



**RFP No. 08-X-39185**

**Audit of Affiliate Relationships and  
Transactions Between Atlantic City Electric and  
Pepco Holdings Inc. and Subsidiaries**

**Management Audit of Atlantic City Electric Co.**

**Submitted to:**

**New Jersey Board of Public Utilities**

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## **Phase I – Affiliate Transactions**

### **Phase II – Management Effectiveness & Efficiency**

#### **Chapter 1. Executive Summary and Background**

##### **Introduction**

The Overland audit was fully supported by both PHI and ACE personnel. The company has provided dedicated personnel to support our discovery and audit task requirements. We appreciate the extraordinary cooperation provided to us in the conduct of our review, which allowed the development of a thorough consideration of the areas of operations included in this report.

This report is organized in a manner that is generally consistent with the structure of the scope of effort requested by the New Jersey Board of Public Utilities (NJBPU) RFP guidelines. Our work was organized into two Phases – Phase I: Affiliate Transactions; and Phase II: Management Effectiveness & Efficiency.

The primary period of analysis was the two year period from January 1, 2006 to December 31, 2007. However, depending on the subject area, we also provided historical data prior to January 1, 2006. In other instances, we included 2008 and more recent information regarding corporate operations. However, as with any corporate organization, PHI is continuously reviewing its corporate processes, and is subject to external events that may impact this analysis relative to present circumstances.

##### **Overview of Audit Analysis and Summary of Key Findings and Recommendations**

We found that PHI currently has a highly qualified senior management team, possessing a skill set focused on regulated utility operations, which we believe is positive for PHI stakeholders, including ACE New Jersey customers. Our audit identifies a number of continuing challenges facing the Company. The following represents those recommendations that we believe have the greatest potential impact in terms of financial materiality, quality of service, or regulatory compliance

- The lack of consistent commitment of funding for service quality and reliability projects has led to subpar performance metrics. Customer satisfaction, service quality and reliability performance should be a high priority that translates into tangible results in the near-term. (Chapter 8)
- PHI should prepare a comprehensive reliability improvement plan and report by March 31, 2010. The report should explain its reliability improvement strategies, plans and initiatives and explain how they relate to ACE. (Chapter 15)

- The ACE equity ratio has declined somewhat in 2008, and should be increased to protect current credit ratings. (Chapter 11)
- Should PHI corporate credit ratings decline from present levels, the BPU should open a proceeding to consider the implementation of additional ring-fencing measures to protect ACE from potential adverse effects of its unregulated affiliates. (Chapter 8)
- PHI has had varying success in the implementation of the “Blueprint for the Future” initiative within its various jurisdictions. Without abandoning its core objectives, the Company should be willing to adapt the various components of its plan to the preferences of each state jurisdiction. With regard to ACE, PHI may need to consider an increased effort by senior management to move its objectives forward. (Chapter 9)
- PHI should consider centralizing the management of the locating and markout function in the service company. The UtiliQuest contract covers all three PHI utilities. However, management of the contract is currently decentralized. At ACE the contract is managed by a single contract administrator on a part time basis. The delays in needed improvements may be indicative of staffing shortages in the one call function. A centralized group could provide ACE with the technical and backup capabilities it needs. (Chapter 18)
- Millennium Account Services (MAS) did not comply with EDECA rules that required transfer pricing at the lower of fully allocated cost or fair market value. Therefore, as required by EDECA transfer pricing rules, a calculation of the fully-allocated cost-based price for meter reading services provided by MAS to ACE should be developed. ACE should cease paying for amounts exceeding fully-allocated cost. (Chapter 5)
- We recommend the Company reevaluate the number and weighting of Annual Incentive Plan goals it maintains for its various employee groups. (Chapter 20)
- Conduct an annual survey of market prices for finished and unfinished commercial space in the market area surrounding Mays Landing. Ensure the price charged to ACE for finished and unfinished space is no more than the lower of fully allocated cost or the market price for equivalent finished and unfinished commercial space in the local market area. (Chapter 2)
- Absent disclosure to the customer of the New Jersey rules concerning down-payments prior to the initiation of a deferred payment agreement, we recommend Company representatives be trained on these rules on a periodic basis, and the training manual be updated to incorporate these rules. In addition, during

negotiations, company representatives should not suggest down-payments that exceed 25 percent of outstanding balances owed, and customers should not be coaxed by company representatives to pay more than a 25-percent down-payment on a deferred payment arrangement if they initially offer less. (Chapter 20)

## **Project Background and Scope of Audit**

### **RFP and Project Scope**

On December 21, 2007, the NJBPU Division of Audits issued a Request for Proposal to perform an affiliate transaction and management audit of ACE, PHI and its affiliates. Overland submitted its proposal on January 30, 2008, and was ultimately selected to conduct the audit pursuant to an agreement dated May 8, 2008. Substantive work commenced in June 2008.

### **Approach to the Project**

#### **Initial meeting with BPU Staff and Rate Counsel**

Prior to finalizing our project workplans and commencing the technical analysis, Overland met with representatives of the BPU Staff and the New Jersey Rate Counsel. This meeting addressed various concerns about ACE that the parties felt were within the intended scope of our review. This meeting allowed Overland the opportunity to assure that our analysis would incorporate any legitimate issues that were of concern to these public entities.

#### **Conduct of Interviews**

The audit review was facilitated by the conduct of informal interviews with company personnel, including subject matter experts, senior management and the PHI Board of Directors. Most of these interviews were conducted onsite at various locations within the PHI service area. The primary sites relevant to our audit were:

- Mays Landing – Atlantic City Electric headquarters;
- Edison Place, Downtown D.C. – PHI Holdings headquarters; and
- Wilmington, Delaware - PHI Service Company facility.

The interviews were considered “informal”, as they were not taken under oath and there was no transcript taken or recording made. No attorneys were present. Aside from the Overland representative and the company interviewee, the company generally had one or two individuals present who were assigned to support the audit process. The primary purpose of the interviews was to gain an understanding of corporate operations, and to identify and clarify documents and reports available to support our technical analysis. To the extent possible, Overland did not rely directly on the information gathered in interviews. Written data requests were used as the primary basis for our analysis, findings and conclusions.

Overland interviewed all members of the PHI Board of Directors. While it appeared that company representatives had briefed each director on the subject matter likely to be covered in

the interview, we were generally able to elicit information and opinions concerning matters relevant to our review of the company.

A complete list of the 64 interviews conducted by Overland is provided in Attachment 1-1.

### **Written Discovery**

Overland developed written discovery requests as the primary basis for its technical analysis, which is relied upon in the development of this report. Over the course of our audit, Overland issued 1,212 data requests. Many of the documents produced were classified as confidential by the company. Certain information was further classified as “Restricted” material, which was provided subject to its use under more limited conditions. Overland believes that the classification and limitations placed on the material produced was justified, and that the procedures agreed upon with regard to this material actually facilitated our work by providing reasonable access to highly sensitive material requested during the audit.

### **Other Sources of Material Relied Upon**

Overland also reviewed documents from sources external to the written discovery and interview process described above. We have reviewed: financial material from various sources including investment services and rating agency publications; New Jersey BPU reports and Orders relevant to the ACE audit; and industry publications in the public domain. To the extent that this information was relied upon in our report, we have identified it in our footnoted references.

### **PHI and Business Unit Overview**

PHI engages in two primary business operations:

- the transmission and distribution of electricity and natural gas (Power Delivery); and
- competitive energy generation, marketing and supply (Competitive Energy).

Earnings from regulated operations currently represent about 60-65% of PHI consolidated net earnings.

### **History of PHI Leading to Current Organization**

Atlantic City Electric Company (ACE) was originally formed in 1924. It became a wholly owned subsidiary of Atlantic Energy, Inc., a public utility holding company formed in 1986. In 1998, Delmarva Power & Light and ACE merged to form Conectiv, which also included Conectiv Energy. Pepco Holdings, Inc. (PHI) was formed in 2000. In 2001, Conectiv announced its merger with Pepco, which included Pepco Energy Services.

**Overview of Regulated Companies**

The Power Delivery segment consists of the transmission and delivery of electricity and natural gas service by PHI's three regulated utility subsidiaries: Potomac Electric Power Company (Pepco), which has approximately 750,000 customers; Delmarva Power and Light (DPL), which has approximately 525,000 customers; and Atlantic City Electric (ACE), which has about 540,000 customers. On a combined basis, the utilities operate in the District of Columbia and the states of Delaware, Maryland, and New Jersey. ACE provides only electric service and operates exclusively in New Jersey.

The Power Delivery segment accounts for approximately 80 percent of PHI employees, including employees of the regulated utilities and employees of PHI Service Company (PHISCO) dedicated to utility operations. As of mid 2008, PHI employed about 5,500 people. Approximately 530 of these employees worked directly for ACE at that time.

The three utilities are generally operated as a single business. However, after business combinations that have now extended over a period of at least seven years, many of the systems and procedures employed by the utility subsidiaries remain disparate and are not necessarily integrated, standardized or centralized.

**Overview of Significant Non-regulated Businesses.**

The Competitive Energy business provides competitive generation, marketing and supply of electricity and gas, and related energy management services primarily in the mid-Atlantic region. These operations are conducted through subsidiaries of Conectiv Energy Holding Company (CE) and Pepco Energy Services, Inc. and its subsidiaries (PES).

Conectiv Energy provides wholesale electric power, capacity and other services in the wholesale markets and also supplies electricity to other wholesale market participants under various short-term and long-term agreements. CE obtains the electricity required to meet its Merchant Generation & Load Service power supply obligations from its own generation plants, bilateral contract purchases from other wholesale market participants, and purchases in the wholesale market.

PES provides retail energy supply and energy services primarily to commercial, industrial, and governmental customers in the mid-Atlantic region.

Through Potomac Capital Investment Corporation (PCI), PHI maintains a portfolio of cross-border energy lease investments with a book value of approximately \$1.3 billion as of fall 2007.

## **Chapter 2. Overview of Affiliate Relationships and Transactions**

**Atlantic Southern Properties (ASP) – Mays Landing Office.** The calculation of rent for ACE's use of space in the Mays Landing building owned by ASP is vaguely defined and insufficiently documented in both the building lease and the Cost Allocation Manual (CAM). ACE paid 54% more per square foot for unfinished space than the price paid by a third party tenant. Taking finished and unfinished space together, ACE annually paid approximately \$460,000 more than the market price for the space it occupied at Mays Landing. (2-2 to 2-3; 2-11 to 2-19)

### Key Recommendations:

- Fully document the pricing basis and space leased by ACE in its office lease. Require ACE to approve all changes in the price per square foot and space leased before they are made. Document all changes in lease amendments signed by both parties.
- Conduct an annual survey of market prices for finished and unfinished commercial space in the market area surrounding Mays Landing. Ensure the price charged to ACE for finished and unfinished space is no more than the lower of fully allocated cost or the market price for equivalent finished and unfinished commercial space in the local market area.

**Compliance with EDECA Standards.** Based on the nature of ACE affiliates and their businesses, there were limited opportunities for ACE to violate EDECA rules addressing non-discrimination, cross-marketing and information disclosure to affiliates providing competitive services in New Jersey. ACE was compliant with significant EDECA provisions addressing the separation of utility management and utility accounting from competitive affiliates, and the sharing of corporate support services. (2-4 to 2-5; 2-21 to 2-24)

- ACE and ASP were not in compliance with EDECA transfer pricing rules that required ACE to pay no more than the market price for space leased in Mays Landing.
- Millennium Account Services (MAS) did not comply with EDECA rules that required transfer pricing at the lower of fully allocated cost or fair market value.

## **Chapter 3. PHI Service Company**

PHISCO's internal controls and the accounting procedures governing the service company cost accumulation and distribution process were adequate to facilitate a reasonable distribution of service company costs between regulated utility and non-regulated diversified operations and among PHI's three utilities and the allocation process produced reasonable results for ACE, which was allocated approximately 22% of total service company costs during the audit period. Specifically:

- Accounting procedures priced the services to be distributed to subsidiaries on a fully distributed cost basis; that is, the price included the direct, indirect and overhead charges attributable to the activities charged.
- Procedures included processes for periodic true-up to actual cost where service company prices and allocations were based on estimates.
- Organizational and accounting controls were adequate to facilitate a reasonable link between PHISCO services and the PHI businesses and subsidiaries that benefit from them.
- PHISCO's allocation procedures generally take advantage of measures (including allocators and unit rates) that establish cost-causative links between service company activities and subsidiaries that benefit from them when such measures exist.
- Due primarily to the nature of the corporate activities charged by PHISCO, many of the size-based allocation methods used to distribute corporate costs are "unattributable" and inherently arbitrary. However, PHISCO's methods were generally adequate in the audit period to produce a reasonable distribution of corporate expenses between PHI's regulated Power Delivery and its non-regulated business segments, as well as among the three regulated utilities within the Power Delivery unit.

However, the definitions for allocation methods and factors documented in PHISCO's CAM were inadequate. (3-3 to 3-5)

#### Key Recommendations:

- Include detailed definitions of the calculations of allocation factors in the Cost Allocation Manual.
- Identify all PHISCO activities associated directly or indirectly with legislative and political advocacy, corporate sponsorships and corporate contributions and ensure that the costs of such activities are charged below-the-line.

### **Chapter 4. Power Supply and Transmission Affiliate Issues**

The BGS auction process and PJM's control over transmission provide substantial protection to ratepayers against abusive affiliate transactions. The utility and merchant power procurement functions are adequately separated. (4-4 to 4-6)

With the exception of PJM committee activities, the utility and merchant transmission functions are adequately separated. The joint participation of the utility and merchant businesses in PJM committee activities creates unnecessary risks for ratepayers and should be prohibited. (4-7 to 4-12; 4-14 to 4-18)

CESI has eight power plants located in ACE's service territory. Overland reviewed the interconnection arrangements for those plants and identified three issues. First, ACE failed to deduct station power from the Deepwater Plant net generation that it reported to PJM for four years. As a result, ACE paid its BGS suppliers for power that was never delivered. ACE identified the error internally and retroactively billed CESI in 2007. ACE credited the retroactive billing to the BGS deferral account. The retroactive billing used the PJM spot market energy price rate rather than the BGS supply price. ACE should reduce the BGS deferral balance to fully remove the excessive amounts paid to the BGS suppliers.

Second, ACE provided CESI's Cumberland and Missouri Avenue plants with station power without charge for almost nine years. During the course of this audit, ACE recognized that error and retroactively billed CESI for \$1.1 million. A substantial portion of the retroactive billing should be credited to ACE's BGS deferral account.

Third, ACE's charges to CESI for interconnection administrative and maintenance costs are sporadic and lower than expected. Overland recommended that PHI conduct annual internal audits of the ACE/CESI interconnection and station power arrangements. (4-21 to 4-25)

## **Chapter 5. Millennium Account Services (MAS)**

MAS is a joint venture of South Jersey Industries (SJI), the holding company for South Jersey Gas (SJG), and Conectiv Solutions, owned by Conectiv, the holding company for ACE. SJI and Conectiv Solutions are equal owners of MAS and share equally in its profits. MAS' primary business purpose is to read meters for ACE and SJG, which it has been doing since its inception in January 1999. MAS has been reviewed in previous NJBPU audits. Its operations have not changed significantly in the ten years it has been in business. (5-1)

MAS is a stable, efficiently run and well-managed operation. The business relationship between ACE and MAS is not arms-length. The prices MAS charged ACE for meter reading during the audit period were not based on any regulatory cost standard, and were significantly higher than a regulated cost of service price determination. The prices MAS charged ACE for meter reading during the audit period were not market-based. To date, Conectiv and SJI have been unable to provide any evidence that MAS' pricing is related to prices that would be charged in a competitive market. MAS' audit period operating margins were high enough that Overland believes the amounts charged to ACE by MAS could have exceeded ACE's cost of performing the meter reading function itself. (5-2; 5-10 to 5-13)

The previous NJBPU audit found that MAS was a related competitive business segment, making it subject to EDECA standards. There has been no change in MAS' operations or customers to warrant a change in this finding. As far as Overland can determine, MAS has never been in compliance with EDECA's transfer pricing requirements with respect to meter reading services supplied to ACE or South Jersey Gas. (5-3; 5-13 to 5-14)



#### Key Recommendations:

- As part of ACE's next rate proceeding, provide testimony and updated cost-benefit information demonstrating that MAS provides a net savings to ACE compared with the cost of ACE providing its own meter reading.
- As required by EDECA transfer pricing rules, calculate the fully-allocated cost-based price for meter reading services provided by MAS to ACE. Cease charging ACE for amounts exceeding fully-allocated cost.

### **Chapter 6. Income Taxes**

PHI allocates its consolidated income tax liability to its subsidiaries pursuant to the PHI Tax Allocation Agreement. The audit identified two issues pertaining to those allocations. The first issue is the allocation of parent company tax net operating losses (NOLs) to subsidiaries. The second is compliance with the BPU's consolidated tax savings policy. (6-1 to 6-2)

The dividends the parent receives from its subsidiaries are not included in the parent company's stand-alone taxable income. The parent company has substantial debt outstanding. The resulting interest deductions create large parent company NOLs. The subsidiaries do not receive a tax deduction for the dividends they pay to the parent. The subsidiaries fund the parent's costs through the dividends they pay. (6-5 to 6-6)

Prior to 2006, PHI allocated parent company NOLs to its subsidiaries. The allocations reduced ACE's income tax costs by \$7.2 million in 2004 and \$3.1 million in 2005. PHI stopped the allocations when the Public Utility Holding Company Act was repealed in early 2006. (6-4)

The BPU has a long-standing policy of allocating a portion of consolidated tax savings to ratepayers. The BPU policy is well-settled and has been repeatedly upheld by New Jersey courts. The sharing is accomplished by deducting the utility's share of the cumulative savings from rate base. PHI disagrees with the BPU's policy. (6-9)

PHI's non-regulated cross-boarder leases generate significant NOLs. The tax benefits generated by the leases depend on PHI having enough positive taxable income to fully utilize those NOLs. PHI's utility operations are the primary source of positive taxable income for PHI. During the five years ending December 2007, PHI's utility operations generated \$420 million in tax benefits for PHI's non-regulated subsidiaries. (6-6 to 6-8)

### **Chapter 7. PHI Organizational Structure**

PHI's management organization is structured to its primary business segments, with a heavy emphasis on the Power Delivery segment. The Power Delivery segment accounts for

approximately 80 percent of PHI employees, including employees of the regulated utilities and employees of PHI Service Company (PHISCO) dedicated to utility operations. Competitive Energy (power generation and marketing) accounts for approximately 10 percent of employee resources. It consists of employees under the Conectiv Energy and Pepco Energy Services holding company umbrellas and employees in the competitive energy organizations within PHISCO. The PHI Investments segment does not have its own management organization; rather, its functions are managed by a small number of PHISCO employees. At the end of 2007, six PHISCO employees were assigned to manage Potomac Capital Investment Corporation, the Investment segment's primary subsidiary. The remaining 10 percent of PHI's employees work in PHISCO functions that benefit PHI as a whole. These include functions such as corporate legal, human resources, audit and treasury. (7-2)

PHI's management organization corresponds loosely with its legal entity structure. PHI's top executives, several of whom serve PHI as a whole, are employees of PHISCO. Most high-level executives and many middle managers, whether or not they are dedicated to a particular segment, are also employees of PHISCO. About a third of all PHI employees worked for PHISCO during the audit period. Many had responsibilities dedicated primarily or entirely to either the Power Delivery or Competitive Energy segments. Within Power Delivery Segment, some had responsibilities that extended to all three utilities and some (in the customer service function) were shared only by ACE and DPL. (7-2)

## **Chapter 8. Executive Management and Corporate Governance**

We found that the PHI Board of Directors is comprised of an excellent mix of expertise and experience relevant to oversight of corporate planning, reporting and operations. The Board selection process assures the independence of its members by being controlled by the independent directors, with limited involvement by management. Importantly, we found that the attitude of the Board and Senior Management is to place a high priority on the interests of the PHI utility subsidiaries. (8-4 to 8-8)

### Key Recommendations:

- Given the increased level of regulatory activity, senior management should consider more frequent interaction with legislators and regulators regarding its strategic and business planning objectives as they relate to a particular state.
- The Corporate Governance Guidelines currently provide for up to three members of management to serve on the PHI Board. We believe that this provision should be modified to limit the number of management directors to not more than two.
- The lack of consistent commitment of funding for service quality and reliability projects has led to subpar performance metrics. Customer satisfaction, service quality and reliability performance should be a high priority that translates into tangible results in the near-term.

- Should PHI corporate credit ratings decline from present levels, the BPU should open a proceeding to consider the implementation of further ring-fencing measures to protect ACE from potential adverse effects of its unregulated affiliates.
- The Comp HR Committee should reevaluate the weightings it assigns to goals associated with both short-term and long-term executive compensation. In doing so, the Committee should re-design current incentives so that they motivate executives to attain goals associated with customer satisfaction, safety, and reliability while at the same time appropriately penalizing them for poor performance in these same areas.

**Executive Management and Compensation.** PHI, and its subsidiaries, are governed by senior management through a group of executives referred to within the Company as the “Executive Leadership Team.” During the audit period, the ELT was principally comprised of the CEO, the COO, the Chief Legal Officer, the CFO, the SVP Government Affairs, the General Counsel, and the Presidents of CE and PES. Other members of senior management may also attend ELT meetings, depending on the issues or subject matter under review. (8-16)

Executive compensation is overseen by the Compensation / Human Resources Committee, a body comprised completely of independent members of the PHI Board of Directors. This committee retains third party consultants to advise it on executive compensation matters. The structure of PHI’s executive compensation is designed so that those with the most responsibility have more at-risk and have compensation that is more heavily weighted towards long-term remuneration. The compensation consultants have found PHI’s executive compensation to be competitive with the market. (8-2 to 8-3; 8-16 to 8-35)

**Senior Management Focus on Customer Interests.** In 2005, PHI developed a business plan focused on the Company’s vision of becoming the “premier energy delivery services and competitive energy company in the mid-Atlantic region”. In accomplishing this goal, specific areas of focus were identified, including customer satisfaction and reliability. Each executive scorecard has performance metrics directly aligned to achieving the goals for utility operations. The three customer service measures are given a relatively modest and equal weight. These measures, as well as other measures of operating performance indicate below average utility operating performance as measured against utility peers. As identified in Chapter Fifteen, the lack of consistent commitment of funding for service quality and reliability projects has led to subpar performance metrics. (8-36 to 8-38)

**Compliance with Sarbanes Oxley and Other Requirements.** PHI has devoted a significant amount of resources to comply with the requirements of SOX in terms of manpower, outside services, and systems. Both management and the Board of Directors made SOX compliance a high priority during 2007 and 2008. We noted no instances of any material SOX non-compliance in our review. The responsibility for compliance with other SEC requirements and NYSE rules has been delegated to several different groups within PHI. Of the requirements that came to our attention, we noted no exceptions that went unremediated. (8-38 to 8-47)

## **Chapter 9. Strategic Planning**

The PHI strategic planning process “develops, communicates, and monitors long term plans that increase shareholder value, mitigate risks, and position PHI for the future.” Business segment plans are developed, and “are aligned with the overall PHI strategy.” These plans are reviewed on an annual basis in the fall at a multi-day Board Retreat. Key components of the 2008 plan included infrastructure investments, implementation of the Blueprint initiative, and increasing utility operating efficiency. (9-2)

The strategic planning process has incorporated a greater consideration of external analyses of industry and market factors in more recent years. The PHI long-term planning is reviewed in light of these long-term trends. PHI utilizes external resources to consider various factors having material impacts on the Company. In recent years, such analyses have included implications of carbon legislation and risk management. (9-2)

The “Blueprint for the Future” initiative is the platform for the Company’s current utility strategic planning. It includes investment in technologies and programs that will assist customers in managing their energy use more efficiently. This initiative is consistent with and will facilitate compliance with the stated goals in the New Jersey Energy Master Plan. (9-2; 9-8 to 9-11)

### Key Recommendations:

- The Strategic Planning function currently reports to the CFO. This is a key process and a fundamental area of focus for senior management and the Board. As such, this function should report directly to the CEO.
- PHI has had varying success in the implementation of the “Blueprint for the Future” initiative within its various jurisdictions. Without abandoning its core objectives, the Company should be willing to adapt the various components of its plan to the preferences of each state jurisdiction. With regard to ACE, PHI may need to consider an increased effort by senior management to move its objectives forward.

**PHI Commitment to Non-Regulated Business Units.** Like many other utility holding companies, PHI has investments in generating assets and regulated utility transmission and distribution operations. Some utility holding companies have also diversified into business activities that presumably complement the core business model. PHI’s view of the Conectiv Energy and PES business segments is that “the competitive energy businesses are strategic and integral components of PHI’s growth.” PES is the 5<sup>th</sup> largest retail energy marketer in the US. (9-13 to 9-18)

## **Chapter 10. External Relations**

The External Relations function is centrally coordinated along utility brands. On-site local management of the function is the domain of the Regional President who interacts with the legislature, governor's office, and the Board of Public Utilities. (10-1 to 10-3)

Recent goals of the Government Affairs and Public Policy group include education of stakeholders on the Blueprint initiative; fostering support for the Mid-Atlantic Power Pathway (MAPP) project; and securing funding through the Economic Stimulus Bill. Particular focus in New Jersey has been placed on the Energy Master Plan, smart metering, and decoupling. (10-3 to 10-5)

## **Chapter 11. Finance**

PHI and ACE credit ratings have been stable during the audit period. However, general economic conditions and capital requirements associated with the construction program will put pressure on the ratings. Like ACE, PHI has a goal of maintaining or improving its credit ratings. This is important in the face of a major capital program. In order to accomplish this goal, PHI may need to consider issuance of equity in an adverse market environment. (11-2, 11-10 to 11-13)

PHI has maintained investment grade ratings by, among other things, maintaining utility equity ratios in the mid-to-high 40 percent range. Dividends made by the utility subsidiaries are generally considered in light of the impacts on the equity ratios. The ACE equity ratio at December 31, 2008 was 45.7%. (11-2 to 11-4, 11-18)

### Key Recommendations:

- The ACE equity ratio has declined somewhat in 2008, and should be increased to protect current credit ratings.
- PHI should place more emphasis on its strategic and business plans and related financial forecasts in assessing cost recovery requirements. This may require heightened efforts to develop consensus with regulators and legislators.

**Impact of PHI Diversification on ACE.** The business risk profile of PHI is impacted by its investments in CE, PES and Potomac Capital Investment. The potential effects of these risks has become more obvious over the last twelve to eighteen months, given the major volatility in energy prices, coupled with the significant events in the US and global financial markets at this time. (11-1)

If the PHI and ACE cost of equity are assumed to be equal, then the regulated cost of capital is impacted by PHI unregulated activities. While regulators may measure a surrogate cost of equity based on pure-play regulated utility risk, the actual cost is PHI's cost of equity. (11-1)

PHI management believes that it has taken the necessary steps to insulate ACE from potential financial difficulties of its affiliates. These steps include preserving a healthy utility equity ratio, limiting participation in the corporate money pool, and maintaining separate credit ratings and separate debt issues. (11-2)

**ACE Dividend Payments to PHI.** ACE dividend payouts have been high in relation to earnings. There are a number of legitimate reasons for these high payout ratios during the audit period. Under certain circumstances this could be a potential concern. However, PHI has the financial strength to support ACE capital and operating requirements. Therefore, Overland does not recommend the use of any additional ring-fencing measures to restrict PHI policies over the cash flow and capital structure of ACE. (11-17 to 11-18)

**Financing.** ACE successfully placed \$250 million in long-term debt in November 2008 maturing in 2018. This issuance aided in smoothing out the scheduled maturities of debt over the next thirty years. It also provided ACE with the necessary liquidity to execute its 2009 plan.

Funds raised through equity offerings take place at the PHI level. PHI generated approximately \$442 million in gross proceeds from two separate issuances of common stock in November 2007 and November 2008. (11-14 to 11-21)

## **Chapter 12. Cash Management**

Our review of cash forecasting and management included a summary of the utility's sources and uses of funds as well as an overview of ACE's access to and use of the corporate lines of credit and money pool. Due to the liquidity crisis that affected the U.S. capital markets in late 2008, the monitoring of cash balances became a high priority of management.

In conformance with an agreement reached with the BPU, ACE has not invested in the corporate money pool since October 15, 2006. ACE also elected not to borrow from the money pool since this time except for one instance. (12-1)

The amount of ACE's dividends to its parent is driven by a desire to maintain strong utility investment grade ratings by managing ACE's underlying equity ratio in the high 40s percentile. The rating agencies have linked ACE's debt ratings to that of its more risky parent, resulting in higher capital costs to the utility. (12-1)

In response to disruptions in the capital and credit markets, PHI management began daily monitoring of cash and liquidity availability in October 2008, and the Board of Directors was provided bi-weekly updates. Taking advantage of an opportunity to raise capital to fund its 2009 plan, PHI and its subsidiaries issued approximately \$1 billion of debt and equity in November and December, 2008. PHI also secured a second line of credit to provide additional flexibility in November 2008. (12-1 to 12-2)

In order to conserve cash, PHI and ACE have scaled back their planned capital spending for the remainder of 2008, 2009, and 2010. At the consolidated PHI level, most of the reductions in capital expenditures involved deferrals of MAPP and Blueprint project spending to future years. PHI also reduced costs by instituting a hiring freeze and eliminating management merit salary increases. (12-2)

Key Recommendations:

- We recommend the money pool conditions agreed to by ACE in the previous audit be maintained, and that ACE should file any proposed changes to these terms with the BPU and receive approval before implementing them.
- ACE and the BPU should come to an understanding regarding the use of the money pool to settle intercompany transactions.

**Cash Flow Impacts.** Beginning in June 2008, ACE agreed pursuant to a stipulation agreement with the New Jersey BPU and other parties that it would refund approximately \$254 million to its customers over a four-year period for over-collecting on past non-utility generation contracts. This was partially offset by under-recoveries on state-mandated social programs for one year. For the period from June 1, 2008 to May 31, 2009, the net decrease in customer rates was expected to be \$117 million. (12-3)

**Money Pool.** ACE is a participant in a money pool agreement with PHI and 24 of its subsidiaries; including DPL, Pepco, PES and Conectiv Energy Holding Company. As correctly pointed out in the previous audit of competitive service offerings of ACE, ACE's participation in the money pool raises a number of potential issues. ACE could theoretically borrow more money from outside sources than it needs and invest the excess in the money pool so that riskier non-regulated businesses could access lower cost funds. Other participants in the money pool do not all carry investment grade ratings. In response, the audit included a recommendation to restrict ACE investment in the money pool. ACE agreed to certain measures at that time in compliance with the audit recommendation. (12-5 to 12-6)

Since the acceptance of the various ACE compliance measures, ACE's actions with regard to the money pool have not changed. ACE only uses the money pool to settle intercompany transactions with no end-of-day carryover balance, and it has not borrowed from the PHI money pool since September 25, 2006 with one exception. (12-6)

**Impact of Diversification on ACE.** In 2008, PHI's unregulated business operations (includes Conectiv Energy, PES and PCI) made up 53 percent of PHI's total revenues, 28 percent of operating income, and 26 percent of total assets. These operations have the potential to directly and indirectly impact ACE: with respect to dividends, in terms of management focus and attention, and on utility cost of capital. (12-10)

Both PES and Conectiv Energy enter into contracts with third parties that, at times, impose collateral requirements on them when circumstances warrant. For instance, in the second half of 2008, PES had a significant increase in its collateral obligations due to the decrease in energy prices. As of December 31, 2008, the Competitive Energy businesses had posted net cash collateral of \$331 million and letters of credit of \$558 million. (12-12)

**PHI Response to 2009 Credit and Economic Events.** While it had been building for months if not years, underlying issues surrounding the capital and credit markets came to a head in the latter half of 2008 when coupled with volatile energy prices. During this time, confidence in the credit markets waned, and companies were forced to change the ways they financed their operations on both a short-term and long-term basis. At PHI and ACE, it was no different. (12-12 to 12-13)

In late 2008, PHI and its subsidiaries issued over \$250 million in equity and \$750 million in debt. By being proactive in raising capital, PHI management ensured that it would have the necessary resources to operate on a daily basis in the short term. Whether that decision will ultimately minimize PHI's and its subsidiaries' cost of capital in the long-term is unknown due to the uncertainty and volatility in the debt and equity markets. However, as of October 20, 2009, the decision to issue common stock at a price of \$16.50 per share in November, 2008 was timely on a short-term basis given the drop in PHI's share price by over 7 percent since that transaction took place. (12-14)

In addition to raising funds from outside sources, PHI and its utility subsidiaries took steps to conserve their existing cash with an expectation that they would save between \$200 and \$225 million, most of it associated with the 2009 construction cut-backs. Later estimates presented to the financial community indicate that the savings from reduced utility construction spending will total \$129 million, \$229 million, and \$178 million in 2008, 2009, and 2010, respectively. Most of the reductions in spending in 2009 and 2010 are the result of delays associated with the MAPP and Blueprint projects. In addition, 2009 O&M expenses (other than pensions and bad debts) were capped at a 2 percent growth rate and management merit salary increases were eliminated. Based on statements made to analysts, expenditures for distribution reliability and customer service are also considered as discretionary. However, given the incentive returns on the MAPP transmission project, management is committed to proceeding as planned. (12-14 to 12-15)

### **Chapter 13. Accounting and Property Records**

PHI's and ACE's internal control framework is based on an accounting industry-derived model. (13-3 to 13-7) PHI's and ACE's internal controls are scrutinized by several different groups including the external auditors, Internal Audit, and the SOX Compliance Unit. The results of recent reviews indicate that the number of PHI and ACE internal control deficiencies have decreased over time, and neither company has reported a material weakness (the most serious



type of internal control deficiency) during the time period from 2005 to 2008. (13-8 to 13-13) A formal Internal Audit plan is reviewed and approved by the Audit Committee of the PHI Board of Directors, who also meet on a recurring basis with the head of Internal Audit. (13-14 to 13-15) The external auditor, PricewaterhouseCoopers, opined that PHI maintained effective internal controls over financial reporting in each of the years from 2005 to 2008. (13-26)

#### Key Recommendations:

- We recommend that the Company take the necessary steps within the next twelve months to satisfactorily address, in all material respects, the finance staffing concerns that have affected the Company for the past five years.
- On a spot basis, we recommend that Internal Audit confirm both the occurrence of actions asserted to have been taken by management in response to internal audit report recommendations and the effectiveness of those actions to remedy the noted audit findings.

## **Chapter 14. Power Supply Management**

ACE's basic power supply strategy is to purchase power for its BGS customers in the BGS auction and to sell the power it buys under its legacy NUG contracts into the PJM capacity and energy markets. ACE's policy of not considering longer-term risk management strategies for BGS customers is not reasonable. (14-7 to 14-10)

ACE purchases 468 MW of power under three legacy NUG contracts and resells the power into the PJM markets. The NUG costs and resale revenues are assigned to ACE ratepayers through the BPU approved Non-Utility Generation Charge (NGC). The role of the NUG contracts is changing. The NUG capacity charges are scheduled to decline significantly in November 2010. Once that occurs, the contracts will no longer be a significant source of stranded costs. Instead, they will provide a beneficial hedge against capacity and energy price volatility. (14-2 to 14-7)

The NUG power resale revenues were reasonable during 2006 through 2008, with the exception of reactive power credits. Reactive power credits are allocated between the generators included in ACE's transmission zone. Currently none of the credits are allocated to the NUG contracts. The NUG contracts provide reactive power and should receive a fair allocation of the credits. The NUG contracts should receive annual reactive power credits of \$818,377 or \$1.22 million, depending on the treatment given to the two power plants in ACE's zone that are owned by non-affiliates. The credits assigned to the NUG contracts should pass through to ratepayers via the NGC. (14-26 to 14-28)

ACE pursued the restructuring of its NUG contracts for many years. In October 2008, the owners of the two largest NUG plants notified ACE that they were terminating restructuring efforts. ACE suspended its efforts to restructure the NUG contracts in late 2008. ACE's

decision to suspend its restructuring efforts was reasonable. ACE's management of the restructuring process was reasonable during the audit review period. (14-28 to 14-32)

ACE does not have a documented power supply plan. The only documentation of ACE's power supply plans are its filings in the annual BPU BGS auction proceedings. PHI's other two utilities have recently filed power supply plans with their respective state regulatory commissions. ACE's power supply costs are impacted by complex interactions between a large number of external factors and strategic alternatives. Those interactions and alternatives should be analyzed on an integrated basis. ACE should prepare biennial power supply plans for its BGS firm requirements load. (14-10 to 14-16)

The Delaware Public Service Commission requires Delmarva to file power supply plans in two year intervals. The timing of the ACE plans should correspond with those filings to minimize the incremental cost of preparing the ACE plans. (14-14)

## **Chapter 15. System Reliability**

Electric system reliability focuses on avoiding power outages and quickly restoring power once an outage occurs. ACE's reliability metrics are mediocre compared to other electric utilities but are better than Pepco and DPL. ACE's outage frequency performance is below average. ACE ranks about average on outage duration. ACE's reliability metrics have not improved over the past five years. (15-4, 15-8 to 15-10)

PHI recognizes the need to improve its reliability performance. It initiated a major review of its reliability performance and processes in August 2008. PHI observed that none of its operating companies compared favorably to their peers in reliability benchmarking surveys. PHI initiated the review because its performance was inadequate and not improving. The cross-functional review included five regional reliability summits. The summit participants expressed "universal recognition of the problem of reliability" and "significant frustration and dissatisfaction with the direction [PHI] was heading" prior to the summits. There was a general sense of optimism that things could improve and wide support for a "back to basics" approach to improving reliability. (15-16 to 15-21)

Improving reliability was the primary focus of PHI's Operations Department in 2009. PHI adopted a goal of achieving first quartile performance in benchmarking surveys by the end of 2012. PHI's new reliability goal is commendable and achievable with focused effort. (15-21)

The reliability summits generated a large number of ideas for improving reliability. PHI used 2009 to analyze and plan reliability improvement initiatives and to make improvements to reliability management processes. (15-33 to 15-36)

The reliability summits identified vegetation management as a key factor impacting reliability.

ACE had not adequately funded vegetation management in the past. As a result, overgrowth conditions existed on its system. PHI commenced a vegetation management policy review in 2009. (15-33 to 15-36)

Key Recommendations:

- PHI should prepare a comprehensive reliability improvement plan and report by March 31, 2010. The report should explain its reliability improvement strategies, plans and initiatives and explain how they relate to ACE.
- ACE should increase its vegetation management spending. ACE's current 2009 budget is not adequate to eliminate overgrowth conditions.
- ACE should provide consistent stable funding for reliability initiatives. The reliability summits identified funding fluctuations caused by cost reduction initiatives as a contributor to poor reliability performance.
- ACE should improve the metrics it uses to measure reliability, including outage cause categories and outage duration components.

## **Chapter 16. Emergency Management - Storm Response**

ACE's capability to manage restoration efforts after normal size storms is adequate. However, ACE is not as prepared as it should be for a major hurricane. (16-14 to 16-19)

Hurricane Isabel caused extensive damage to PHI's Utility Operations in 2003. Approximately 75 percent of Pepco's customers and 30 percent of ACE's customers lost power. Lengthy outages in Pepco's service territory caused significant customer anger and frustration. Hurricane Isabel demonstrated the importance of the storm response function. (16-5 to 16-9)

PHI has made several important improvements to its storm response function since Hurricane Isabel, including adopting an incident command system, developing a second roles data base, expanding the use of mobile data terminals, implementing crew guides and standardizing procedures. The increased use of mobile data terminals and crew guides has significantly increased ACE's storm response capability. (16-12 to 16-17)

Several additional opportunities for improvement have not yet been addressed. Areas for improvement include: standardizing procedures among operating districts, functional exercises, training frequency, Emergency Preparedness Department staffing, mutual assistance, coordination with public works agencies and off right-of-way vegetation management. (16-17 to 16-19)

#### Key Recommendations:

- ACE should prepare an assessment of its capabilities to respond to a hurricane. ACE has not prepared an assessment since the post-Isabel review. The assessment should include an analysis of ACE's current capabilities, identification of gaps in those capabilities and strategies for closing the gaps.
- ACE should complete its Incident Response Plan. ACE's current IRP is inadequate. PHI recognizes the need for a new plan and has prepared an outline of the new plan.

### **Chapter 17. Lost and Unaccounted for Energy**

System energy losses for distribution customers typically range from five to eight percent. ACE's energy losses average approximately 7.0 percent for distribution customers. ACE's average energy loss rate leaves substantial room for improvement. (17-4 to 17-6)

Energy losses are a significant cost item. ACE's 2008 energy losses had a value of \$70.4 million based on the winning price in ACE's most recent BGS auction. In 2008, 88 percent of the losses were purchased from BGS suppliers and included in the BGS rate surcharge. Third Party Retail Energy Suppliers were responsible for the cost of the remaining 12 percent. As a result, ACE does not have a significant economic incentive to make investments to minimize energy losses. (17-6 to 17-9)

ACE has taken a number of modest steps that reduce energy losses in recent years. Those steps include installing capacitor banks, commissioning an economic conductor sizing study, implementing phase balancing projects, replacing the conductors on some lines and converting some lines to higher voltages. Distribution Automation and demand response programs could reduce ACE's loss percentages in the future. (17-9 to 17-10)

#### Key Recommendations:

- ACE should update the fixed factors that it uses to assign losses to BGS and third party retail energy suppliers. The factors have not been updated in over 10 years. Although the factors appear to track losses reasonably well on a composite basis, they may mis-allocate costs between customer groups.
- ACE should develop the capability to reconcile its energy account on a more detailed basis. ACE does not track energy losses by cause or location. Developing a better understanding of the sources of energy losses will help ACE develop cost effective strategies for reducing them.

## **Chapter 18. One Call Damage Prevention Program**

ACE uses a contractor, UtiliQuest LLC, to perform its locating and markout function. UtiliQuest developed an excessive backlog of overdue markout requests during the spring of 2007. ACE was unaware of the excessive backlog because it did not have a procedure for tracking the timeliness of UtiliQuest's performance. The BPU Staff cited ACE for violations of the BPU's One Call Rules in May 2007. The matter was settled. As part of the settlement, ACE agreed to develop and implement a remediation plan to improve its performance. (18-3 to 18-5)

The remediation plan required ACE to create: (1) a process to monitor the timeliness and quality of UtiliQuest's performance; and (2) a backup system to complete markout requests when UtiliQuest failed to do so in a timely manner. (18-3 to 18-9)

ACE increased its monitoring by requiring UtiliQuest to submit daily status reports. ACE also required UtiliQuest to submit its quarterly internal quality assurance (QA) audit reports. The quality assurance reports show opportunities for improvement. The 2008 QA reports show less than 90 percent compliance in five of the seven categories tracked. (18-3 to 18-5)

ACE is currently negotiating with a local electrical contractor to obtain backup locating capability and periodic audits of UtiliQuest's compliance with the BPU's One Call Rules. ACE must develop and implement an internal capability to receive and dispatch mark-out requests before the secondary contractor can begin work. (18-3 to 18-5)

ACE needs to make further improvements to its One Call program. ACE continues to experience some overdue markouts and UtiliQuest's QA reports indicate inadequate compliance rates. The lengthy delay in retaining the secondary contractor may indicate a lack of understanding of the importance of One Call Rule compliance. The qualifications and resources of the proposed secondary contractor are questionable. ACE needs to increase its focus on One Call program management. (18-8 to 18-10)

### Key Recommendations:

- PHI should consider centralizing the management of the locating and markout function in the service company. The UtiliQuest contract covers all three PHI utilities. However, management of the contract is currently decentralized. At ACE the contract is managed by a single contract administrator on a part time basis. The delays in needed improvements may be indicative of staffing shortages in the one call function. A centralized group could provide ACE with the technical and backup capabilities it needs.

## **Chapter 19. Construction Contract Management - Inspection**

The audit reviewed ACE's procedures for inspecting work performed under construction contracts. ACE retains contractors through a temporary labor agency to serve as the ACE construction representative on most of its construction contracts. The contractors are all former ACE field operations supervisors who have retired from ACE. During a recent 27 month period, they billed hours equivalent to 15 full time employees. Ten of the retirees are essentially working for ACE on a full time basis. (19-5)

ACE's contractor inspection process is informal. ACE does not prepare inspection reports or forms for any of its construction contracts. The ACE construction representative is on-site during most of the work. The construction representative is responsible for identifying problems and works with the contractor to resolve those problems. ACE's philosophy is to focus on remedying problems rather than issuing inspection reports. (19-7 to 19-8)

### Key Recommendations:

- PHI should consider replacing some of the retirees with permanent employees. The stated purpose of using the retirees is to supplement the permanent workforce to address peak workload requirements. Ten of the retirees are essentially working for ACE full time. The contracting approach does not result in significant cost savings. Replacing some of the retirees with permanent employees would produce a number of benefits including improving internal controls and facilitating process improvements.
- A final inspection report should be prepared for contracts exceeding \$100,000. A written inspection report should be prepared to document contract compliance and facilitate communications and accountability.

## **Chapter 20. Customer Service**

While metrics used to determine pay-outs under the Annual Incentive Plan showed favorable results, other performance measurements of the customer services organization were mixed. Overall ACE customer satisfaction declined slightly between 2006 and 2008 even though ACE scored higher than the other PHI utilities. A benchmarking study conducted in 2008 showed that the combined customer service organizations of ACE and DPL placed in the third quartile of their peer group, largely due to poor performance in safety and the high costs associated with Call Centers and Billing. On the other hand, ACE met its call responsiveness commitment to the New Jersey BPU by a comfortable working margin. (20-5 to 20-15)

Customers having difficulty making payment for their energy usage have the opportunity to enter into deferred payment agreements with ACE. The Company has chosen not to adopt a

specific policy with respect to the terms and conditions offered to customers who request such an arrangement, although management approval is required in certain circumstances. ACE and its representatives do not disclose to customers that (based on New Jersey regulations) utilities shall not require more than 25 percent of balances owed as down-payment on individual agreements. As a result, nearly half of the active deferred payment agreements involved customers who initially paid in excess of this cap. (20-17 to 20-18)

While past due accounts fluctuate on a seasonal basis, they have trended up in the past three years - most likely due to the general downturn in the economy. Amounts written off or charged to bad debt expense by ACE are approximately 0.5%. Although not directly comparable, these statistics are generally more favorable than those experienced by either DPL or Pepco. (20-18)

#### Key Recommendations:

- We recommend the Company reevaluate the number and weighting of Annual Incentive Plan goals it maintains for its various employee groups.
- Absent disclosure to the customer of the New Jersey rules concerning down-payments prior to the initiation of a deferred payment agreement, we recommend Company representatives be trained on these rules on a periodic basis, and the training manual be updated to incorporate these rules. In addition, during negotiations, company representatives should not suggest down-payments that exceed 25 percent of outstanding balances owed, and customers should not be coaxed by company representatives to pay more than a 25 percent down-payment on a deferred payment arrangement if they initially offer less.

## **Chapter 21. HR Overview, Workforce Planning and Staffing**

PHI evolved through the 1998 and 2002 mergers. As a result, the HR Department inherited a large number of legacy systems, plans and processes. The HR function had several significant deficiencies prior to 2005. The HR Department has made significant progress since that time.

PHI implemented new management compensation and benefits plans in 2005. In 2006, the HR Department implemented new staffing and employee performance evaluation processes. In 2008, the HR Department (21-5 to 21-6):

- Developed a new workforce planning process.
- Made significant improvements to its management of IT systems.
- Implemented improvements to the succession management process.
- Developed an HR metrics dashboard.
- Implemented improvements in leadership development.

PHI continued its HR improvement initiatives in 2009, including comprehensive reviews of its

compensation and benefits programs. (21-2)

The best measure of a company's ability to retain employees is its employee turnover rate. ACE's employee terminations are largely due to retirements. Very few ACE employees leave voluntarily for jobs at other companies. The PHI Service Company's voluntary turnover rate is approximately 3 percent. That implies that its total employment offering is competitive. (21-6 to 21-8)

PHI has a good reputation as an employer in the market place. It receives 26,000 job applications a year. The ratio of applications to new hires is approximately fifty to one. (21-35 to 21-36)

#### Key Recommendations:

- PHI should consider implementing an HR service center in 2010. Establishing an HR service center would concentrate administrative and transactional tasks in an organization dedicated to operational efficiency in those areas.
- PHI should move forward with the HR dashboard business intelligence project. The project was deferred in late 2008 for budget reasons. The project will facilitate the extraction and analysis of HR data enabling better management decisions.

## **Chapter 22. HR Performance Evaluation, Compensation and Training**

PHI's policy is to pay base salaries consistent with the median salaries paid by other electric utilities. PHI increases national salary survey results by five percent to account for the higher costs of labor in PHI's region. PHI's total compensation offering is in line with the median value offered by other electric utilities, adjusted for geographic location. Base pay increases averaged 3.65 percent in 2007 and 2008. PHI commenced a comprehensive review of its compensation programs in 2009. The resulting changes will be implemented in 2010. (22-16 to 22-17)

PHI's new employee performance evaluation process receives good reviews from employees, supervisors and consultants. However, the supervisors are not using the full range of performance ratings. The system uses a performance rating scale of one (unsatisfactory) to five (significantly exceeds expectations). Currently, 98 percent of employees are rated either three or four. PHI's supervisors need to do a better job of differentiating performance. (22-4 to 22-6)

The performance ratings are only loosely linked to pay. The ratings are considered in the annual base pay increases for management employees. However, the relatively low annual budgets for base pay increases do not provide much capability to differentiate salary based on performance. The link between individual performance and incentive pay is very weak. The incentive plan is



based on business unit level metrics. Individual performance ratings are not reflected in the incentive pay plan. (22-7)

PHI does not have an enterprise-wide training organization. The Utility Operations Department has a centralized training group. PHI's other Power Delivery and Corporate Services Departments are responsible for their own training. PHI recognizes the need for a more centralized approach to training. (22-24 to 22-25)

PHI has good constructive relationships with its unions. According to representatives of the ACE and Delmarva IBEW locals, ACE treats its employees with respect and is a good company to work for. (22-35 to 22-36)

#### Key Recommendations:

- PHI should implement mandatory performance evaluation training for supervisors. PHI supervisors are not using the full range of ratings. PHI should enhance its training for supervisors and make the training mandatory.
- PHI should incorporate individual performance into its incentive pay plan. The current linkage between individual performance and pay is too weak to motivate employees. Individual performance should be given at least a one-third weight in the incentive pay plan.
- PHI should evaluate its training organizational model. PHI should consider adopting a more centralized approach to training.

### **Chapter 23. HR Employee Benefits and Productivity Analysis**

PHI's strategy is to provide competitive employee benefits while focusing on cost containment. PHI's current benefit plans and policies were implemented in 2005. PHI is conducting a comprehensive review of its benefits programs in 2009, with the resulting changes to be implemented in 2010. (23-4 to 23-5)

PHI's employee benefits cost over \$125 million a year. During 2007, PHI's benefits costs included \$36 million for active employee medical, \$37 million for retiree medical, \$25 million for pension costs, and \$11 million for the savings plan. (25-5 to 23-7)

PHI's benefit costs are modestly higher than the average for its peer group of electric utilities. According to a benchmarking survey of 2007 data, the value of PHI's management benefits exceeded the peer group average by five percent and the value of ACE's union benefits exceeded the group average by six percent. (23-7 to 23-8)

PHI's pension trust experienced losses equal to 25 percent of its beginning market value in 2008. As a result, PHI expects its pension costs to be \$56 million higher in 2009 than in 2008. PHI's pension losses are in line with those experienced by other companies and do not appear to be the result of an overly risky investment policy. (23-24 to 23-27)

PHI is implementing an integrated health care strategy. The strategy reduces costs and increases productivity by encouraging healthy lifestyles and by providing appropriate care before health conditions worsen and become more expensive. (23-11 to 23-12)

PHI currently has nine different health care plans for active employees. The large number of plans creates unnecessary administrative costs and complexity. PHI has a goal of consolidating those plans in 2009. PHI planned to re-bid all of its health care plans in 2009. (23-8 to 23-11)

PHI's productivity analysis approach is decentralized and lacks adequate oversight, governance and cross-functional integration. PHI currently has an information poor environment. It's operational and financial data is contained in multiple data bases located throughout the Company. Extracting and analyzing data across platforms is difficult and time consuming. (23-28 to 23-31)

PHI adopted an enterprise information management (EIM) and business intelligence (BI) strategy in 2008 to improve its decision making and operational efficiency. PHI implemented several BI projects in 2009 and has additional projects planned for 2010. EIM and BI have the potential to significantly improve PHI's productivity assessment process. (23-31 to 23-35)

#### Key Recommendations:

- PHI should work with its unions to consolidate its medical plans. Pepco's IBEW local agreed to medical plan consolidation in 2004. PHI should work with its ACE and Delmarva IBEW locals to eliminate plans that are not cost effective.
- PHI should consider increasing the monthly contributions paid by pre-medicare eligible participants in its retiree medical plans. The contributions are currently significantly lower than those required by other electric utilities.
- The Operations Department should implement an internal benchmarking program for PHI's operating districts. Comparing productivity across PHI's three utilities would facilitate the implementation of best practices and the standardization of operating procedures.

## **Chapter 24. Information Technology**

PHI's Information Technology (IT) department maintains 30 Service Level Expectations (SLE) performance metrics. SLEs are set by a committee that includes representatives of the "clients" (departments) that IT serves. During the 2005 through 2007 audit period, IT met or exceeded most of its SLEs. Most of PHI's major information systems are 10 years old or less and are either new or have been upgraded within the past five years. However, the separate legacy customer information systems used by ACE / DPL and Pepco are significantly older and were found to be inadequate and in need of replacement and integration back in 2005. At the time of our audit, IT plans were to replace the legacy systems with an updated, potentially integrated system (Pepco with DPL/ACE) sometime between 2011 and 2014. A 2014 date, if met, would be nine years after the systems were found to be inadequate. (24-9 to 24-11)

IT departmental business plans seem to indicate that staffing and training budgets are inadequate to provide necessary core systems support while also managing new projects. IT does not make use of project management organizations to oversee the development and implementation of large scale projects. In a benchmarking study done by the Hackett Group that included PHI, use of PMOs for large-scale project management was found to be a "best practice" and was employed by 70 percent of the companies in the survey group.

### Key Recommendations:

- We recommend PHI perform an assessment of the benefits and costs of forming a project management organization to oversee the development of large-scale IT projects.

## **Chapter 25. Support Services**

Reviews covered in this chapter include Facilities and Real Estate Management, Supply Chain, Vehicle Resources Management, Records Management, Corporate Security, Legal and Insurance and Claims organizations. Facilities and Real Estate Management had not implemented Service Level Expectations (SLE) performance measurements at the time of our audit. Building operating cost per square foot was near the mean of a benchmark group surveyed in 2005, but cost per occupant was more than double the mean. (25-7 to 25-11) In the area of Vehicle Resources Management, ACE's 2007 transportation cost per customer was 14 percent lower than an average of 46 utilities surveyed in a benchmark group. However, because of the rural nature of ACE's territory and a fleet mix that has relatively more heavy-duty vehicles than DPL or Pepco, ACE's cost per vehicle was 44 percent higher than PHI's overall average in 2007. (25-16 to 25-20) PHI's and ACE's Corporate Security policies and procedures appear to adequately address the security of revenue, people, facilities and other physical assets. (25-24 to 25-31) PHI has taken a number of pro-active steps to enhance cyber-security. In the area of Records Management, we found ACE and PHI have detailed schedules

for the retention of various corporate records and procedures call for destruction at the end of retention periods. However, we did not find that ACE or PHI have a retention policy specifically applicable to corporate email. (25-20 to 25-24) In the Legal organization, PHI has been trying to lower costs by increasing the number of legal matters it handles in-house. (25-31 to 25-34) PHI uses benchmarking to compare its Insurance programs against other utilities to determine the appropriateness and adequacy of coverage. (25-34 to 25-37) The Supply Chain organization met or exceeded all of the performance goals established in the 2008 Annual Incentive Plan. However, these goals were not fully integrated into a Supply Chain business plan that included a set of service level expectations for the department. The organization expects to have SLEs in place by 2010. (25-11 to 25-16)

Key Recommendations:

- We recommend PHI implement the Service Level Expectations performance measurement program in the areas of Facilities and Real Estate and Security. It is our understanding that SLEs will be implemented in 2010 in the Supply Chain organization.
- We recommend PHI benchmark key facilities performance metrics (cost per square foot, cost per occupant). The benchmarking last performed in 2005 is outdated.
- We recommend PHI develop a policy addressing the retention of corporate email.
- We recommend ACE implement a procedure to follow up on and ensure correction of deficiencies found during substation inspections. Currently, there is no standardized process to ensure that deficiencies noted during these inspections are corrected.

Management Audit of Atlantic City Electric Interviews Conducted by Overland Consulting				
Date	Interviewer Name	Interviewee Name	Interviewee Title (1)	Subject Matter
6/11/2008	Gary Harpster	Peter Schaub	Director & Process Manager, Supply Customer Energy	Power Supply
6/11/2008	Gary Harpster	Roger Pedersen	ACE Vice President Regulatory Affairs	Prior Audit Recommendations
6/12/2008	Gary Harpster	Joseph Janocha	Regulatory Affairs Manager	Power Supply (NUG)
7/15/2008	Gary Harpster	Basil Allison	Manager, System Planning Group	Reliability & Transmission Planning
7/15/2008	Gary Harpster	Chester Knapp	Manager, Reliability Group	Reliability
7/16/2008	Gary Harpster	Tsion Messick	Vice President, Power Delivery Transmission	Transmission
7/16/2008	Gary Harpster	William Mitchell	Manager, Transmission Services Group	Transmission
7/16/2008	Gary Harpster	Stephen Sunderhauf	Manager, Program Design And Evaluation	Demand Side Management
8/12/2008	Gary Harpster	George Potts	Vice President, Business Transformation	Smart Grid/Demand Response
8/12/2008	Gary Harpster	Gary Zibinski	Manager, Regulatory Planning	NUG Restructuring
8/13/2008	Gary Harpster	Paula James	Contract Administrator	One-call Program
8/13/2008	Gary Harpster	Jeffrey Mittler	ACE Regional Resource Manager	One Call & Construction Management
8/13/2008	Gary Harpster	John Lobley	Manager, Construction Management	Construction Management
8/19/2008 - 8/21/2008	Bob Welchlin	Kathy White	Assistance Controller, PHI Service Company	PHISCO accounting and cost allocations to ACE
8/19/2008 - 8/21/2008	Bob Welchlin	Karen McKenna	Manager, Accounting, PHI Service Company	PHISCO accounting and cost allocations to ACE
9/16/2008 - 9/19/2008	Bob Welchlin	Kathy White	Assistance Controller, PHI Service Company	PHISCO accounting and cost allocations to ACE
9/16/2008 - 9/19/2008	Bob Welchlin	Karen McKenna	Manager, Accounting, PHI Service Company	PHISCO accounting and cost allocations to ACE
10/7/2008	Bob Welchlin	Joseph Scaffidi	Vice President, Millennium Account Services	MAS operations and MAS relationship and transactions with ACE
10/8/2008	Bob Welchlin	Christine Cannon	Associate General Counsel, Pepco Holdings, Inc.	ACE's compliance with EDECA and implementation of prior audit recommendations
11/17/2008	Gregory Oetting & Howard Lubow	Kenneth Parker	President - Atlantic Region	Blueprint, Energy Master Plan, Lobbying
11/17/2008	Gregory Oetting & Howard Lubow	Paul Friel	Vice President & General Auditor	Internal Auditing
11/17/2008	Gary Harpster	Karen Franks	Hr Manager, Performance, Process & Technology	Performance & Productivity Analysis
11/17/2008	Gary Harpster	Sandra Fisher	Manager, Distribution Engineering Group	Productivity Analysis
11/17/2008	Gary Harpster	Jeffrey Mittler	ACE Regional Resource Manager	Productivity Analysis
11/18/2008	Gregory Oetting & Howard Lubow	Kevin McGowan	Vice President, Strategic and Financial Planning	Strategic Planning, Budgeting, Balanced Scorecard
11/18/2008	Gregory Oetting & Howard Lubow	George Potts	Vice President, Business Transformation	Blueprint, Smart Metering
11/18/2008	Gary Harpster	Mike Sullivan	Manager, Compensation & Benefits	Compensation & Benefits
11/19/2008	Gregory Oetting & Howard Lubow	Ronald Clark	Vice President and Controller	Internal Controls, Deficiencies, Staffing
11/20/2008	Geraldine Reed Brown	Charles Hill, Jr.	Business Manager for Local 210, IBEW	Labor Relations
12/5/2008	Geraldine Reed Brown	Karen Boyd	Manager Strategic Staffing & Work Force Planning	Talent Acquisitions and Workforce Planning
12/5/2008	Geraldine Reed Brown	Joy Dorsey	Director of Diversity	Diversity
12/5/2008	Geraldine Reed Brown	William Wolvertson	Strategic Labor Relations Manager	Labor Relations
12/8/2008	Gregory Oetting & Howard Lubow	Anton Zeithammel	Manager, SOX Compliance Process	SOX Compliance
12/8/2008	Gregory Oetting & Howard Lubow	William Gausman	Senior Vice President, Asset Management and Planning	System Reliability, Customer Satisfaction, Capital Spending
12/9/2008	Gregory Oetting & Howard Lubow	William Torgerson	Vice Chairman & Chief Legal Officer	Corporate Ethics and Policies, Commitments and Contingencies, Ring-Fencing
12/9/2008	Gregory Oetting & Howard Lubow	Kirk Emge	Senior Vice President & General Counsel	Corporate Ethics and Policies, Commitments and Contingencies, Ring-Fencing
12/10/2008	Gregory Oetting & Howard Lubow	Joseph Wathen	Vice President, Regulatory Affairs	Rate Filings, Regulatory Climate, Initiatives
12/10/2008	Gregory Oetting & Howard Lubow	Anthony Kamerick	Vice President and Treasurer	Rating Agency Interaction, Dividend Policy, External Financing, Liquidity
12/10/2008	Gregory Oetting & Howard Lubow	Kirk Emge	Senior Vice President & General Counsel	Legal Organization, Outside Counsel
12/11/2008	Gregory Oetting & Howard Lubow	Joseph Rigby	President and Chief Operating Officer	System Reliability, Blueprint, MAPP, Strategic Planning, Unregulated Businesses
12/12/2008	Gregory Oetting & Howard Lubow	Paul Barry	Senior Vice President and Chief Financial Officer	Financial Objectives, External Financing, Strategic Planning
12/12/2008	Gregory Oetting & Howard Lubow	Beverly Perry	Senior Vice President, Government Affairs and Public Policy	Lobbying, Government Interaction
12/16/2008	Gary Harpster	Karen Boyd	Manager, Strategic Staffing & Work Force Planning	Staffing And Workforce Planning
12/16/2008	Gary Harpster	Ron Godwin	Hr Manager, Business Solutions	HR Information Systems
12/17/2008	Gary Harpster	Tyler White	Manager, Utility Operations Training	Training
1/12/2009	Gregory Oetting & Howard Lubow	Lester Silverman	Director	Board and Committee Matters
1/12/2009	Gregory Oetting & Howard Lubow	Jack Dunn	Director, Chairman of Compensation/Human Resources Committee	Board and Committee Matters
1/13/2009	Gregory Oetting & Howard Lubow	Frank Heintz	Director	Board and Committee Matters
1/14/2009	Gregory Oetting & Howard Lubow	Frank Ross	Director, Chairman of Audit Committee	Board and Committee Matters
1/14/2009	Gregory Oetting & Howard Lubow	George MacCormack	Director	Board and Committee Matters
1/15/2009	Gregory Oetting & Howard Lubow	Terence Golden	Director, Chairman of Finance Committee	Board and Committee Matters
1/15/2009	Gregory Oetting & Howard Lubow	Richard McGlynn	Director, Chairman of Corporate Governance/Nominating Committee	Board and Committee Matters
1/15/2009	Geraldine Reed Brown	John Bolden	Business Manager, Local 1238	Labor Relations
1/16/2009	Gregory Oetting & Howard Lubow	Dennis Wraase	Chairman, President and CEO	Board and Committee Matters, Strategic Planning, Unregulated Businesses
1/16/2009	Gregory Oetting & Howard Lubow	Pauline Schneider	Director	Board and Committee Matters
1/26/2009	Gregory Oetting & Howard Lubow	Barbara Krumsiek	Director	Board and Committee Matters
1/26/2009	Gregory Oetting & Howard Lubow	Lawrence Nussdorf	Director, Chairman of Executive Committee, Lead Independent Director	Board and Committee Matters
2/18/2009	Bob Welchlin	Kathy White	Assistance Controller, PHI Service Company	ACE's lease with Atlantic Southern Properties
2/18/2009	Bob Welchlin	Karen McKenna	Manager, Accounting, PHI Service Company	ACE's lease with Atlantic Southern Properties
3/5/2009	Bob Welchlin	Scott Razze	Manager, Supplier Relations	Pepco Energy Services and its operations in New Jersey
3/17/2009	Gary Harpster	Tsion Messick	Vice President, Power Delivery Transmission	Station Power - CESI Plants
3/26/2009	Bob Welchlin	Noel Underwood	Manager, Information Technology Services, PHISCO	PHISCO and ACE information technology organization and operations
3/30/2009	Bob Welchlin	Ken Cohn	Chief Information Officer, Pepco Holdings, Inc.	Plans to implement a new customer service information system
4/20/2009	Bob Welchlin	Ron Dollin	Manager, Security, PHI Service Company	PHISCO and ACE security

Note1: Some of the individuals interviewed changed jobs after the interviews were held. The job titles listed represent the interviewees' positions at the time of the interview.

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## **Chapter 2. Overview of Affiliate Relationships and Transactions**

This chapter contains an overview of PHI's organizational structure and the relationships and transactions between Atlantic City Electric Company (ACE) and its affiliates. This chapter discusses the relationship and transactions between ACE and Atlantic Southern Properties, Inc. (ASP), which owns and leases a building (Mays Landing) that houses some of ACE's administration and operations employees. This chapter also addresses the New Jersey activities of Pepco Energy Services, Inc. and ACE's overall compliance with EDECA standards.

### **Audit Scope and Objectives**

The scope of Phase I of our audit included significant relationships and transactions between ACE and affiliates during the years 2005 through 2007 (the audit period). Among the key audit objectives were:

- Determine that internal controls and accounting procedures were sufficient to prevent significant opportunities for cross-subsidization between ACE and affiliates.
- Determine compliance with applicable portions of the Electric Discount and Energy Competition Act (EDECA).
- Determine the disposition of recommendations from the prior EDECA audit.

We focused a significant amount of effort on PHI Service Company (PHISCO) because it is where the greatest opportunities for affiliate cross-subsidization exist. Direct and allocated PHISCO charges accounted for a significant percentage of ACE's operating expenses. PHISCO is discussed in chapter 3. We also performed a review of the relationships and power supply transactions between ACE and its merchant affiliates Conectiv Energy Supply, Inc. (CESI) and Pepco Energy Services, Inc. (PES). The merchant affiliates engage in a wide variety of transactions in the PJM regional power and transmission markets. Merchant affiliate relationships are discussed in chapter 4. We reviewed the relationship between ACE and Millennium Account Services, LLC (MAS), which performs joint meter reading services on behalf of ACE and South Jersey Gas Company. MAS is discussed in chapter 5. We reviewed inter-company tax transactions and between ACE and PHI; in particular, compliance with the NJBPU's consolidated tax savings policy and the allocation of tax liabilities by PHI to ACE and other subsidiaries. This is discussed in chapter 6. We examined the relationship and transactions between ACE and Atlantic Southern Properties (ASP), which owns the Mays Landing utility operations building occupied by ACE. The lease arrangement between ACE and ASP is discussed in this chapter. We examined PES's limited participation in the New Jersey retail electricity and energy-related service markets, which is also discussed in this chapter.

## Summary of Findings

### **Atlantic Southern Properties**

1. The calculation of rent for ACE's use of space in the Mays Landing building owned by ASP is vaguely defined and insufficiently documented in both the building lease and the Cost Allocation Manual (CAM). Neither the lease between ACE and ASP nor ACE's CAM contain an adequate description of ACE's rent for Mays Landing or how it is calculated. The amount of space leased to ACE (currently approximately 160,000 square feet) is also not documented. Instead, the lease simply states that the "rental amount [is to be] developed in accordance with the CAM." When we asked where the basis for the rental amount was discussed in the CAM, ACE pointed us to Section I, page 4 of the CAM, which states that "the underlying [principle] of PHI's costing approach is the use of a fully distributed cost alignment methodology (full costing)".
2. The amount ACE paid per square foot for finished space at Mays Landing was comparable to what was charged to third party tenants. However, because ACE's lease cost for the space depended on an arbitrary allocation of total building cost between the finished and unfinished space categories, comparison of ACE's finished space cost to what non-affiliated tenants paid, without accounting for unfinished space, is not meaningful. Based on building cost allocated to finished space, ACE was charged \$14.89 per square foot in 2006 in Mays Landing. The Federal Aviation Administration (F.A.A.), by far the most significant third party tenant, was charged \$14.63 for finished space in 2006.<sup>1</sup> At first glance, ACE's cost-based price appears reasonable: ACE was charged only a little more than what an unaffiliated tenant paid for a significant amount of space in the same building. However, under the procedure in place during the audit period, ACE's price depended on an arbitrary allocation of total building cost between the unfinished and finished space categories. As discussed below, less than half of ACE's total lease cost was attributable to finished space. ACE was the only significant tenant occupying and paying for unfinished space (77.55% of the usable unfinished space in the building was assigned to ACE), and unfinished space, based on the cost allocation noted above, was charged to ACE at nearly three-fourths the price of finished space. Because ACE's finished space price was dependent on several variables and accounted for less than half of ACE's total lease cost, we believe a market comparison to what third parties paid for finished space only is not meaningful.
3. ACE paid 54% more per square foot for unfinished space than the price paid by third party tenant the F.A.A. Unfinished space accounted for more than half of ACE's total audit period lease cost in Mays Landing.<sup>2</sup> Neither the amount of unfinished space assigned to ACE, nor the basis for allocating building cost to the unfinished category, was documented in ACE's

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<sup>1</sup> Response to Discovery, OC-729 and OC-908-b. \$14.63 is an average of \$16.64 per s.f. for 32,564 s.f. of finished office space and \$7.30 per s.f. for 8,920 s.f. of space used as a gym.

<sup>2</sup> According to data provided in response to Discovery, OC-729, ACE's total lease cost for Mays Landing broke between finished and unfinished categories as follows: 2006 – 44.7% finished / 55.3% unfinished; 2007 – 43.3% / 56.7%; 2008 – 41.9% / 58.1%.



lease. ACE was assigned an average of more than 100,000 square feet of unfinished space during the audit period. ACE was charged an average of \$11.28 per square foot for the space. Third party tenant the F.A.A. was charged \$7.30 per square foot for 5,000 square feet of unfinished warehouse space, 35% less than the price paid by ACE. Much of the space assigned to ACE consisted of vehicle repair and materials and supplies storage, consistent with ACE's utility operating needs.<sup>3</sup> However, a significant amount was assigned for "furniture storage", and smaller amounts were designated as "training" and "evidence storage."<sup>4</sup> By 2008, ACE was the only tenant using unfinished space in Mays Landing, occupying 83% of the available space, with the remainder retained (unleased) by ASP. In 2008, ACE was charged almost \$280,000 annually for storage space that ACE indicated was used primarily for surplus furniture.<sup>5</sup> Neither the amount of space nor the price were documented in ACE's lease.

4. Taking finished and unfinished space together, ACE annually paid approximately \$460,000 more than the market price for the space it occupied at Mays Landing, as evidenced by the lease terms given to third-party tenant the F.A.A. - As noted above, ACE's price for finished and unfinished square feet in Mays Landing depended on an arbitrary allocation of building cost between the two space categories. The allocation of cost to finished space produced a cost-based price per square foot close to the prices paid by third party tenants. However, the flip side of this allocation – the cost allocated to unfinished space – resulted in a cost-based price for unfinished space that was 54% higher than the price paid by the F.A.A., which leased both finished and unfinished space in the building. Unfinished space accounted for more than half of ACE's total lease cost during the audit period, and by 2008, ACE was assigned more than 80% of the unfinished space available in the building. Taking finished and unfinished space together, ACE paid about \$460,000 more each year during the audit period than it would have paid had it been charged the same prices per square foot paid by the F.A.A.
5. ACE and PHISCO were unable to provide workpapers showing the calculation of ACE's Mays Landing lease cost for 2005. – We did not review the costs charged by ASP to ACE under the Mays Landing lease for 2005 because the Company indicated it could not provide supporting workpapers. ACE was charged \$1,945,401 in 2005 (net of amounts charged by ACE to ASP for building maintenance). This compares to net charges of \$1,565,387 in 2006 and \$1,713,199 in 2007.<sup>6</sup> As a result of the unavailability of lease cost documentation for 2005, the audit period for transactions between ACE and ASP was adjusted forward by one year, to include the years 2006-2008.

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<sup>3</sup> Response to Discovery, OC-910

<sup>4</sup> Id.

<sup>5</sup> Based on response to Discovery, OC-729, in 2008 ACE used 23,512 square feet of unfinished space in cost center 109 (furniture storage). Based on Discovery, OC-910, ACE used 619 square feet in cost center 851 (evidence storage). Combined, ACE used 24,131 square feet for of unfinished space for furniture and evidence storage. At a cost of \$11.58 per square foot, this is \$279,442 annually.

<sup>6</sup> Response to Discovery, OC-4, 7 & 8

## Compliance with EDECA Standards

1. Based on the nature of ACE affiliates and their businesses, there were limited opportunities for ACE to run afoul of EDECA rules addressing non-discrimination, cross-marketing and information disclosure to affiliates providing competitive services in New Jersey. During the audit period ACE had three affiliates operating in New Jersey that were classified as “related competitive business segments”: PES, MAS, and ASP.<sup>7</sup>
  - PES had a very limited presence in New Jersey, selling about \$3 million annually in competitive electricity to a few large commercial and industrial customers. It did not market to residential or small commercial customers and New Jersey accounts represented a very small share of its business. We found nothing to indicate that PES gained an advantage in selling services in New Jersey based on its relationship with ACE. PES’ website is not linked to ACE and does not mention ACE.
  - MAS provided meter reading to two customers under a single trilateral agreement involving MAS, ACE and South Jersey Gas. Overland found no evidence that MAS affected broader New Jersey markets for energy or related services, although, as discussed below and in chapter 5 and noted below, MAS’ transfer pricing to ACE was not in compliance with EDECA transfer pricing rules. Most of the competitive market concerns that EDECA is designed to address are not applicable to MAS.
  - ASP, a real estate affiliate, owned the Mays Landing building, which it leased to ACE and to third parties (notably, the Federal Aviation Administration) during the audit period. EDECA rules require that ACE pay the lower of cost or market for the space it leased in Mays Landing. As explained below, ACE paid more than the market price for this space and was not compliant with EDECA transfer pricing requirements. However, we found no evidence that ACE promoted ASP in the commercial real estate marketplace. Mays Landing was ASP’s only investment during the audit period, and it was leased mainly to ACE and PHISCO. It is therefore reasonable to conclude that ASP did not have a significant effect on the overall local market for commercial office space.
2. ACE was compliant with significant EDECA provisions addressing the separation of utility management and utility accounting from competitive affiliates, and the sharing of corporate support services. Overland found that ACE maintained the proper separation of its books and management from those of its affiliates. As discussed in more detail below, ACE shared certain utility services with DPL. Most of these services were conducted jointly through PHISCO, the service company. Most of the affiliates served by PHISCO are not classified as “related competitive segments” under EDECA. Nevertheless, the nature of the services provided by PHISCO, and the related procedures for distribution of costs among

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<sup>7</sup> Previous EDECA audits have determined that affiliates that provide a product or service to end users (i.e., a product or service that is not resold) are subject to EDECA’s competition rules.

affiliates, were appropriate under the EDECA standards. In terms of risk to ACE, the services provided by PHISCO and related distributions of cost were ACE's most significant overall relationship during the audit period. The relationship with PHISCO was analyzed in detail and is discussed at length in a separate chapter.

3. ACE and ASP were not in compliance with EDECA transfer pricing rules that required ACE's pay no more than the market price for space leased in Mays Landing. Per EDECA Section 14:4-5.5(u)(2), utility asset transfers, including leases, from an RCBS "shall be recorded at the lesser of book value or fair market value." EDECA Section 14:4-5.5(t)(2) states that services offered for sale on the open market shall be priced at "no more than fair market value." ASP offered and rented commercial space on the open market, making it subject to this EDECA rule. As discussed above, the price ACE paid for finished space was slightly higher than the price paid by the F.A.A., the only third party tenant leasing a substantial amount of space. However, ACE paid substantially more per square foot than the price paid by the F.A.A. for unfinished space. As such, ACE and ASP were not compliant with EDECA transfer pricing requirements. As discussed in more detail below, we calculated ACE's overpayment (relative to EDECA requirements) to be about \$460,000 annually, or about \$1.4 million for the three-year audit period.
4. MAS did not comply with EDECA rules that required transfer pricing for "services not produced . . . for sale on the open market" be priced at the lower of fully allocated cost or fair market value. MAS' classification as an RCBS was established in two prior audits. EDECA section 14:4-5.5(t)(6) requires that an RCBS that sells a service to a utility that is *not* sold on the open market provide the service at the lower of fully allocated cost or fair market value. As explained in detail in the chapter documenting transactions with MAS, MAS did not provide service on the open market during the audit period and no market value was established. MAS audit period pricing was also not based on fully distributed (allocated) cost; in fact, there was no cost basis for the meter reading prices MAS charged to ACE and South Jersey Gas. Instead, MAS pricing was set by fiat by its owners, which are holding companies for ACE and South Jersey Gas. MAS pricing appears to have been set to achieve a target level of operating margin.

## **Recommendations**

Recommendations concerning PHISCO, power supply transactions and MAS are discussed in the applicable chapters.

### **Atlantic Southern Properties**

1. Fully document the pricing basis and space leased by ACE in the lease. Require ACE to approve all changes in the price per square foot and space leased before they are made. Document all changes in lease amendments signed by both parties. As discussed above, the lease and the CAM currently contains no information other than "fully distributed cost" to describe the rent that ACE pays to ASP for its use of the Mays Landing building. The rent

varies from year to year, as expenses and space usage change. Overland recommends ACE's rent calculation, including the charges per square foot of finished and unfinished space, and the amount of space leased, be fully documented in the ASP / ACE lease. In addition to full documentation in the lease, to the extent lease prices are based on cost, changes in: 1) the cost basis (cost methodology, cost elements or allocation to space categories); 2) the market price basis (including market survey data supporting the market price; or 3) the *amount* of space leased should be approved in advance and incorporated into the lease by way of an amendment, dated and signed by both ASP and ACE. While it will not turn the lease into an arms-length contract, implementing this recommendation will bring ACE into compliance with standard business practice for documenting commercial lease transactions.

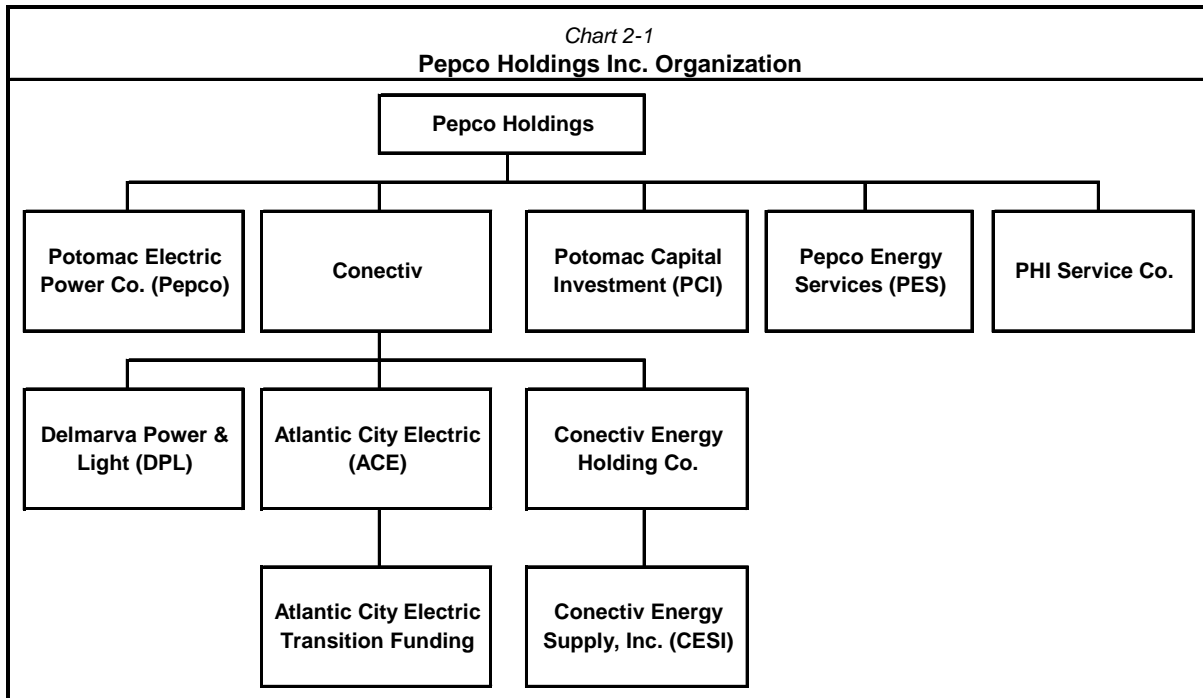
2. Conduct an annual survey of market prices for finished and unfinished commercial space in market area surrounding Mays Landing. Ensure the price charged to ACE for finished and unfinished space is no more than the lower of fully allocated cost or the market price for equivalent finished and unfinished commercial space in the local market area. As discussed above, EDECA transfer pricing rules require that ASP's lease to ACE be priced at "no more than fair market value." ACE's Mays Landing lease did not comply with this provision. As a result, we estimate that ACE paid approximately \$1.4 million (\$460,000 per year for three years) over the market value for space leased at Mays Landing during the audit period. Overland recommends ACE annually obtain, by survey, the necessary market data to determine that its Mays Landing lease price per square foot does not exceed the market price for equivalent finished or unfinished commercial space in the Mays Landing market area. To the extent ACE is charged more than the market price for either finished or unfinished space (i.e., if ACE is charged "fully distributed cost" that exceeds the market price in either space category), ACE should record the excess of cost over market below-the-line so that it is not passed on to ratepayers. The prior audit recommended that the lease be brought into compliance with EDECA's "lower of cost or market" pricing rules.<sup>8</sup> Despite the prior auditor's report notation that a new lease document (which the auditor had not reviewed) was to be executed, compliance with transfer pricing rules was *not* implemented. Therefore, in this audit, we recommend the NJBPU require ACE to provide documented proof of compliance (consisting of the new lease document and annual market survey results).

## **PHI's Organizational Structure**

The flowchart below summarizes the structure of PHI and ACE's place in that structure.

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<sup>8</sup> Liberty Consulting, Audit of the Competitive Service Offerings of Atlantic City Electric, March 31, 2003, recommendation 28, p. 117.



For financial reporting purposes, PHI is divided into the following operating segments:

**Power Delivery** – The Power Delivery segment consists of the transmission and delivery of electricity and natural gas service by PHI’s three regulated utility subsidiaries: Potomac Electric Power Company (Pepco) (approximately 750,000 customers), Delmarva Power and Light Company (DPL) (approximately 525,000 customers) and Atlantic City Electric Company (ACE) (approximately 540,000 customers). On a combined basis, the utilities operate in the District of Columbia and the states of Delaware, Maryland and New Jersey. ACE provides only electric service and operates exclusively in New Jersey.

**Competitive Energy** - This segment generates, markets and supplies energy through a number of unregulated subsidiaries organized under two umbrellas:

- **Conectiv Energy Holding Company (CEH)**, through its subsidiaries, provides electric power, power capacity and “ancillary services” using its own generating facilities. The CEH subsidiaries provide power only in the wholesale markets. They do not deliver power to retail customers. At the end of 2007, CESI’s generating capacity consisted of approximately 3,700 MW.<sup>9</sup> CEH controls an additional 480 MW of capacity through tolling agreements, and is constructing a plant which will add another 545 MW of capacity to its generating portfolio in 2011. CEH’s primary operating subsidiaries during the audit period include:

<sup>9</sup> PHI 2007 S.E.C. Form 10-K, p. 10.

- Conectiv Energy Supply, Inc. (CESI) is CEH's primary operating subsidiary during the audit period. It conducted energy procurement, transportation, energy trading and wholesale energy sales.
  - Conectiv Bethlehem, LLC (CBL) owns and operates a 1,100 MW generating plant in Pennsylvania.
  - Conectiv Mid-Merit, LLC (CMM) is currently constructing a 545 MW generating plant in Pennsylvania.
  - Conectiv Delmarva Generation, LLC (CDG) owns and operates generating plants formerly owned by DPL.
  - Conectiv Atlantic Generation, LLC (CAG). CAG owns and operates generating plants formerly owned by ACE.
  - PHI Operating Services Company (POSC) - operates and maintains Conectiv generating plants.
  - Delaware Operating Services Company (DOSC) - operated and maintained Conectiv generating plants in 2005. By the end of the audit period it no longer conducted any business.
- Pepco Energy Services, Inc. (PES) is PHI's competitive retail energy supplier. PES and its subsidiaries sell electricity to commercial, industrial and government customers in the mid-Atlantic and northeastern regions and the Chicago, IL area. PES sells competitive natural gas supply services in the mid-Atlantic area. PES subsidiaries also own two older, oil-fired generating plants in the District of Columbia. These plants sell power on a wholesale basis into the PJM market area. PHI plans to fully deactivate both plants by 2012. PES did not sell retail electricity to residential or small commercial customers in New Jersey during the audit period, but it did sell power to a few larger customers. Based on remittances by ACE (which bills customers on PES' behalf), PES' sales to New Jersey customers averaged between \$3 million and \$4 million annually during the audit period. PES' primary operating subsidiaries include:
    - Pepco Energy Services (PES) sells wholesale and retail energy commodity and related services, including electricity and natural gas. It also provides energy efficiency contracting services primarily to government customers. PES had 106 employees at the end of 2006 and 128 employees at the end of 2007.<sup>10</sup>
    - Conectiv Thermal Systems, Inc. develops, owns and operates systems that provide heating and cooling. These systems currently serve customers in Wilmington, DE and in the casino district of Atlantic City, NJ.
    - Potomac Power Resources, LLC owns the District of Columbia power plants discussed above.
    - Pepco Building Services, Inc. owns businesses that provided heating, ventilation, air conditions, electrical testing and building automation. **[BEGIN CONFIDENTIAL]**

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<sup>10</sup> Response to Discovery, OC-377. ACE did not provide employee statistics for PES for 2005.

[END

**CONFIDENTIAL]** were sold in 2006 for approximately \$21 million.<sup>11</sup>

**PHI Investments** - This segment consists primarily of Potomac Capital Investment Corporation (PCI). It also includes Conectiv Properties and Investments, Inc. (CPI), Atlantic Southern Properties, Inc. (ASP) and Conectiv Communications (CCI), Inc.

- Potomac Capital Investment Corporation (PCI) - PCI, owned by Pepco Holdings, Inc., is the primary company in the PHI Investments business segment. Financial statements describe PCI as the owner of a “portfolio of financial investments which are principally energy leveraged leases.”<sup>12</sup> Basically, PCI purchases energy industry assets, including electric generating plants and gas transmission and distribution pipe, and leases them back to the sellers. During the audit period, PCI’s portfolio consisted of an equity investment of approximately \$1.3 billion. Approximately two-thirds was invested in electric power plant leases, with the remainder invested in gas transmission and distribution leases. The underlying assets are located in The Netherlands, Austria and Australia. PCI had no employees during the audit period. PCI is a participant in the PHI money pool. During most of the audit period, PCI also operated with a **[BEGIN CONFIDENTIAL]** **[END CONFIDENTIAL]** loan from PHI. In November, 2007, PCI repaid half of the loan.
- Atlantic Southern Properties (ASP) - ASP is owned by Conectiv. It owns the Mays Landing building, leased to ACE and PHISCO.
- Conectiv Communications (CCI) - This affiliate is owned by Conectiv. Prior to 2007, CCI provided the use of a fiber optic loop to affiliates. It was no longer operating in 2007, but continued to pay preferred dividends approximately equal to its annual revenue in prior years.
- Conectiv Properties and Investments, Inc (CPI) - This subsidiary, owned by Conectiv, owns an office building leased to PHISCO. Total revenue from these leases is approximately **[BEGIN CONFIDENTIAL]** **[END CONFIDENTIAL]** annually.<sup>13</sup>

### **Summary of Transactions Between ACE and Affiliates**

Significant transactions between ACE and its affiliates during the audit period included the following:<sup>14</sup>

- Power and Transmission Transactions - ACE bought power and transmission services from Conectiv Energy Supply, Inc. (CESI). Power and transmission purchases from CESI

<sup>11</sup> PHI 2007 S.E.C. Form 10-K, p. 12.

<sup>12</sup> Response to Discovery, OC-5, PCI 2006 & 2007 financial statements.

<sup>13</sup> Response to Discovery, OC-47.

<sup>14</sup> Response to Discovery, OC-4, OC-7 and OC-8.

constituted ACE's largest affiliate relationship in dollar terms **[BEGIN CONFIDENTIAL]**  
**[END CONFIDENTIAL]**.

The relationship between ACE and CESI is discussed in chapter 4.

- Service Company Transactions - ACE received a significant amount of service during the audit period from PHI Service Company (PHISCO). PHISCO provided corporate and shared utility and competitive energy operating services to most of PHI's operating subsidiaries. PHISCO's employees, including PHI's corporate executives, also managed PHI's non-operating (investment) subsidiaries. In addition to providing services, PHISCO also assigned employee benefit costs to ACE that PHISCO paid on behalf of ACE employees. PHISCO services to ACE totaled approximately \$82 million in 2005, \$79 million in 2006 and \$81 million in 2007. PHISCO assigned ACE employee benefits expenses of \$6.7 million in 2005, \$6.7 million in 2006 and \$5.7 million in 2007. Services provided by PHISCO to ACE are discussed in chapter 3.
- Meter Reading Services - ACE purchases meter reading services from Millennium Account Services (MAS), an affiliate jointly owned by Conectiv Solutions LLC (a subsidiary of Conectiv) and South Jersey Industries, the holding company for South Jersey Gas. MAS exists to perform meter reading services for the utilities of its two holding company owners. Meter reading charges to ACE were **[BEGIN CONFIDENTIAL]**  
**[END CONFIDENTIAL]**. ACE's relationship and transactions with MAS are discussed chapter 5.
- Intercompany Tax Allocation – Pepco Holdings, Inc. is the entity that pays corporate income tax on the income earned by ACE and other PHI subsidiaries. PHI allocates tax liabilities to subsidiaries based on income or losses. Tax allocations to ACE were \$56 million in 2005, \$108 million in 2006 and \$27 million in 2007. Intercompany tax allocations are discussed in chapter 6.
- Dividends to the Parent - ACE pays dividends to the Pepco Holdings, Inc. ACE's dividends to the parent were \$96 million in 2005, \$109 million in 2006, \$50 million in 2007. Issues involving finance, including dividends paid to the parent company, are covered in Phase II of the report in chapter 11.
- Building Lease - ACE's Mays Landing building is owned by affiliate ASP. ACE leases space from ASP and supplies some building services to ASP. Lease payments were **[BEGIN CONFIDENTIAL]**

**[END CONFIDENTIAL]**

ACE's relationship with ASP and the Mays Landing lease are discussed below in this chapter.



- Remittances to Pepco Energy Services (PES) - PHI's competitive retail energy affiliate PES sells power to certain large customers in ACE's territory. ACE performs consolidated billing for these customers and remits the amounts collected to PES. ACE remitted **[BEGIN CONFIDENTIAL]** **[END CONFIDENTIAL]**. The ACE / PES relationship is discussed below in this chapter and in chapter 7.
- Other Transactions - During the audit period, ACE sold electricity at tariffed rates to affiliate Thermal Energy Limited Partnership I **[BEGIN CONFIDENTIAL]** **[END CONFIDENTIAL]**. ACE provided and received minor amounts of direct labor, materials and the use of vehicles to and from Pepco, DPL, Conectiv Bethlehem, Conectiv Delmarva Generation and Conectiv Atlantic Generation, resulting in small net transfers to and from ACE of less than \$1 million per year.

### **ACE's Lease With Atlantic Southern Properties**

ASP is described by ACE as a company "formed to own and manage certain investments in real estate including a commercial office and warehouse facility in southern New Jersey."<sup>15</sup> It owns the Mays Landing building, which serves as operating and administrative office space for ACE. ACE has rented space in the building from ASP since 1999. Mays Landing was ASP's only real estate investment during the audit period.<sup>16</sup> In addition to ACE, several tenants not affiliated with PHI or ACE rented space in the building during the audit period:

- The Federal Aviation Administration (F.A.A.) (vacated in 2007)
- A building maintenance company (vacated in 2005)
- A company running a day care facility
- An alarm company

On a combined basis, third party tenants not affiliated with PHI or ACE occupied approximately 77,300 of Mays Landing's 282,000 square feet in 2006, and 16,900 square feet after the F.A.A. vacated in 2007. The amount occupied in 2005 is unknown.<sup>17</sup>

The lease between ACE and ASP for Mays Landing contains the following provisions:

- The lease is on a "year to year" basis unless terminated.
- Rent price is defined only as an amount "developed in accordance with the CAM."
- Utilities are "developed and charged in accordance with the CAM."

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<sup>15</sup> Response to Discovery, OC-3.

<sup>16</sup> Phone interview, Kathy White and Karen McKenna, February 18, 2009.

<sup>17</sup> Square footage statistics per rental calculations provided in response to Discovery, OC-729. ACE was unable to locate 2005 rental calculation workpapers.

- There is a 5 percent late charge if rent is not paid by the 15<sup>th</sup> of each month, which ACE indicates it did not pay during the audit period.<sup>18</sup>

**Affiliate Transfer Pricing** - The terms of the Mays Landing lease are vague and non-specific. There is nothing in the lease that specifies the basis upon which rents are calculated or how much space is to be leased. Although it references the Cost Allocation Manual (CAM), there is nothing in the CAM referencing ASP or the lease. When we asked ACE to identify the portion of the CAM governing the rent calculation, the Company responded as follows:

Section I, page 4 of the MD 2008 CAM filed with the Company's response to OC 40, governs the calculation of the rental amounts. This section describes the underlying principal (sic) of PHI's costing approach as the use of fully distributed cost. Additional information describing fully distributed cost has been provided under item B above.<sup>19</sup>

The referenced section of the CAM describes fully distributed cost in theoretical terms, as "a philosophy . . . based on the premise that both direct and indirect costs are identified for products and services." No description of the Mays Landing rent calculation is included or referenced. The additional information "provided under item B" (Response to Discovery, OC-729) is similarly vague:

B. The rental amounts were developed based on PHI's cost approach of using a fully distributed cost alignment methodology (full costing) to charge for services provided by one PHI affiliate to another affiliate. As stated in the company's 2008 Cost Allocation Manual (CAM), PHI's full costing philosophy is based on the premise that both direct and indirect costs are identified for products and services and that the costs of products and services include all costs that would be incurred on a stand alone basis . . .<sup>20</sup>

This description, like that in the CAM, is vague and uninformative and contains nothing to describe how ASP's rent is calculated; specifically, it contains nothing explaining how rent is "developed in accordance with the CAM."

**Analysis of Mays Landing Rents Charged to ACE** - We asked for a detailed calculation of the fully distributed rental cost calculation developed in accordance with the CAM.<sup>21</sup> ACE provided rent calculations for 2006 and 2007, but indicated that 2005 was unavailable.<sup>22</sup> Below is a summary of the 2007 calculation, which shows the ACE rental for Mays Landing was **[BEGIN CONFIDENTIAL]** **[END CONFIDENTIAL]**.

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<sup>18</sup> Response to Discovery, OC-729, item E

<sup>19</sup> Response to Discovery, OC-729, Item C

<sup>20</sup> Response to Discovery, OC-729, Item B

<sup>21</sup> Response to Discovery, OC-729

<sup>22</sup> Response to Discovery, Per OC-7, **[BEGIN CONFIDENTIAL]**

**[END CONFIDENTIAL]**

[BEGIN CONFIDENTIAL]

<p style="text-align: center;">Table 2-1 Atlantic Southern Properties 2007 Calculation of Atlantic City Electric's Lease Payment Amounts (\$000s)</p>				
Item	Unfinished Pct	Unfinished Space Allocation	Finished Space Allocation	Total

[END CONFIDENTIAL]

**Audit Testing of ACE’s Rent for Mays Landing** – We tested ASP’s cost-based rent calculation, which is calculated by PHISCO. We also examined the reasonableness of the amount charged.

**ACE’s Rent Calculation** - We attempted to trace the amounts in the table above to ASP’s trial balance for 2007.<sup>23</sup> We traced the total amount charged to ACE – **[BEGIN CONFIDENTIAL]**  
**[END CONFIDENTIAL]** - directly to intercompany revenue on the ASP trial balance. Some of the amounts used to compute total rent (depreciation, utilities, property taxes) tied directly to the trial balance. Tracing O&M from the rent calculation above required a reconciliation that we requested from ACE.<sup>24</sup>

The response to our request for the detailed rent calculation contained no explanation of how interest was calculated. We determined through discussion with PHISCO’s Assistant Controller that interest expense is based on a commercial paper (short term debt) rate applied to net

<sup>23</sup> Response to Discovery, OC-47, Conectiv Consolidating Workpapers, Company 3520, ASP.  
<sup>24</sup> Response to Discovery, OC-909

borrowings by ASP from the money pool.<sup>25</sup> The resulting interest expense charged to ACE during the audit period was equivalent to an approximate 10 percent rate of return on ASP's net property, plant and equipment, which consists entirely of Mays Landing.

Reasonableness of the Rent Charged to ACE – Tables 5 and 6 below are comparisons of finished and unfinished space lease rates per square foot for ACE and several third party tenants. Based on an arbitrary allocation of building costs to ACE's finished and unfinished space rates, the comparisons show that ACE's cost-based rate per square foot for *finished* space appears reasonable in comparison to several third-party tenants; most notably, the F.A.A., which leased a substantial amount of space over a five-year period from 2002 to 2007. However, ACE paid 54% more per square foot for *unfinished* space than the F.A.A., even though ACE was assigned 20 times as much unfinished space as leased by the F.A.A. In addition, it appears that about 600 square feet of unfinished space was provided at no charge (over the lease rate for finished space) to tenant American Building Maintenance (ABM).<sup>26</sup> Taking finished and unfinished space together, and using the prices paid by the F.A.A. as a market proxy, we calculated that ACE paid approximately \$460,000 annually (\$1.4 million for the audit period) *more* than the market price for the space assigned to it in Mays Landing.<sup>27</sup>

It is possible for the amounts charged to ACE to be “managed” (for example, by allocating the amount necessary to keep finished space near or below the price charged to third party tenants). This is a consequence of affiliate relationship between ACE and ASP. However, it is *facilitated* by the lack of documentation in the lease as to how ACE's rent is to be calculated, how building cost is to be allocated between space categories, how much space ACE occupies from “year to year”, and market price comparisons for equivalent commercial space. Regardless of how ACE's lease cost was calculated and documented (or not documented) in the lease, ACE and ASP were not in compliance with EDECA because there was no information to demonstrate that ACE's *overall* cost-based price during the audit period was not higher than market.

Building Cost Charged to ACE - ACE's cost-based price to lease Mays Landing during the audit period depended on the following variables:

- Total incurred building cost for Mays Landing – Total building cost and related audit testing is discussed above.
- The allocation of building cost between finished and unfinished space - The total incurred cost of Mays Landing includes operating costs (maintenance, utilities, etc.), depreciation and interest on ASP's borrowings from the PHI money pool. ACE's share of this cost depends in part on an arbitrary allocation of 60% of expense to the “finished

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<sup>25</sup> Phone interview, Kathy White and Karen McKenna, February 18, 2009.

<sup>26</sup> Response to Discovery, OC-935, Attachment

<sup>27</sup> Referencing the prices and space figures in Table 5 and Table 6, [(15.32 – 14.63) x 59,195 finished s.f. + (11.28 – 7.30) x 105,604 unfinished s.f.] = \$461,149.

space” category and 40% to unfinished.<sup>28</sup> Allocations by cost category are shown in the following table. There was no practical way to test these arbitrary allocations. EDECA rules require that the building space in Mays Landing be priced to ACE at no more than market price. As discussed above, we recommend that ACE survey the market for equivalent finished and unfinished commercial space in the Mays Landing area to determine the proper price per square foot for each space category in its lease.

Cost Category	Cost Allocation to	
	Finished	Unfinished
Operations & Maint Exp.	60%	40%
Depreciation	60%	40%
Utilities	70%	30%
Property Tax	60%	40%
Facilities Svc Admin	50%	50%
Allocations & Assessments	60%	40%
Property Insurance	60%	40%
Interest on Money Pool Loan	60%	40%
Overall Building Cost Allocation (1)	60%	40%
Relative Building Space (2)	53%	47%
Source: Response to Discovery, OC-729		
1. For 2007, based on total cost in each category and the factors shown above.		
2. Based on 281,943 total square feet; 133,293 of which was designated "unfinished" as of 12/31/07.		

- The amount of finished space rented and the allocation of unfinished space between ACE and ASP. - ACE’s total cost also depended on the amount of finished and unfinished space assigned to ACE. The cost of space not assigned to ACE is assigned to ASP. To test the reasonableness of the space charged to ACE:
  - We computed the number of square feet of finished space per employee. During the audit period, finished space (including finished common space) averaged about 300 square feet per PHI employee.<sup>29</sup> We consider this to be a relatively high, but not extremely high, amount per employee.<sup>30</sup>
  - We assessed the usage of unfinished space to determine why ACE was charged for more than 100,000 square feet of unfinished space. ASP’s allocation of unfinished space to affiliated and non-affiliated tenants, and to itself, is summarized in the table below. In 2006 and 2007, ACE was assigned 77% of

<sup>28</sup> “Arbitrary”, does not mean “unreasonable.” Rather, it means that an allocation of 60% to finished space represents a number chosen by PHISCO and / or ASP.

<sup>29</sup> Response to Discovery, OC-908-a and OC-729. This includes space occupied by ACE and PHISCO employees.

<sup>30</sup> It was our observation while working at Mays Landing that a significant amount of finished space was lightly used.

this space. In 2008, ACE’s share of unfinished space rose to 82%. When the largest third party tenant (the F.A.A.) vacated the building, the unfinished space assigned to third party tenants appears to have shifted, first to ASP in 2007, and then to ACE in 2008. In 2008, at the rate of \$11.58 per square foot, ACE’s annual bill for unfinished space, approximately \$1,265,000, accounted for nearly two-thirds of its Mays Landing rent.

<b>Assigned To</b>	<b>2006</b>	<b>2007</b>	<b>2008</b>
ACE	102,950	102,745	109,256
ASP (Retained, not Leased)	22,748	29,335	22,678
PHISCO	621	619	619
3rd Party Tenants	7,240	594	594
<b>Total</b>	<b>133,559</b>	<b>133,293</b>	<b>133,147</b>

Source: Response to Discovery, OC-729

We also asked an accounting of the use of unfinished space assigned to ACE. This is summarized in the table below.

<b>Used For</b>	<b>Amount</b>
Furniture Storage	18,600
Garage (Vehicle Repair)	15,232
Warehousing (Stores, Maint.)	64,232
Training Area	4,682
Evidence Storage	619
<b>Total</b>	<b>103,365</b>

Source: Response to Discovery, OC-910

- The total, 103,365 square feet, is the sum of the unfinished space assigned to ACE and PHISCO in 2007. ACE paid for an additional 6,500 square feet of unfinished space in 2008. The additional amount can probably be added to either the furniture or evidence storage, since garage and stores areas should be confined to finite spaces specifically designed for the purposes indicated. Thus, in 2008, it appears that ACE paid as much as \$280,000 for storage mainly of furniture.<sup>31</sup> In fact, it is possible that ACE’s annual cost for Mays Landing furniture storage exceeds the market value of the furniture. This highlights one of the problems with the lease as it is currently structured: Any amount of space deemed necessary can be assigned to ACE, without signed approval on the part of ACE, and without written evidence in the

<sup>31</sup> Using amounts per response to Discovery, OC-729 and 910: (18,600 s.f. furniture storage + 620 s.f. evidence storage + 6,500 additional unfinished square feet assigned to ACE in 2008) X \$11.58 cost per unfinished square foot = \$297,838. The amount paid for furniture storage in 2007 was \$215,760.

lease as to ACE’s need for or use of the space in the form of a lease amendment.<sup>32</sup> It also appears likely, based on the fluid nature of the space assigned to ACE from year-to-year, that ACE bears, directly or indirectly, the cost consequences of space leased to or vacated by third party tenants.

We also found that ACE was charged not only for space assigned to its own employees, but also for approximately 19,000 square feet assigned to PHISCO employees. We reviewed the cost center detail for the space assigned to PHISCO and determined that the cost center titles were primarily consistent with those of utility operations, rather than corporate administration.<sup>33</sup> However, there is nothing in ACE’s lease documenting the fact that ACE will pay for space occupied by PHISCO employees, or why it is reasonable for ACE to do so.

Comparison of ACE and Third-Party Rental Prices per Square Foot – Finished Space - ACE’s cost per square foot for finished space during the audit period compared to third party tenants (tenants unaffiliated with ACE, ASP or PHI) as shown below.

**[BEGIN CONFIDENTIAL]**

<p style="text-align: center;"><i>Table 2-5</i>  <b>Atlantic Southern Properties</b>  <b>Comparison of ACE and Third Party Lease Prices per Square Foot – Finished Space</b></p>					
Lease Date	Lessee	Terms	Square Feet	Annual Rent	Price / Sq.Ft.

**[END CONFIDENTIAL]**

Finished space leased by the Federal Aviation Administration (F.A.A.) was priced at an average of \$14.63 (for office and gymnasium space combined) during its lease term.<sup>34</sup> By comparison,

<sup>32</sup> This is not to suggest that the existence of lease amendments alone would solve the problem, given that the underlying issue is that the relationship between ACE and ASP is not arms-length. However, a lease that specifically defined the space to be rented to ACE, together with amendments describing changes in the amount of space leased, would at least serve to provide documentation of the factors affecting ACE’s rental expense under the lease, and serve as a basis for determining whether the amounts should be funded by ratepayers.

<sup>33</sup> To the extent these employees are fully dedicated to ACE, it is unclear why they should be PHISCO employees, rather than ACE employees. However, PHISCO employees can charge time to multiple utilities (in this case most likely DPL). To the extent they directly charge their time, the fully distributed “Activity Type Price” rates used by PHISCO are designed to capture a portion of overheads such as billing costs and distribute them to the affiliate benefiting from the assigned employee time.

<sup>34</sup> Using the amounts shown in Table 5: **[BEGIN CONFIDENTIAL]**

ACE's \$14.89 charge per finished square foot in 2006, the last complete year of the F.A.A. lease, was only slightly higher. However, as discussed above, ACE's price per finished square foot essentially depends on an arbitrary allocation of total building cost to finished space. Furthermore, ACE's total rental charge for Mays Landing also depends significantly on the amount of unfinished space assigned to ACE. For example, as noted above, by 2008 ACE was spending \$280,000 annually just for storage (mainly furniture). As such, a price-per-square foot comparison between ACE and third parties for a space category by itself is not meaningful – both categories must be considered together.

**Comparison of ACE and Third-Party Rental Prices per Square Foot – Unfinished Space**

The F.A.A. and American Building Maintenance (ABM) were the only third-party tenants leasing unfinished space at Mays Landing during the audit period. ABM vacated its space in 2005 and the F.A.A. vacated in 2007. A comparison of the prices paid by ABM, the F.A.A. and ACE for unfinished space is shown below.<sup>35</sup>

**[BEGIN CONFIDENTIAL]**

<p style="text-align: center;"><i>Table 2-6</i>  <b>Atlantic Southern Properties</b>  <b>Comparison of ACE and Third Party Lease Prices per Square Foot - Unfinished Space</b></p>						
Lease Date	Lessee	Terms	Square Feet	Used for	Annual Rent	Price / Sq.Ft.

**[END CONFIDENTIAL]**

Based on the building cost allocation to unfinished space, ACE paid an average of 54 percent more per square foot for the space than the F.A.A. even though it occupied more than 20 times as much space. In its data response ACE noted that the unfinished space is “not listed in the ABM lease.”<sup>36</sup> We presume this means that it was provided at no cost. Conversely, ACE paid almost 75% as much per square foot for unfinished space as it paid for finished space, even though ACE rented more than 90% of the unfinished space leased by ASP during the audit

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**[END CONFIDENTIAL]** It is also important to note that ACE's allocated cost and the F.A.A.'s lease price both were inclusive of utilities and building maintenance.

<sup>35</sup> Response to Discovery, OC-908-2 Supplemental. The amendment showing the F.A.A.'s lease for unfinished space was omitted from the initial data response. It was provided only after Overland found some of the unfinished space that was leased could not be accounted for, and asked ACE to explain it.

<sup>36</sup> Response to Discovery, OC-935. In addition, OC-935 shows that the F.A.A. occupied 6,645 s.f. of unfinished space, while the lease covers only 5,000. We do not know what to make of the difference; it may be that the F.A.A. was given 6,645 s.f., but paid for only 5,000.



period. As with the finished space, comparison of the price paid by ACE is dependent on an arbitrary allocation of building cost to unfinished space, and is therefore not meaningful by itself. However, if the allocation of building costs to finished and unfinished space categories is considered to be “attributable” rather than arbitrary, the unfinished space provided to the F.A.A. was provided at a rate significantly below cost (\$7.30 vs. a cost of \$11.28). The unfinished space provided to ABM was significantly below cost by any measure, since it was free.

### **Pepco Energy Services**

Pepco Energy Services (PES) provides competitive retail energy, including electricity from renewable sources. It also provides various energy-related services, including energy assessment and consulting, internet-based energy information systems, heating, ventilation and cooling systems, lighting, project financing, and energy operations and maintenance services.<sup>37</sup> Marketing materials and the PES website indicate that its primary customers are classified in the commercial, industrial and government categories.<sup>38</sup> PES is a subsidiary of Pepco Holdings, Inc., but it is not part of Conectiv. According to marketing materials, PES’ primary area of operation includes the Mid-Atlantic states and states in the eastern half of the Midwest (from Illinois east and from North Carolina north to New Jersey).

PES appears quite large when viewed in terms of revenue. However, because most of its revenues reflect a pass-through of energy and fuel purchase costs, net income is small by comparison. PES’ net income in 2007 was **[BEGIN CONFIDENTIAL]**

**[END CONFIDENTIAL]**<sup>39</sup> Assets at the end of the audit period totaled **[BEGIN CONFIDENTIAL]** **[END CONFIDENTIAL]**, but these consisted primarily of accounts receivable. Total non-utility plant investment was approximately **[BEGIN CONFIDENTIAL]** **[END CONFIDENTIAL]**. From the end of 2006 to mid-2008, PES’ employee level grew from 107 to 160.

**Transactions Involving ACE** - PES operates as a third-party retail electricity provider in New Jersey. It sells retail electric service to approximately 20 larger commercial and industrial customers in ACE’s territory.<sup>40</sup> It is currently one of approximately 15 companies supplying competitive retail electricity to approximately 400 mainly commercial and industrial customers in ACE’s service territory.<sup>41</sup> With one minor exception, PES did not sell retail service to New Jersey residential customers during the audit period.<sup>42</sup> New Jersey commercial, government and other non-residential customers who select PES as a supplier are metered and billed by ACE under the terms of standard Third Party Supplier and Customer Account Services

<sup>37</sup> Pepco Energy Services website.

<sup>38</sup> Response to Discovery, OC-14.

<sup>39</sup> Response to Discovery, OC-47, consolidating worksheets for 2007.

<sup>40</sup> Telephone interview with Scott Razze, Manager, Supplier Relations, March 5, 2009.

<sup>41</sup> Id.

<sup>42</sup> According to the response to Discovery, OC-928, “PES provided generation and transmission service to 13 residential accounts located within the Atlantic City Electric service territory during all of 2005 and through May of 2006. No residential accounts were served after May 2006 or during 2007. The accounts consisted of twelve cabins at a state park and a state forest, as well as one account at a public college.”

agreements. These agreements are products of the NJBPU and are identical for all retail electricity providers supplying electricity within ACE's and other utilities' service territories in New Jersey. In addition to metering and billing and the transfer of associated data, ACE purchases the receivables of PES and other third party suppliers and remits funds collected back to the suppliers, resulting in the amounts that appear as affiliate transactions between PES and ACE. The audit period amounts collected and remitted to PES by ACE were as follows.<sup>43</sup>

**[BEGIN CONFIDENTIAL]**

**[END CONFIDENTIAL]**

These transactions reflect amounts remitted to PES by its New Jersey customers for which ACE acts as an intermediary. Among the New Jersey customers of PES listed in a "2004 Annual Report" (marketing brochure) were the State of New Jersey, Rutgers University and the Tropicana Casino and Resort. However, it is not clear from the 2004 report whether these customers purchased retail electricity or one or more of the many other services provided by PES. New Jersey retail electricity sales accounted for less than 1 percent of PES' revenue during the audit period.<sup>44</sup>

**Costs Associated with Metering, Billing, Coordination and Receivables Factoring on behalf of Third Party Suppliers** – The services ACE provides to PES and other third party suppliers have costs, such as the salary of ACE's Manager, Supplier Relations, incremental paper and postage costs for bills, and meter reading. These costs are not directly charged to the third party suppliers; therefore, there are no affiliate transactions associated with the services provided by ACE to PES. Instead, as a result of regulatory decisions evolving over the years since retail competition was introduced, the costs of facilitating retail competition, which were initially tracked and deferred by ACE, have been effectively included in ACE's revenue requirements and recovered from its entire customer base.<sup>45</sup>

**PES Marketing in New Jersey** – To test compliance with EDECA rules in the area of marketing and promotion, we requested marketing materials used by PES during the audit period and reviewed PES' and ACE's websites to determine whether either used ACE in any way to promote PES' services<sup>46</sup> We did not find any reference to ACE in any of the materials. Similarly, we found no mention of PES or its services on ACE's website. With respect to PES, PHI appears to have complied with EDECA rules concerning marketing and promotion during the audit period.

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<sup>43</sup> Response to Discovery, OC-8.

<sup>44</sup> For example, in 2007 PES' New Jersey billings of \$3.8 million accounted for less than 2/10ths of 1% of operating revenue of \$2.3 billion.

<sup>45</sup> Razze interview, March 5, 2009; information provided by Charlie Morgan, interview moderator.

<sup>46</sup> Marketing materials were provided in response to Discovery, OC-14.

**Management and Accounting Separation** – PES’ management and accounting are both completely separate from ACE. There were no employee transfers between ACE and PES during the audit period.<sup>47</sup>

### **Compliance with EDECA Standards**

In 2000 New Jersey implemented the Electric Discount and Energy Competition Act (EDECA). EDECA includes rules governing affiliate relations, competition, accounting and reporting for utilities that provide retail services in competitive markets. The rules regulate certain aspects of the relationship between New Jersey utilities and their affiliates that provide competitive non-regulated retail services (services to end users). EDECA was crafted to ensure that affiliates providing non-regulated retail products or services are not given cost, resource or marketing advantages by virtue of their affiliation with the utility. More specifically, EDECA serves to ensure that non-regulated affiliates do not obtain an unfair advantage in New Jersey markets by selling at an artificially low price due to subsidy by the utility or its holding company; by gaining access to utility resources, such as customer lists, that are not available to competitors; or by creating an impression that what they sell are utility products or services, thereby trading on the utility’s name and reputation.

ACE does not currently have relationships with affiliates that have a significant presence in New Jersey retail markets, nor did it have such relationships during the audit period. PHI’s competitive retail electric and gas provider, PES, did not market services to New Jersey residential or small commercial customers during the audit period, and had only a limited presence in the large commercial and industrial retail electricity market. We found no evidence that it benefited in any way from its association with ACE. Other ACE energy affiliates, discussed above, most of which market energy through CESI, were not subject to EDECA’s competition rules. It was determined in a prior audit that Millennium Account Services (MAS) was a related competitive business segment (RCBS) of Conectiv, and therefore subject to EDECA. A discussion of MAS’ compliance with EDECA is included in chapter 5. It was also determined that ASP, which leases space to ACE in the Mays Landing building, is an RCBS of Conectiv, and therefore subject to EDECA. ASP owns a utility operations building (Mays Landing) and rents some of the building’s space to unaffiliated tenants. Given the fact that only a portion of one building was involved, Overland believes ASP was of relatively little significance to the local market for commercial office space, a market that bears almost no relationship to the market for utility or utility-related services. However, as an RCBS offering a service to both a utility and on the open market, we found that ASP’s pricing to ACE violated the transfer pricing rule set forth in EDECA 14:4-5.5.

As a result of the nature of the business conducted and / or their limited presence in New Jersey retail markets many of EDECA’s competition rules were not applicable to ACE’s affiliates

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<sup>47</sup> Response to Discovery, OC-32 and OC-33.

during the audit period. However, Overland conducted this audit under the assumption that the EDECA's rules relating to affiliate pricing, cost allocation and internal accounting control applied to all affiliates, regardless of their status as an RCBS. Below is a general discussion of ACE's overall compliance with EDECA rules in key areas.

- Non-Discrimination – EDECA requires that ACE refrain from discriminating against a competitor in favor of an affiliate. The only ACE affiliate providing a potential for discrimination is PES, which has a limited presence in New Jersey selling retail power to a few large commercial and industrial customers. We found nothing in the relationship between ACE and PES to indicate that any form of discrimination in favor of PES over other third-party electricity suppliers occurred during the audit period.
- Information Disclosure – ACE did not provide customer or other proprietary information to affiliates in violation of EDECA standards. However, in order to conduct its business, MAS requires certain customer information to be able to read meters, and, in fact, MAS' service (meter reading) produces customer information. There is no evidence that MAS' use or provision of ACE's customer information disadvantaged or otherwise affected any unaffiliated business operating in New Jersey.
- Accounting Separation – All PHI subsidiaries, including ACE, and all affiliates that maintained a business relationship with ACE, maintained books separate from ACE (and each other) during the audit period.
- Management Separation – Management responsibility for ACE, and for many other PHI subsidiaries, was either 1) divided between the subsidiary and PHISCO (PHI's service company), or 2) handled entirely by PHISCO. Subsidiaries that were effectively managed by PHISCO were generally those with limited or no ongoing operations (e.g. investment subsidiaries such as PCI). Overland found that the management of ACE's day-to-day operations was effectively separated from the operations of affiliates conducting non-utility businesses. EDECA section 14:4-5.5(i) specifically permits ACE to share corporate support services, including corporate oversight, governance, support systems and personnel. In addition to corporate services, the management and operation of some of ACE's significant utility operations (transmission and distribution engineering and planning and customer service are two examples) was shared during the audit period with DPL and Pepco. In these cases, the sharing took advantage of economies of scope and scale, and Overland believes that the efficiencies and cost savings created by joint utility services offset, by a significant margin, what amounts to a minor risk of a diversion of the management attention from ACE due to shared utility management.

- Affiliate Pricing – Within EDECA’s separation standards are rules covering pricing.<sup>48</sup> Although ACE was in compliance with EDECA covering the most substantial transfers from affiliates (PHISCO services and power and transmission purchases), it was not compliant with transfer pricing requirements in the following areas:
  - Space Rented by ACE from ASP at Mays Landing – ASP was determined to be an RCBS (subject to EDECA rules) in the prior audit. Because it offered commercial space to the marketplace, ASP was required by EDECA rules to lease to ACE at the lower of fully allocated cost or the market value of the commercial building space it provided.<sup>49</sup> ASP’s lease price to ACE was determined on the basis of building cost. ACE did not receive the market price for space in ASP. Specifically, ACE paid slightly more than market (as measure by what unaffiliated tenant the F.A.A. paid) for finished space, and substantially more (over 50% more than the F.A.A. paid) for unfinished space. The *amount* of unfinished space leased to ACE, which included approximately \$250,000 annually for surplus furniture storage (perhaps more than the value of the furniture), was also questionable.
  - Meter Reading Services Provided to ACE by MAS – MAS has also been found to be an RCBS in at least two prior audits. EDECA requires that the provision of services by an RCBS to a utility that are “not produced . . . for sale on the open market” be priced at the lower of cost or market.<sup>50</sup> As discussed more fully in the chapter discussing MAS, MAS’ services were not priced at the “lower of fully allocated (fully distributed) cost or market,” making the pricing non-compliant with EDECA. The prior audit recommended establishing a market price based on a competitive bidding process. A Request for Proposals was sent to coincide with the end of MAS’ contract, but no unaffiliated companies submitted proposals. As a result, MAS continues to charge ACE substantially more than what would be charged under a standard regulatory definition of fully distributed cost, and a market price for MAS meter reading service remains undetermined.
- Access to ACE Information Systems – ACE shares certain information system assets with PHISCO. PHISCO uses a number of information systems for the shared benefit of either multiple utilities and the utility and non-utility subsidiaries. As noted above, assets shared are used for the provision of corporate and shared utility support services, and are therefore compliant with EDECA 14:4-5.5(i). Overland found the costs associated with these shared systems are appropriately distributed by PHISCO to benefiting subsidiaries based on usage. Overland found no evidence indicating that designated retail affiliates PES or MAS used ACE information systems; however, ACE did bill the energy services provided by PES to PES’ customers.

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<sup>48</sup> EDECA Section 14:4-5.5(t) & (u)

<sup>49</sup> EDECA Section 14:4-5.5(u)(2)

<sup>50</sup> EDECA Section 14:4-5.5(t)(6)

- Marketing and Promotion – The only audit period affiliate relationship that presents a potential for violation of EDECA restrictions on the cross-marketing and promotion was the relationship with PES. PES had a limited presence in New Jersey markets, selling approximately \$4 million annually electric power to large commercial and industrial customers. We reviewed PES' website and requested copies of marketing materials used during the audit period. We did not find references or links to ACE or any of its services on the website or in the marketing materials. New Jersey accounts for a small percentage of PES' service. As noted in a separate chapter, the operations of ACE's other retail affiliate, MAS did not indicate the MAS and ACE were engaged in joint marketing. ACE and South Jersey Gas are MAS' only customers, and the nature of MAS' services are such that additional New Jersey customers are unlikely. As such, violation of EDECA marketing and promotion standards by MAS is very unlikely.
- Provision of Competitive Services by ACE – EDECA rules regulate and restrict the provision of competitive services by a utility. During the audit period, ACE did not provide competitive services, nor did it provide such services through a subsidiary or affiliate.

### **Followup on Prior Audit Recommendations**

Overland reviewed the status of ACE's implementation for the recommendations made in the prior audit, as documented in ACE's Compliance Summary.<sup>51</sup> Implementation of prior audit recommendations is discussed below. It should be noted that compliance letters sent to the NJBPU Staff make it clear that some of the prior audit's recommendations were no longer applicable by the time implementation was being discussed in 2006. Recommendations found to be no longer applicable by 2006 are not discussed here.<sup>52</sup>

- Prior audit recommendations to update the Compliance Plan, the CAM and internal policies and procedures – Many of the recommendations in the prior audit report discussed the addition of language to the Compliance Plan or the CAM addressing concerns about internal controls, EDECA restrictions on transactions or communications between ACE and affiliates, or the status of affiliates as EDECA competitive business segments. Our review of ACE's responses in correspondence with the NJBPU Staff indicated that the recommended changes in language and affiliate status had been made to the Staff's satisfaction.<sup>53</sup> Given that the updates to the Compliance Plan and company procedures completed the implementation of these recommendations, they are not individually addressed in this discussion.

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<sup>51</sup> Response to Discovery, OC-1.

<sup>52</sup> Includes recommendations 20, 21, 22, 23 and 29

<sup>53</sup> Response to Discovery, OC-1, Letter to NJBPU Audit Staff, February 17, 2006. Uncontested recommendations 1, 4, 5, 6, 7, 8, 9, 10, 12, & 14

- Solicit bids for meter reading services provided by MAS and change contractors if another contractor provides and acceptable lowest-cost bid.<sup>54</sup> In 2006 ACE and SJG jointly issued an RFP for meter reading services for a three-year period. The RFP was sent to five vendors, including MAS. Several of the vendors not affiliated with ACE operated from a significant distance (Georgia and Texas). No vendor other than MAS had existing business in New Jersey; the closest was located in Pennsylvania. Of the five vendors that received the RFP, only MAS responded with a bid, offering essentially the same pricing and terms under which services were being provided at the time. Thus, although the recommendation was implemented, it did not produce lower meter reading costs for ACE or SJG, nor did it establish a market price comparison for the services provided by MAS.
- Charge for all work done by MAS - Following this recommendation, beginning in 2006, MAS was billed for executive committee (governance) efforts. As discussed in the chapter on MAS, it does not appear that the amount billed in 2007, \$1,470, was sufficient to account for corporate governance efforts, which we estimate, based on a statement made by ACE in a Compliance memo to the BPU staff following the prior audit, to be at least 20 hours per year. However, the amounts involved are not material.
- Formulate detailed procedures for pricing transactions under Section 14-4:5.5(t) and implement a training program for their use. ACE noted that this recommendation dealt with MAS. In its Compliance Summary document, ACE stated “procedures for such pricing transactions will be addressed.”<sup>55</sup> Overland concurs with the prior audit’s recommendation, but notes that it has not been addressed or implemented. There is no evidence that the pricing used by MAS to charge ACE for meter reading services is either cost or market-based, not to mention the lower of cost or market, as required by EDECA. This issue is discussed in chapter 5. Given that a market price for MAS’ services does not exist, Overland recommends that any charges to ACE that exceed MAS’ fully distributed cost of meter reading services, determined in accordance with normal cost-based regulatory costing principles (O&M + rate of return on rate base + income tax), be recorded below-the-line by ACE. This will prevent ratepayers from cross-subsidizing PHI through excess profits earned by MAS from ACE.<sup>56</sup>
- Reduce dependence on general allocators by implementing a greater degree of direct charging. The Company’s response to this recommendation, which appears to have satisfied the NJBPU Staff, was to note that “costs shall be directly charged whenever practicable and possible and [the] goal shall be to increase direct billings to ACE.”<sup>57</sup> As

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<sup>54</sup> Uncontested recommendation #2

<sup>55</sup> Compliance Summary, recommendation 27

<sup>56</sup> In Overland’s 2003 Audit of the Competitive Service Offerings of South Jersey Gas, we made a similar recommendation concerning MAS. Based on the current review, it does not appear to have been implemented.

<sup>57</sup> Response to Discovery, OC-1, Letter to NJBPU Audit Staff, February 17, 2006, uncontested

discussed in chapter 3, it is not currently possible to determine the overall percentage of PHISCO's cost that is directly charged, because PHISCO cannot currently produce a report that shows how the costs in each of its 400-plus cost pools are distributed. However, Overland's review of PHISCO's allocation process, which included analysis of more than 60 cost pools, did not find that so-called "general allocators", such as "total cost", O&M and assets, produced inappropriate cost allocations. We found that although arbitrary by nature, PHISCO's size-based "general" allocators were appropriately used in the cases included in our sample to distribute "unattributable," higher-level corporate costs.<sup>58</sup> Perhaps because of the emphasis placed by regulators on direct charging, we also found that PHISCO described certain usage-based cost allocations it made as "direct charges".<sup>59</sup> Direct charging *should* be used when it will provide a more accurate link to cost-causing subsidiaries than an allocator, but this is not usually the case when dealing with higher-level corporate functions, for which each dollar spent usually benefits multiple cost objectives (subsidiaries).

- Develop an A&G loader to be included in the activity type prices (ATPs) used for direct charges. Develop a method for capturing the indirect A&G costs in each cost center so that remaining costs allocated reflect the fully loaded cost of that activity. Reconcile for differences between budgeted and actual activity type prices.<sup>60</sup> - ACE addressed these recommendations in its Compliance Summary by noting that it had added pension and OPEB costs to ATPs. It also added language to the CAM addressing the overhead costs to be included in ATPs. Overland found that, in general, ATPs and the costs collected in allocable PHISCO cost centers contained the appropriate types of indirect and overhead costs that attach to each activity. There were a few exceptions in which indirect costs could, with some refinement, be attached to service company activities rather than separately allocated. One example is incentive pay for PHI's corporate executives, which was separately allocated rather than charged to executive cost centers for distribution with salaries. However, we did not find that further refinement would have had a significant effect on the distribution of PHISCO costs to ACE or to the Power Delivery (regulated) segment of PHI. Below is an example showing the PHISCO ATP for Legal Services. It contains the appropriate types of indirect and overhead costs and is, therefore, a fully distributed cost-based rate.<sup>61</sup> We also reviewed PHISCO's

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recommendation 16

<sup>58</sup> However, this should not be interpreted to mean that there are problems with the use of general allocators as applied to cost pools not included in our sample. As noted, we were prevented from conducting an overall high-level analysis of the process of linking costs to cost objectives by PHISCO's inability to produce, with a reasonable amount of effort, a report showing how each of several hundred cost pools were distributed.

<sup>59</sup> For instance, pools the labor, materials, outside services and other costs to maintain personal computers and related equipment and distributes them based on the number of workstations in each subsidiary. PHISCO considers this a direct charge, we would call it unattributable (usage based) allocation. Regardless of what it is called, PHISCO's procedure is appropriate given the costs and the benefiting subsidiaries involved.

<sup>60</sup> Response to Discovery, OC-1 Compliance Summary, recommendations 17, 18 & 19

<sup>61</sup> One noteworthy cost missing from the Legal Services ATP is professional services (outside counsel, experts, etc.). These costs can usually be directly assigned themselves to benefiting subsidiaries based on the nature of the project for which the outside services are employed. As such it would not be appropriate, at least in the case of legal services, to attach professional services to a loaded labor rate used by PHI's Legal Services employees.



process for true-up between actual and budgeted costs. Variations between standard ATP rates and actual costs are trued up at least annually, and sometimes more frequently. It is also important to note that most PHISCO costs are allocated, not distributed using standard ATP rates. Overall, we found the true-up process provided a reasonable matching between the incurred costs and benefiting subsidiaries during the 2005-2007 audit period.

**Table 2-7**  
**PHI Service Company Legal Services Cost Center 882**  
**Activity Type Price (ATP) Standard Cost Breakout**  
**2006**

Cost Category	OH Rate	Total Std Costs
S&W Regular		\$4,561,335
S&W Overtime		105,637
S&W Meal Allowance		7,000
Incentives		729,785
Benefits	0.33	1,505,241
Pension	0.07	319,293
OPEBS	0.13	592,974
<b>Total Salaries and Wages</b>	<b>0.53</b>	<b>\$ 7,821,265</b>
Employee Service Costs	\$2,220	\$ 90,132
Occupancy - Finished Space		1,339,169
Edison Place Park		37,800
Common Support IT Workstation	2,940	173,460
Common Support IT Network	4,440	173,160
Common Support IT Phone	900	61,200
Common Support IT SAP	6,600	270,600
Training		15,000
Travel		55,000
Office, Misc, Materials		972,000
Total Indirect & Overhead Costs		3,187,521
<b>Total ATP Costs</b>		<b>\$11,008,786</b>

Source: Response to Discovery, OC-461

- Formalize a lease agreement between ACE and ASP for the Mays Landing office building, with the charges to ACE based on the lower of book value or demonstrated market value. This recommendation was not implemented. ACE's Compliance Summary response stated that there was an updated lease agreement (dated March 27, 2003).<sup>62</sup> Liberty Consulting, the prior auditor, indicated it had not reviewed the updated lease.<sup>63</sup> The lease provided in response to Overland's request was dated May 1, 1999, not March 27, 2003, and contained no provisions that would indicate ACE is to be charged the lower of cost or market value, or "no more than market value" (as we interpret the rule).<sup>64</sup> Notwithstanding the question of whether the lease Overland

<sup>62</sup> Compliance Summary, recommendation 28

<sup>63</sup> Audit of the Competitive Service Offerings of Atlantic City Electric, March 31, 2003, p.117

<sup>64</sup> Response to Discovery, OC-557

reviewed is the most current lease, we found its provisions to be vague and non-specific. As discussed above, we recommend that the lease terms be made more specific by fully documenting the rental price basis and square footage rented by ACE in the lease and documenting all changes in lease amendments.

- Reposition the duties of employees serving as directors or officers for both ACE and related competitive business segments.<sup>65</sup> The prior audit found that there were instances in which individuals served as directors and / or officers for both ACE and a competitive business segment. The prior audit concluded that this violated EDECA Section 14:4-5.5(q). As it applies to ACE, this EDECA rule states that a holding company officer or board member may serve on the holding company and with the utility and a competitive business segment, but not both. During the prior audit period, and into the current audit period, ACE had several board members and officers that served both ACE and ASP, which is a competitive business segment under EDECA. These same individuals also serve as officers and board members for other affiliates, such as Conectiv Energy Supply, which are technically not subject to EDECA because they do not provide “retail” services to customers in New Jersey.

ACE did not implement this recommendation. In its Compliance Summary discussion of the recommendation, ACE stated that the prior auditor misinterpreted EDECA Section 14:4-5.5(q). ACE did not elaborate on how or why it believes the finding is a misinterpretation of EDECA.<sup>66</sup> ACE also stated that cross-affiliate alignment of officer and board responsibilities was essential for the proper governance and oversight of the affiliates. Because the NJBPU was considering a change in a different section of its administrative rules that would require that utilities with more than one board member to maintain “significant ties to New Jersey,” three of ACE’s four board members resigned from the Board in 2007.<sup>67</sup> However, it is Overland’s understanding that none of the other officer changes covered by the prior audit recommendation have been or will be made.

We address issues involving affiliate governance, including officer and board membership, in chapter 8 of this report. We do not reiterate the prior audit’s recommendation that ACE separate its officers and board members from affiliate oversight. However, the fact that officers and board members continue to oversee both ACE and the affiliates with which it does business highlights the need to improve and tighten the contracts and pricing provisions between the utility and the affiliates. In particular, it highlights the need to ensure that meter reading services and office space

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<sup>65</sup> Compliance Summary recommendation 25

<sup>66</sup> In its initial comments to Overland’s draft report, ACE stated that it met with the BPU Staff on May 8, 2006 and reached agreement with Staff that ACE was in compliance with EDECA concerning its officer/director structure. ACE further stated that “[t]his was confirmed in ACE’s May 19, 2006 submittal of a final compliance summary and confirmed by the BPU Staff in its September 19, 2006 letter, in which Staff states ‘It is the understanding of this Division that the intent of all recommendations (with the exception of #31 [which related to the money pool – not officers or directors] that were submitted by Liberty Consulting Group in their report has been completed’”.

<sup>67</sup> Response to Discovery, OC-677.

sold to ACE by MAS and ASP are either priced based on the traditional regulatory standard of “lower of cost or market”, or that charges to ACE that exceed amounts determined under this standard are recorded below-the-line, as recommended elsewhere in this report.

- Demonstrate the adequacy of steps to protect the utility from the negative effects of affiliation with unregulated businesses, and place restrictions on ACE investments in the money pool. These recommendations were implemented by placing restrictions on ACE’s interaction with the PHI money pool. Based on a letter to Mark Beyer, Chief Economist for the NJBPU, ACE agreed to the following:
  - Not to petition the BPU to create a utility-only money pool;
  - Not to invest in the PHI money pool after October 14, 2006 and to remove any existing investment by that time;
  - To continue borrowing from the money pool only to the extent that ACE can obtain a lower rate than it could if it issued its own short term debt.<sup>68</sup>

We followed up on compliance with money pool restrictions in the current audit. ACE stated that it withdrew from the money pool on October 10, 2006 and that since that time has participated in the money pool “only to facilitate intercompany investments.”<sup>69</sup> Although it is permitted to do so, ACE further indicated it has not borrowed from the money pool since September 25, 2006.<sup>70</sup> We confirmed the statements ACE made in data responses during our interview of PHI’s Vice President and Treasurer.<sup>71</sup>

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<sup>68</sup> Compliance Summary, recommendation 31, Letter from Jeffrey Snyder, ACE Assistant Treasurer, to Mark Beyer, NJBPU Chief Economist, September 25, 2006. (Response to Discovery, OC-1).

<sup>69</sup> Response to Discovery, OC-182 and OC-186

<sup>70</sup> Response to Discovery, OC-182

<sup>71</sup> Interview of Anthony J. Kamerick, PHI Vice President and Treasurer, December 10, 2008. Mr. Kamerick is also ACE’s Treasurer.

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### Chapter 3. PHI Service Company

PHI Service Company (PHISCO) provides management and administrative services to PHI's subsidiaries, including PHI's utilities, competitive energy companies and other subsidiaries. PHISCO is the successor company to Conectiv Resources Partners (CRP), the service company that existed under the Conectiv holding company umbrella prior to Pepco's acquisition of Conectiv in 2002. In the merger Conectiv contributed CRP's assets to a new holding company, Pepco Holdings, Inc. (PHI).<sup>1</sup>

After Pepco's acquisition of Conectiv and the formation of PHI, Conectiv Resource Partners was renamed PHI Service Company. Prior to the acquisition, Pepco was not subject to the restrictions of the Public Utility Holding Company Act of 1935 (PUHCA 1935) and, as a result, it did not have a service company organization similar to CRP. Instead of absorbing CRP into its own service company organization, PHI essentially converted CRP, including its processes and procedures, into PHISCO. As such, most of CRP's organization and accounting procedures, including the enterprise accounting system (SAP) and the pricing, cost pooling and cost allocation procedures, are the same as or similar to what they were at the time of the prior NJBPU audit of Atlantic City Electric, which covered a period prior to the merger.

#### Audit Scope, Objectives and Procedures

The scope of our audit of PHISCO consisted of service company activity and transactions during the three years ending December 31, 2007 ("the audit period"), with an emphasis on ACE direct charges, allocations and allocation factors. Service company expenses included in the audit scope are summarized by segment, and for power delivery, by subsidiary, below.

[BEGIN CONFIDENTIAL]

Segment	Amounts			Percentages		
	2005	2006	2007	2005	2006	2007

[END CONFIDENTIAL]

<sup>1</sup> PHI's S.E.C. Form 10-K, fiscal year ended December 31, 2002, p. 188.

The primary audit objective was to determine that PHISCO internal controls and accounting procedures were sufficient to prevent significant opportunities for cross-subsidization of the activities of the various utility, competitive and other subsidiaries to which PHISCO charged and allocated its costs. In particular, the audit focused on ensuring that PHISCO's cost assignments and allocations did not result in a significant potential for ACE to cross subsidize the activities of other subsidiaries.

### **Summary of Findings**

1. Overall, the process PHISCO employed to allocate service company expenses to Atlantic City Electric resulted in a reasonable distribution of corporate and operating expenses during the audit period.
2. During the audit period, PHISCO's internal controls and the accounting procedures governing the service company cost accumulation and distribution process were adequate to facilitate a reasonable distribution of service company costs between regulated utility and non-regulated diversified operations and among PHI's three utilities. Specifically:
  - a) Accounting procedures priced the services to be distributed to subsidiaries on a fully distributed cost basis; that is, the price included the direct, indirect and overhead charges attributable to the activities charged.
  - b) Procedures included processes for periodic true-up to actual cost where service company prices and allocations were based on estimates.
  - c) Organizational and accounting controls were adequate to facilitate a reasonable link between PHISCO services and the PHI businesses and subsidiaries that benefit from them. Specifically, these controls included procedures linking service company activities to service company departments focused on specific PHI business segments (Competitive Energy & Power Delivery) and accounting procedures linking organizational cost centers to cost pools. These procedures, which separate costs directly attributable to the Power Delivery segment from those attributable to the Competitive Energy segment, reduce the likelihood of cross-subsidization of non-regulated activities by the regulated utilities.<sup>2</sup>

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<sup>2</sup> However, this does not mean that cross-subsidization cannot occur as the process is also highly dependent on decisions made by PHISCO employees.

- d) PHISCO's allocation procedures generally take advantage of measures (including allocators and unit rates) that establish cost-causative links between service company activities and subsidiaries that benefit from them when such measures exist.
  - e) Due primarily to the nature of the corporate activities charged by PHISCO, many of the size-based allocation methods used to distribute corporate costs are "unattributable" and inherently arbitrary. However, due to the characteristics of PHI's current set of non-regulated businesses (primarily their size relative to the regulated utilities), PHISCO's allocation methods were generally adequate in the audit period to produce a reasonable distribution of corporate expenses between PHI's regulated Power Delivery and its non-regulated business segments. The allocation procedures also produced reasonable distributions among the three utilities, because the utilities share similar investment and operating characteristics. This finding is based on the PHI's businesses, organizational structure and allocation procedures as they existed during the audit period. It would not necessarily apply in the future if these characteristics became materially different.
  - f) As discussed below, we found specific problems with a few allocation procedures. However, our audit testing and sensitivity analysis demonstrated that ACE's billings for PHISCO services were not affected significantly by the way these allocators were calculated. As such, the problems we noted do not conflict with our finding that allocation controls and procedures, on the whole, were reasonable to protect ACE from cross-subsidization during the audit period.
3. The definitions for allocation methods and factors documented in PHISCO's Cost Allocation Manual (CAM); specifically, in an attachment to the PHISCO Service Agreement that accompanies the CAM, are inadequate. Specifically, while PHISCO uses more than four-dozen Statistical Key Figures (SKFs) to distribute allocable costs, it maintains allocation documentation only in the form of general definitions of methods that apply to groups of allocators. PHISCO maintains general definitions for *categories* of allocators (e.g. employee, asset and expense-based), but does not maintain definitions for the multiple specific factors, each with their own inputs and calculation procedures, within each category. The lack of documentation makes the factor calculation process a "black box," permitting factor calculation procedures to be changed at will and opening the door to management of allocation results. This would be less of a concern if factor definitions were fully documented in the CAM and Service Agreement and if regulators were notified when a factor's inputs or calculation procedure changed.
4. PHISCO's "Blend" allocator is based on a composite allocator with three parts: assets, labor costs and employees. Presumably, it is intended to capture several characteristics that influence the overall size of the service company's operation (even if they don't

directly “cause” specific PHISCO costs). However, by including both employees and labor costs, the allocator effectively double counts labor. Because the characteristics of PHI’s businesses are such that relative levels of employees, operating expense and assets are not significantly different, the “double count” of labor does not significantly influence the amounts allocated to specific subsidiaries. However, it highlights the inherently arbitrary nature of “unattributable” allocators, especially those based on composites of several measures of size or usage.

5. Certain below-the-line activities, including labor associated with Political Action Committees, were appropriately charged below the line.<sup>3</sup> However, corporate brand advertising, which we believe should be either “retained” (charged to the holding company), and certain political and sponsorship expenses, were allocated almost 3/4ths to the utilities, and were charged to above-the-line receivers (account 923).<sup>4</sup>
6. An SEC audit performed in 2005 resulted in a change in allocations that caused the PHI Holding company allocation of certain corporate functions to decline from 10% to about 6%. The impact of this change on PHISCO costs charged to ACE was not significant.
7. Because of the way PHISCO’s accounting procedures are structured, a manual process is currently required to identify the cost center and the SKFs (allocation methods) associated with PHISCO cost pools (secondary cost elements).<sup>5</sup>

## **Recommendations**

1. Include detailed definitions of the calculations of allocation factors (Statistical Key Figures, or SKFs) in the Cost Allocation Manual (CAM) – SKFs are the factors used to allocate common service company expenses to subsidiaries. As discussed above, current CAM and Service Agreement documentation of allocation factors is limited to general descriptions that apply to groups of allocators. A lack of documentation creates a potential for changes to be made to calculations and a possibility for the manipulation of allocation results. Overland recommends that PHI incorporate definitions of all SKFs (allocation methods) in the CAM. The definitions should include descriptions of the inputs into the SKF and description of the calculations at a level of detail sufficient to permit an independent recalculation of the allocation factor by anyone possessing the proper financial or operational data. Overland further recommends that PHI adopt a procedure to notify the NJBPU of all intended changes in the methods and inputs used to calculate SKFs, including their impact on ACE’s allocation percentage (by showing before and after percentage allocations to ACE), before the changes are implemented.

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<sup>3</sup> Response to Discovery, OC-779; OC-621-627.

<sup>4</sup> Response to Discovery, OC-839.

<sup>5</sup> Response to Discovery, OC-837.



2. Develop reports to show: a) how PHISCO's cost centers link with allocation cost pools; and, b) the SKFs (allocation factors) that are applied to cost pools. To facilitate an overall understanding of how service company activities accounted for in individual cost centers are actually allocated to ACE and other subsidiaries, we recommend PHISCO develop the capability to provide:
  - a) A report showing which service company cost centers link to each of PHISCO's 400-plus Secondary Cost Elements (cost pools),
  - b) A report showing the methods (SKFs and ATPs) applied to each cost pool.

It is Overland's understanding that establishing these relationships is currently a manual process. PHISCO did this for Overland on a sample basis (for 64 cost pools), but it currently has no automated way of documenting the links among cost centers, cost pools and allocation methods for the service company as a whole or on a regular basis. Providing documentation of these links is fundamental to a high level understanding of PHISCO's allocation process.

3. Identify all PHISCO activities associated directly or indirectly with legislative and political advocacy, corporate sponsorships and corporate contributions and ensure that the costs of such activities, to the extent charged to ACE, are charged below-the-line. Overland found that when PHISCO allocated certain government affairs expenses from activities such as advocacy and corporate sponsorships to ACE, they were charged to an above-the-line "receiver"; that is, to above-the-line account 923. PHISCO has mechanisms in place to charge these expense to below-the-line accounts to the extent they are allocated to the utilities. We recommend PHISCO conduct a complete review of its government affairs, donations, sponsorships and political and legislative advocacy activities to ensure that the expenses directly or indirectly connected to these activities including at least a share of the compensation paid to the Government Affairs Vice President, be charged to below-the-line "receivers" (accounts) to the extent they are charged or allocated to ACE.

### **PHISCO Organization and Services**

For evaluation purposes, we divided PHISCO's organization and services into three categories. Key PHISCO functions and the amounts charged to ACE and the Power Delivery Segment audit period are summarized below.

Functional Area	2005			2006			2007		
	ACE	Power Delivery Segment	PHI Total	ACE	Power Delivery Segment	PHI Total	ACE	Power Delivery Segment	PHI Total
Executive Management	2,707	12,611	18,833	2,544	11,181	17,659	3,544	17,037	24,996
Procurement & Admin.	3,621	16,979	18,430	4,514	19,476	21,598	4,151	18,615	20,627
Financial Services	9,879	41,878	53,410	9,806	40,988	51,442	9,906	44,560	54,468
Human Resources Svcs	8,449	33,997	44,612	4,164	17,788	28,824	4,943	24,143	32,680
Legal & Internal Audit	2,066	11,690	14,031	2,392	13,067	15,420	2,880	14,652	17,035
Information Technology	5,472	45,193	48,684	5,059	44,146	46,961	3,876	41,890	44,335
Communications Svcs	776	3,059	3,766	784	4,836	5,688	666	3,726	4,519
Environmental & Safety	680	5,977	6,539	1,795	9,346	9,860	1,062	4,849	5,236
Internal Consulting	74	368	368	116	564	564	219	1,063	1,063
Interns					17	17	62	327	328
Miscellaneous	(39)	(1,351)	(1,401)	(88)	(331)	(376)			
Customer Services	28,361	59,019	59,043	28,007	61,006	61,027	32,082	72,877	72,898
Marketing Services	1,932	4,505	4,559	1,080	3,399	3,451	749	3,696	3,766
Regulated Gas & Electric	17,009	59,716	59,913	17,966	66,653	66,866	16,925	68,777	68,952
Energy Business	1,872	2,833	37,984	1,262	2,149	37,229	225	1,305	35,594
Adjustments	(5)	(13)	(13)	(139)	(626)	(626)	(63)	(243)	(243)
<b>Total</b>	<b>\$82,855</b>	<b>\$296,460</b>	<b>\$368,757</b>	<b>\$79,262</b>	<b>\$293,660</b>	<b>\$365,606</b>	<b>\$81,228</b>	<b>\$317,272</b>	<b>\$386,253</b>

Source: Response to Discovery, OC-42.

The figures above, in percentage terms, are as follows:

Functional Area	2005		2006		2007	
	ACE	Power Delivery Segment	ACE	Power Delivery Segment	ACE	Power Delivery Segment
Executive Management	14%	67%	14%	63%	14%	68%
Procurement & Admin.	20%	92%	21%	90%	20%	90%
Financial Services	18%	78%	19%	80%	18%	82%
Human Resources Svcs	19%	76%	14%	62%	15%	74%
Legal & Internal Audit	15%	83%	16%	85%	17%	86%
Information Technology	11%	93%	11%	94%	9%	94%
Communications Svcs	21%	81%	14%	85%	15%	82%
Environmental & Safety	10%	91%	18%	95%	20%	93%
Internal Consulting	20%	100%	21%	100%	21%	100%
Interns				100%	19%	100%
Miscellaneous	3%	96%	23%	88%		
Customer Services	48%	100%	46%	100%	44%	100%
Marketing Services	42%	99%	31%	98%	20%	98%
Regulated Gas & Electric	28%	100%	27%	100%	25%	100%
Energy Business	5%	7%	3%	6%	1%	4%
Adjustments	38%	100%	22%	100%	26%	100%
<b>Total</b>	<b>22%</b>	<b>80%</b>	<b>22%</b>	<b>80%</b>	<b>21%</b>	<b>82%</b>

Note: ACE and Power Delivery Segment percentages both represent percentages of total PHISCO cost distributions.  
Source: Response to Discovery, OC-42.

PHISCO's organization and services are divided into two broad categories:

- Corporate functions generally shared by both regulated utility, non-regulated energy subsidiaries and other unregulated subsidiaries.
- Shared operating services primarily dedicated to either the regulated utility or non-regulated energy segments, and shared mainly by the subsidiaries within the business segment.

### **Corporate Functions Provided by PHISCO**

PHISCO's corporate functions include the following:

**Executive Management** - This area consists of PHI's senior corporate management, including the Chairman, President and CEO, CFO, VP-Treasurer and Corporate Secretary. It also includes the Controller, Risk Management and Government Affairs Vice President officers. Executive Management expenses were distributed through 16 different cost pools during the audit period. ACE was charged 14% of executive expenses during the audit period.

**Procurement and Administrative** - This area includes security, purchasing and materials management, vehicle management, "general" services (such as mail distribution), building services and real estate management. Expenses incurred by these functions are distributed through approximately two-dozen cost pools. ACE was allocated about 20% of the expense during the audit period.

**Financial Services** - The financial functions include insurance and claims, regulatory affairs, accounting (accounts payable, payroll, asset and project accounting), investor relations and shareholder services, financial reporting and Sarbox compliance and investment management. ACE was charged 18 to 19% of this area during the audit period.

**Human Resources** - This function includes the cost of certain benefits, including incentive pay, and true-ups and residuals (the difference between budget-based standard charges and allocations for pension, other retirement benefits and vacation accruals). It also includes the corporate human resources function (staffing, administration of benefits, liaison with subsidiary business units and compensation services). During the audit period these items were distributed through approximately two dozen cost pools. PHI billed ACE 19% of this function in 2005. By 2007, this had dropped to 15%.

**Legal and Internal Audit** - During the audit period there were five cost pools for the legal / audit functional area (three for legal, two for audit). Legal includes the General Counsel's office. Most other senior managers are incorporated within the Executive Management functional area.

ACE's share of the Legal and Internal Audit functions increased from 15% in 2005 to 17% in 2007.

**Information Technology** – IT includes the operation, maintenance, security and upgrade of the computer network, workstations and phone systems and various information systems, including SAP (enterprise accounting software), the customer service system and various systems used in power delivery and energy management. IT costs are distributed through approximately 40 cost pools and may be directly charged to ACE (as indicated by the amounts shown in Table 3 above), or indirectly charged to through other functions. For example, the customer service function shown above includes a significant amount of IT expense charged to the customer service function within PHISCO, and secondarily charged, using customer service allocation factors, to ACE.<sup>6</sup>

**Communications** - This area includes employee and internet communications, public and media relations and government affairs. Corporate contributions and political action committee activities are handled through this function. Audit period communications expense was distributed through 16 cost pools.

**Environmental and Safety** - This functional area includes environmental management, performance assessment and safety services. Audit period expense was distributed through 9 cost pools.

### **Shared Operating Functions Provided by PHISCO**

Services in this category were predominantly assigned to either the Power Delivery or Energy segments and allocated among the subsidiaries within the segments.

**Customer Service (Power Delivery Segment)** - Shared customer services include call center operations and support of information systems used by the Carney's Point Customer Service Center shared by ACE and DPL. In addition to operations at Carney's Point, shared customer services include large company bill preparation, normal bill preparation and mailing, and remittance processing. In terms of cost, customer service is PHISCO's largest functional area, comprising almost 20% of PHISCO's total operating expense. Virtually all customer service expenses are distributed to the regulated utilities through more than 60 cost pools. During the audit period certain functions, such as the bill printing, envelope insertion and mailing, performance assessment and quality monitoring, revenue process management and metering

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<sup>6</sup> Pepco received a much higher direct IT allocation during the audit period than ACE. ACE's relatively low share of direct IT can be seen in Table 3 (above). The table shows that although 93% of the IT expenses charged directly to subsidiaries were charged to Power Delivery, only 11% were charged to ACE. A primary reason for this is that Pepco's customer service function was not integrated with ACE and DPL during the audit period. Because it was separate, IT expenses attributable to Pepco's customer system were directly charged to Pepco by the IT function (and consequently appear under the IT function in Table 3 above), whereas IT expenses attributable to ACE's and DPL's shared customer system were charged to the shared customer service function, and are included in the table under customer service expense.

functions were performed on behalf of all three utilities. However, shared call center operations were limited to Carney's Point, shared only by ACE and DP&L. Pepco continued to maintain its own customer call center operations (within the utility) during the audit period. PHISCO customer service expenses increased as progress was made integrating Pepco into these shared functions. However, this also explains the decline in ACE's share of common customer service expense, from 48% in 2005, to 44% in 2007.

**Marketing (Power Delivery Segment)** - The Marketing function is small, consisting primarily of functions related to "manag[ing] customer perceptions." These activities are charged entirely to the Power Delivery segment. Marketing also includes corporate advertising, a relatively small activity that is allocated across business segments. ACE's share of marketing expenses decreased from 42% in 2005 to 20% in 2007, as Pepco was integrated into PHISCO Marketing. Marketing costs charged to ACE decreased from \$1.9 million in 2005 to \$750,000 in 2007.

**Regulated Electric and Gas Delivery (Power Delivery Segment)** - Regulated Power Delivery is the second largest PHISCO functional area, accounting for approximately 18% of total service company expenses during the audit period. It consists of system operations, meter shop, power procurement, and an extensive number of "other" delivery services, most of which consist of engineering, planning and the maintenance of related information systems. Most E&G Delivery services are common to all three utilities; however, in some cases Pepco continued to maintain its own independent functions and procedures during the audit period. Services in this functional area were distributed through almost 90 different cost pools. ACE's total allocation of shared power delivery remained even at about \$17 million annually during the audit period. ACE's share of the total costs dropped from 28% in 2005 to 25% in 2007, as Pepco became integrated into many of the functions previously shared only by DPL and ACE.

**Energy Business (Competitive Energy Segment)** - Energy functions include the merchant functions (power planning, portfolio management, generation origination and dispatch, power and gas marketing and trading), generation plant management and administration, generation engineering and fuel supply. These functions are allocated primarily to the following four Conectiv Energy companies:

- Conectiv Energy Supply
- Conectiv Delmarva Generation
- Conectiv Atlantic Generation
- Conectiv Bethlehem

At the beginning of the audit period, when ACE still owned the B.L. England generating plant, ACE was allocated approximately 5% of the total expense in the Energy Business functional area. This included 12% of the generation engineering function and about 3% of generation management and administration. With the sale of the plant ACE's overall allocation of shared Energy Business functions dropped to less than 1% in 2007.

## **PHISCO Accounting Procedures and Internal Control**

We reviewed PHISCO's accounting and cost distribution procedures to determine that

- PHISCO's functional organization and books were segregated from the organizations and books of the subsidiaries to which it charges costs.
- PHISCO's procedures for accumulating allocable service costs in cost centers were analogous to the functional areas in which services are provided.
- PHISCO processes for pooling and allocating or directly charging functional costs to cost objectives were consistent and logical.
- The financial and operating measures used as a basis for allocation factors were reasonable and free from calculation manipulation designed to skew common expense allocations toward utility cost objectives (i.e. to Pepco, DPL and / or ACE).

In general, we found that the accounting processes for accumulating, pooling and distributing PHISCO costs were well controlled. These processes are stable and have been in place for a relatively long period of time.

- Accounting procedures for pooling shared services costs were reasonable, consisting of assigning similar costs to specific "secondary cost elements" (SCEs), from which specific allocation and direct charging procedures are applied. The costs of activities pooled for allocation were based on fully-distributed costing principles. In addition to the direct cost of salaries and contractor services, pooled costs included payroll-related (benefits and payroll taxes) and facilities-related (facilities rent, equipment, facilities and information technology support) overheads.
- Accounting procedures for pricing directly charged services included in our audit sample were reasonable. Direct services pricing was based on fully-distributed cost principles. For the direct charges included in our sample, fully-distributed costs consisted of average hourly rates for a group of similarly paid employees providing a particular service. The hourly rates included salaries and payroll-related benefits and taxes, facilities overheads such as the rental cost of space occupied by the employees, related employee expenses, and, as a result of a recommendation in the prior NJBPU audit, a small charge to cover the cost of services provided to service company employees, including the cost of employee benefits administration.
- In general, the allocation methods applied to the SCEs (cost pools) were reasonable for the costs and activities being allocated. The broad "unattributable," size-based methods used to allocate costs for many of the corporate functions are inherently arbitrary. However, PHI's non-regulated subsidiaries, primarily power production and marketing, contained sufficient financial and operating "weight," in relation to the utilities, to draw a

reasonable share of the cost of corporate activities from which they derived benefits. We found that applying different size-based measures and calculating size-based factors such as O&M and “total cost” in different (but reasonable) ways would not have materially affected the total service company cost charged to ACE during the audit period.

- We tested PHISCO’s most commonly applied allocation factors to determine whether they were calculated using inputs consistent with PHISCO’s allocation method definitions, and to ensure that calculation idiosyncrasies did not work to the disadvantage of the regulated Power Delivery segment or ACE. We found that calculating size-based factors such as O&M and “total cost” in different (but reasonable) ways would not have materially affected the total service company cost charged to ACE during the audit period.

### **Detailed Analysis and Testing**

Our technical analysis focused primarily on determining whether PHISCO’s process for charging costs produced outcomes that caused ACE or PHI’s other regulated utility subsidiaries to cross-subsidize the holding company or PHI’s competitive subsidiaries. This testing included the following:

- Analysis of a sample of 64 cost pools allocated during the audit period. This sample was selected to capture the most significant expenses allocated to the Power Delivery segment and to ACE. Sampled costs were examined to determine:
  - The nature of the underlying PHISCO function and costs and their relationship to serving ACE and its ratepayers;
  - The appropriateness of the group of subsidiaries (the cost objectives) selected in relation to the expense distribution;
  - The appropriateness of the methodology (the allocation or direct charge methodology) used to distribute the cost to cost objectives.
- Analysis of the basis for and calculation of Statistical Key Figures (SKFs), PHISCO’s term for the methods and factors used to allocate service company costs to cost objectives. We examined the SKFs to determine whether:
  - There was proper documentation of the basis for the SKFs.
  - The SKFs represented a reasonable basis for allocating the PHISCO expenses to which they were applied.
  - The SKFs were properly calculated based on their descriptions. For example, we examined the total cost (TOTCST) SKF to determine how “total cost” was

defined, and whether this definition was consistently applied to all subsidiaries in providing cost inputs to the SKF calculation.

## **PHISCO's Cost Accumulation and Distribution Process**

In order to assess the service company functions and expenses charged to ACE, PHISCO's overall accounting process can be divided into two sub-processes: cost accumulation and cost distribution.

**Cost Accumulation** - PHISCO's enterprise accounting system, SAP, is essentially a large database that can group and categorize accounting information in numerous ways. To evaluate this process as it relates to distributing costs between regulated and competitive business segments, it is important to determine that costs are grouped, prior to cost distribution, into categories that align appropriately with the activities (services) being charged to subsidiaries, and that all direct and indirect costs related to these services are included in the appropriate category. Through examination of the cost pools (known as Secondary Cost Elements) included in our 64 item sample, Overland determined that, in general: 1) PHISCO's cost pooling process appropriately accumulates the costs associated with providing specific services, and 2) that the indirect and overhead costs associated with activities are appropriately accumulated with associated direct costs prior to cost distribution.

PHISCO's cost accumulation process centers on "Secondary Cost Elements" (SCEs). SCEs are cost pools produced from the expenses of one or more cost centers. PHISCO uses several hundred SCEs to group expenses for distribution. The large number of cost pools is dictated by the combination of 1) the functional categories into which costs fit; 2) the distribution method (specific allocation method or direct charge) linking costs with benefiting subsidiaries; and 3) the specific group of subsidiaries designated to share a particular cost. With so many cost pools, the predictability and stability of service company billings to ACE is dependent not only upon consistency in allocation and direct charge methods, but also in the cost accumulation process. We examined the year-to-year changes in PHISCO's active pools and found a reasonable, but not extraordinary, level of stability. The rate of change from year-to-year (cost pools added and deleted) was approximately 12%, with a bias toward fewer cost pools over time. This indicates that more than 85% the cost pools did not change from one year to the next during the audit period. The total number of available cost pools shrank from about 475 in 2005 to about 425 in 2007. The consolidation of service company cost pools should contribute to the stability, manageability and understandability of the charging process.

**Cost Distribution** - Depending on circumstances, unit rates or allocation factors were used to distribute costs from SCEs to "receivers" (cost objectives). "Activity Type Price" (ATP) is PHISCO's term for unit rates that are used as a basis for either directly charging or allocating costs to subsidiaries. "Statistical Key Figure" (SKF) is the term that PHISCO uses for "allocation factor." Based on our sample, it appears that SKFs were used to distribute a high percentage of



PHISCO's costs. Perhaps because it has been encouraged by regulators to directly charge whenever possible, Overland found examples in which PHISCO classified SKF and ATP-distributed costs as "directly charged", when, in fact, the costs were allocated.

- **Direct Charges** - Directly charged costs employed ATPs calculated based on the fully distributed hourly costs of performing a service. PHISCO employees who dedicated time to specific subsidiaries charged their time to the subsidiaries based on the ATP rate for their positions. Overland found that the number of opportunities for direct charging from the cost pools we sampled was limited. Where direct charging was used, we found that the rates (the ATPs) appropriately considered the difference between professional and administrative hourly rates, and appropriately included the indirect (employee benefits, payroll taxes, employee expenses) and overhead (facilities, vehicle expenses) costs of the activities.
- **Allocations** - Most allocated expenses employed SKFs (allocation factors) to distribute costs, but there were exceptions in which costs were effectively allocated with ATP unit rates.<sup>7</sup> There are more than four-dozen SKF factors, many of which are simply variations on a theme (e.g. ASSET, ASSET1, ASSET2 and ASSET3). The factors used to distribute a majority of the costs in our sample included the following, with the official code for the SKF in parentheses:
  - Subsidiary Total Cost (TOTCST)
  - Subsidiary Operations and Maintenance Expense (SC-O&M)
  - Utility Customers (CUSTMR)
  - Subsidiary Employees (PEOPLE)
  - Subsidiary Assets (ASSET)
  - Average of Subsidiary Employees, Labor and Assets (BLEND)
  - Service Company Billings (SC-BILL)

## **Results of Audit Testing**

**Test of Cost Pool Sample** - We reviewed a sample of 64 allocations of PHISCO expense sampled from the months of June, 2005, 2006 and 2007. For each sample selection we:

- Examined the nature of the service company activities and expenses allocated, and if allocated to ACE, we considered whether the activities and expenses provided benefits to ACE.

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<sup>7</sup> For example, the Human Resources benefits administration function uses an "per employee" ATP rate to allocate its costs based on relative employees. Although PHISCO considers this a direct charge, it is, in fact, an allocation driven by the relative size (relative number of employees) of the subsidiary cost objectives. There is no action taken by benefits administration employees (or the contractor that now accounts for much of this function) to directly charge the time spent on individual employee issues directly to subsidiaries.

- Whether the group of cost objectives (subsidiaries) to which expenses were distributed was appropriate given the nature of the underlying activities and expenses.
- Whether the distribution method (direct charge or the allocation method) provided an appropriate link (causative, when possible) between the services activities and expenses and the subsidiaries to which the expenses were charged or allocated.

The detailed results of this test are shown in spreadsheet form in Attachment 3-1.

In general, PHISCO distributed its expenses to subsidiaries using measures of relative size such as assets, operating expenses, customers and employees. Some factors can reasonably be defined as “attributable” allocators, meaning that the allocator bears at least some relationship to the amount of cost incurred by PHISCO to conduct the activity. Perhaps the best example of an attributable allocator is the customer allocator used to distribute the cost of the Carney’s Point call center to ACE and DPL. In this example, the level of cost incurred by PHISCO does bear a relationship (although not perfect - some costs are fixed) to the number of customers that must be served, and so it is an obvious basis for allocation. Other size-based allocators, such as the “Total Cost” and “Blend” allocators used to distribute various PHISCO functions, are “unattributable”; that is, the amount of cost PHISCO incurs does not generally depend on the expense, employee and other amounts used in the allocator. The questions to be asked with unattributable allocators are:

- Is there an attributable allocator that should be used instead?
- If not, does the unattributable allocator distribute costs in proportion to the benefits received by the subsidiaries being billed. In other words, is it “fair”?

**Benefits of PHISCO functions to ACE** - A portion of the cost pools tested were directly charged or allocated to ACE for most of the cost pools sampled. Except for a few inherently “corporate” expenses, such as brand advertising, corporate contributions and corporate sponsorships, for which it can be argued that the holding company is the primary beneficiary, we did not find PHISCO costs charged to ACE that did not appear to benefit ACE.

**Appropriateness of the Cost Objectives Selected for Allocation** - In three of the 64 items tested, we found the cost objectives (subsidiaries) chosen for allocation were questionable. Details are as follows:

- **Sample item 51: SCE 6634, Public Relations** – Public relations was charged *only* to the Power Delivery segment. No public relations expenses were charged to PHI (the corporate entity) or to PHI’s Competitive Energy segment. We believe PHISCO’s determination that the benefits of public relations extend only to the regulated utilities is questionable. However, the cost reduction to ACE from allocating this activity more broadly would be minor.

- Sample item 53: SCE 7484, Regulatory Strategy and Policy - As with public relations, regulatory strategy and policy expenses are charged only to the Power Delivery function, which we believe is questionable. Regulatory strategy and policy efforts should provide benefits that extend beyond the regulated utilities, to the companies in the Competitive Energy segment. Again, the potential for cost reduction to ACE from allocating this activity more broadly is minor.
  
- Sample item 47: SC7655, Government Affairs - This cost pool distributes the expenses of PHI's Vice President of Government Affairs. PHISCO has procedures that enable the utility portion of an allocated cost to be charged to a "below-the-line" (non-operating) cost objective. Generally, below-the-line charges are limited to expenses such as political advocacy and charitable, civic and political donations that FERC account descriptions classify as non-operating. We determined that "advocacy" (legislative, political and community) was a significant focus of the Government Affairs Vice President and that this cost pool included various expenses that should have been, but were not, charged below-the-line. In particular, we found the following:<sup>8</sup>
  - PHISCO described the Government Affairs & Public Policy team's activities included coordinating with PHI entities to achieve consistent positions on issues, including legislative issues.
  
  - Contractor fees in the sampled month (June, 2007) included \$46,294 paid to "Vocus", a provider of electronic software that provides "grassroots management solutions which include a professional online advocacy site." This was charged above-the-line (to FERC account 923).
  
  - "Training and registration fees" included \$10,000 paid to the Institute for Education for a sponsorship contribution for the "Phillips Collection." This was charged above-the-line (to FERC account 923).
  
  - The Vice President of Government Affairs charged approximately \$22,500 to ACE account 923 in the month we sampled. Extrapolating this monthly amount, ACE ratepayers were exposed to a maximum over-charge of approximately \$270,000 annually, if the Government Affairs Vice President's function was deemed to be entirely chargeable to below-the-line accounts.<sup>9</sup>

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<sup>8</sup> Response to Discovery, OC-621.

<sup>9</sup> Given that the function has regulatory and community elements, it is likely that a detailed examination would yield a finding that at least some of the activities met the requirements for above-the-line accounting. This level of analysis is beyond the scope of our review.

**Appropriateness of Allocation Methods** - When evaluating allocation methods, it is important to remember that when an activity or expense is “unattributable”; that is, when there is no “causative” link between it and the cost objectives to which it is allocated, there is also no single “best” allocator. Recognizing this, the question becomes whether the allocator is reasonable given the expense being allocated.

Generally, we found the allocation methods chosen were correct (for attributable allocators) or reasonable (for unattributable allocators) for the activities and expenses being allocated. As described in more detail under the discussion of allocation factors (below), it does not appear that PHISCO’s allocation methods or its application of allocation factors to specific cost pools resulted in a material mis-allocation or over-allocation of expense to the Power Delivery segment or to ACE. However, we question the use of the “Blend” allocator in some cases. “Blend” is a composite of assets, employee counts and employee salaries, as described below. It is important to note, that in each case, because alternative allocators would have produced a similar result, we do not believe PHISCO’s allocation choice resulted in a significant mis-allocation of cost to ACE or the regulated Power Delivery segment.

- Sample item 1: SC7902 - Severance (June, 2005) - This included the costs of employee severance for service company employees. It is not obvious why a composite of employees, employee salaries and assets establishes a better relationship between the cost and cost objectives than a simpler, size-based allocator such as operating expense.
- Sample item 4: SC7414 - Senior VP & Chief Risk Officer (June, 2005) - In this case, it is unclear how the Blend allocator, which is two-thirds weighted by employee measures (employees and employee salaries) is aligned with the “risks” that the Risk Officer expenses are incurred to mitigate. In its comments to Overland’s draft report, ACE noted that this amount was reallocated in 2005 as a result of the SEC audit using the Total Cost ratio.
- Sample item 5: SC7400 - Executive Management Incentive Pay (June 2005) - The incentive pay associated with “corporate” executives was allocated using the Blend factor. It is not obvious why a composite of employees, employee salaries and assets establishes a better relationship between the cost and cost objectives than a simpler, size-based allocator such as operating expense or total cost. Our sample included this same cost pool in 2006. By then, PHISCO had changed the allocation basis to total cost.
- Sample item 55 - SC7706 VP Environment / Safety (Corp Env Svcs) (June 2007) – It is not clear that the Blend allocator, weighted two-thirds by employees, is aligned with the activities and assets in the subsidiaries that require PHI to incur environmental costs. It appears that PHISCO chose the Blend allocator because the cost pool includes safety costs - which can be attached to employees - and environmental costs - which can be attached to assets. It is not obvious, however, whether the arbitrary “two-thirds

employee / one-third asset” weighting built into the Blend allocation is aligned with the costs included in SC7706.

- Sample item 59 - SC7401 - Miscellaneous Board Chairman Costs (June 2007) - This cost pool included miscellaneous expenses, such as vehicles, occupancy (rent) and parking. We question whether an allocator weighted two-thirds employee / one-third assets is superior to a simpler allocator based on total cost or operating expense.

### **Analysis of PHISCO Allocation Methods**

During the audit period, PHISCO maintained more than 50 allocation methods and factors (SKFs) to distribute service company expenses to subsidiaries. Most were variations based on the following basic measures of size or service usage:

- Operating Expenses
- Assets
- Customers
- Employees
- Computers

We found a majority of the costs in our sample employed a relatively small subset of the available SKFs. We analyzed and tested the six SKFs discussed below, which were used to allocate most of service company expenses distributed from the cost pools included in our sample.

		ACE				Power Delivery Segment			
SKF	Ratio	2005	2006	2007	2008	2005	2006	2007	2008
SC-O&M	O&M Expense	19.7%	19.2%	16.8%	16.1%	71.9%	69.2%	73.7%	73.1%
TotCST	"Total Cost"	18.2%	17.5%	16.5%	16.1%	73.3%	73.6%	76.2%	76.6%
Asset1	Assets	15.8%	16.7%	16.5%	16.7%	80.4%	81.3%	81.7%	81.5%
People	Employees	17.9%	18.1%	16.9%	16.1%	78.1%	80.0%	82.2%	80.3%
Customer	Utility Customers	29.6%	29.6%	29.7%	29.7%	100.0%	100.0%	100.0%	100.0%
Blend	Blend	17.4%	18.0%	17.0%	16.5%	77.9%	79.0%	80.7%	80.2%

### **Reasonableness of PHI’s Broad-Based Corporate Allocations**

The most basic way to test the overall reasonableness of corporate allocations based on financial size is to compare allocation results to financial ratios derived from financial statements. The table below shows Overland’s calculation of various high-level measures of financial size for 2007. These can be compared with the 2008 SKF results shown in the table above (since the factors shown above are first quarter percentages derived from 2007 financial results).

Financial Stmt Category	Pepco	DPL	ACE	Power Delivery	Conectiv Energy	PES	PHI Invstmnts	Combined
Operating Revenue	22.8%	13.1%	15.4%	51.3%	23.4%	24.4%	0.9%	100%
Fuel, Purchased Power	16.9%	11.2%	14.5%	42.7%	26.8%	30.5%	0.0%	100%
Other Operating Expense	45.3%	20.2%	17.1%	82.6%	11.1%	5.8%	0.5%	100%
Interest, Income Tax & Non-Operating	29.5%	18.5%	23.6%	71.6%	16.2%	4.7%	7.5%	100%
<b>Total Income Statement Cost</b>	<b>22.4%</b>	<b>13.1%</b>	<b>15.4%</b>	<b>50.9%</b>	<b>23.6%</b>	<b>25.0%</b>	<b>0.4%</b>	<b>100%</b>
Net Income	32.9%	11.8%	15.7%	60.4%	19.4%	9.7%	10.5%	100%
Net PP&E	39.5%	22.8%	18.4%	80.7%	17.3%	1.7%	0.3%	100%
<b>Total Assets</b>	<b>34.8%</b>	<b>19.1%</b>	<b>19.7%</b>	<b>73.7%</b>	<b>11.4%</b>	<b>5.2%</b>	<b>9.7%</b>	<b>100%</b>

Source: PHI Consolidating Worksheet Data - Response to Discovery, OC-47.

A comparison of relative financial measures with the most closely correlated allocation factors yields the following for ACE:

"Total Cost"

Q1 2008 "TOTCST" SKF allocates	16.1%
2007 Total Income Statement Cost	15.4%

O&M Expense

Q1 2008 "SC-O&M" SKF allocates	16.1%
2007 O&M Other Operating Expense	17.1%

Assets

Q1 2008 "Asset1" SKF allocates	16.7%
Year-end 2007 total assets	19.7%
Year-end 2007 net property, plant & equip	18.4%

Total cost and O&M were the most widely used audit period allocation methods employing measures of financial size (the other two - customers and employees - are based on measures of operating size). The comparisons above show that allocations to ACE in the first quarter of 2008 were slightly below expected percentages using high-level calculations of O&M, PP&E and total assets, and slightly above expected percentages based on a calculation of total cost recorded on the income statement. However, while this comparison shows a reasonable result for ACE, it does not necessarily imply that the results for other individual subsidiaries or the methods PHISCO used to calculate the allocators were similarly reasonable.

## **Allocation Method Testing**

We analyzed and tested the inputs used to calculate factors for PHISCO's four most commonly used allocation methods. This included:

- An examination to determine of the basis for calculating the allocation; and,
- Testing to independently verify the accuracy of financial and operating inputs used in the calculation.

We found that certain financial factors (e.g. total cost and O&M) were based on fairly detailed calculations and that the information needed to understand how the calculations were made could not be obtained from the allocation method definitions in PHISCO's Cost Allocation Manual (CAM) or the PHISCO service company agreement.

**O&M Expense (SC-O&M SKF)** - "SC-O&M" is one of several allocation factors based on O&M expense. SC-O&M is PHISCO's broadly based (corporate) O&M allocator. It distributes service company costs to all PHI segments and to most subsidiaries (including all subsidiaries with material amounts of O&M expense). 13 of the 64 cost pools in our sample were distributed using either "SC-O&M", or a variant, "O&M T&D" (transmission and distribution O&M). PHISCO defines the "O&M expense ratio" (applicable to "SC-O&M" and other O&M SKFs) as follows:

A ratio the numerator of which is the total direct (i.e. excludes charges allocated by the service company) operations and maintenance expense, excluding depreciation and fuel costs, of a client company, the denominator of which is the total direct operations and maintenance expense, excluding depreciation and fuel costs, of all Client Companies using the service.

We attempted, without success, to calculate "SC-O&M" using the definition above. We incorporated additional information concerning the treatment of gains on sales of assets and settlement gains that we obtained in discussions about the calculation of the "total cost" allocator. The calculation involves a fairly complex, multi-step process that is not currently documented in the CAM or the Service Agreement. The steps involved in calculating SC-O&M begin with total recorded, pre-consolidated O&M, and proceed as follows<sup>10</sup>:

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<sup>10</sup> Response to Discovery, OC-47 and OC-840.

Total recorded O&M

Minus:

- Cost of goods sold (wholesale power and gas purchased by non-regulated subsidiaries)
- Gains (sales of assets, claims, etc.)
- Assessments
- Common support, which consists of a portion (primarily the corporate component) of PHISCO allocations
- Amounts from companies with negative O&M (which would produce a negative allocation)

Plus:

- Selected inter-company accounts included in operating revenue
- “Order settlement” depreciation and interest expense

**Sensitivity Analysis** – After obtaining the information necessary to recalculate SC-O&M, we tested its sensitivity to changes in the way it was calculated. The table below shows the percentages attributable to the utilities under SC-O&M for the first quarter of 2008 as calculated by PHISCO, as adjusted to remove of all PHISCO allocations and direct charges from O&M, and using O&M as it appears in pre-consolidated subsidiary financial results (i.e. with none of the PHISCO calculation adjustments shown above). The results of this analysis are shown in Table 3-6.

	Calculation Description	Pepco	DPL	ACE	Power Delivery
1	Q1 2008 SC-O&M, as calculated by PHISCO	36.6%	20.5%	16.1%	73.2%
2	Remove all allocated and direct service company charges from O&M for allocation calculation purposes	33.9%	18.0%	16.7%	68.6%
3	Use recorded O&M (no adjustments)	30.9%	23.8%	19.0%	73.8%

We believe PHISCO made reasonable modifications to recorded O&M expense for the purpose of calculating the SC-O&M allocator. For example, leaving common corporate support expense in the calculation creates calculation circularity, whereby expenses allocated using SC-O&M in one period affect the allocator calculated in the next period. Although we found the most significant adjustments to total O&M expense to be reasonable, we note that none of the adjustments are documented or explained in the CAM or the Service Agreement. Absent documentation, PHISCO is free to change the calculation methodology at any time. This, we believe, is a control weakness that should be corrected. A definition sufficient to explain the calculation of SC-O&M (and every other O&M allocation factor) should be included in the CAM and the Service Agreement.

**“Total Cost” (TOTCST SKF)** - The total cost allocation method was used in the audit period to distribute PHI’s executive management expenses (compensation and other expenses incurred



by the CEO, COO, CFO, General Counsel, Controller, Treasurer, and certain vice presidents) and executive compensation services. It was also used to allocate some common financial (investor relations, shareholder services, financial reporting, Sarbox compliance), communications (government affairs and corporate communications) and internal audit services. The allocation method was implemented as a result of 2005 service company audit conducted by the Securities and Exchange Commission (SEC). At the time, the SEC was not satisfied with the arbitrary 10% distribution of certain high-level corporate expenses to the holding company, so it negotiated with PHISCO for a different method (no less arbitrary) in which corporate interest expense incurred at the holding company level serves to draw costs to the holding company. Beginning in 2005, as a result of negotiation with the SEC, PHISCO began using the TOTCST factor. As a result, the percentage of executive and other high-level corporate expenses retained by the parent dropped from 10% in 2005 to 6% in 2007.<sup>11</sup>

TOTCST was used during the audit period to distribute service company expense from 12 of the 64 cost pools in our sample. It is similar to the O&M allocator, except that its definition also includes service company allocations, interest expense and other taxes, it is similar to the O&M allocator. PHISCO's CAM defines the allocation method as follows:

A ratio the numerator of which is the total expense of Client Company and denominator of which is the total expense of all Client Companies using the service. Total expense shall exclude depreciation, fuel costs, income taxes and merger-related costs that are charged directly to Pepco Holdings, Inc.

We found that this definition did not provide sufficient information to allow an independent calculation of the allocator. For example, "total cost," as calculated by PHISCO, also excludes gains on sales of assets, a component of operating expense, preferred dividends, costs charged to construction and other costs that could be included under a simplified definition of "total cost." Using consolidating financial data, and with assistance from PHISCO, Overland was able to come close to independently calculating PHISCO's TOTCST SKF.

**Sensitivity Analysis** – Because the set of income statement items included in the TOTCST factor is inherently arbitrary, we tested the sensitivity of the factor to changes in the items included in it. Specifically, we added other income statement items that could logically be included in a definition of "total cost." As shown in the table below, we found that ACE's "best" calculation, from the standpoint of costs allocable to New Jersey, resulted from the cost items that PHISCO used in its calculation. For example, as shown in the table below, ACE's share of Q1 2008 service company expense allocated using TOTCST would rise from 16.1% under the existing calculation, to 19.1% if the broadest definition of total cost were applied. Conversely, the existing calculation is somewhat detrimental to Pepco, which would see a 1.7% decline in its share of allocable expenses under TOTCST if the broadest definition

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<sup>11</sup> The impact of this change on ACE's PHISCO billing is insignificant. However, it is interesting to note that in successfully negotiating its preferred arbitrary allocation method, the SEC accomplished a lower retention of PHISCO costs by PHI.

of total cost were applied. The analysis showed that the allocator is not highly sensitive to what is included in the term “total cost.”

	Calculation Description	Pepco	DPL	ACE	Power Delivery
1	TOTCST as calculated by PHISCO during the audit period.	42.8%	17.7%	16.1%	76.6%
2	Include (add) costs charged to construction (capitalized expenses).	41.6%	18.6%	18.3%	78.5%
3	Include (add) income tax, depreciation (but not current capitalized expense), preferred dividends and “other” costs	41.1%	18.9%	19.1%	79.1%

**Customers (CUSTMR SKF)** - The customer allocator was used to distribute expenses from 10 of the 64 cost pools in our sample. PHISCO’s CAM describes the customer allocator as follows:

A ratio the numerator of which is the number of customers served by a Client Company, the denominator of which is the total number of customers for all the Client Companies using the service.

The CUSTMR SKF was limited to use within the Power Delivery segment and would be better defined as the *utility* customer allocator. It was used primarily to allocate costs of customer care operations between DPL and ACE, which include the Carney’s Point call center, billing and credit and collection functions. Because Pepco maintained its own call center operation, it was not included in the calculation. For most of the audit period, the CUSTMR SKF split the costs of Carney’s Point approximately equally between DPL and ACE.

Using the definition above, we compared the customers used in the Q4 2007 SKF calculation to 2007 year-end customer amounts published in PHI’s 2007 Form 10K. The totals for Pepco and ACE were similar (rounded figures in the Form 10K were within one percent of the totals shown in the SKF calculation). However, for DPL, the electric and gas customers shown in the 2007 10K did not compare closely with the amounts used in the SKF calculation, as shown below:

DPL Electric Customers	
Year-end 2007, per Form 10K	519,000
Q1 2008, per CUSTMR SKF calculation	462,241
DPL Gas Customers	
Year-end 2007, per Form 10K:	122,000
Q1 2008, per CUSTMR SKF calculation	65,403

## DPL Total Customers

Year-end 2007, per Form 10K:	641,000
Q1 2008, per CUSTMR SKF calculation	527,644
Difference	113,356

Most of DPL's electric customers (405,729 of 518,753) take only electric service from DPL (they do not buy gas from DPL).<sup>12</sup> However, most DPL gas customers (113,024 of 121,915 at the end of 2007) are also DPL electric customers.<sup>13</sup> For the purpose of allocating the Carneys Point call center shared by ACE and DPL, a DPL customer that overlaps both gas and electric service is counted only once. The 10K calculation counts electric customers and gas customers separately. The SKF calculation removes approximately 113,000 overlapping customers based on the premise that there is little to no incremental cost of servicing the customer's second utility.

Counting each utility service subscribed by DP&L customers, rather than each customer, would lower ACE's allocation of Carney's Point by approximately 4%. However, we agree with PHISCO's approach of counting a customer that takes two utility services once, rather than twice. The only situation that would justify counting an electric and gas customer twice (once for each subscribed utility) would be one in which the second utility caused the call center to incur incremental costs equal to or approaching the amount added by the first utility. However, PHISCO's methodology for counting customers and calculating its various customer allocators should be fully explained in the CAM and the Service Agreement. Currently, it is not.

Employees (PEOPLE SKF) - An employee allocator was used to distribute expenses from five of the 64 cost pools in our sample. There are several employee SKFs, including PEOPLE, "calculated in accordance with the employee ratio"; PEOPLE2, "a count of employees by legal entity and building;" PEOPLE4 - "calculated in accordance with the number of employees paid;" and PEOPST, "a subset of the PEOPLE SKF."<sup>14</sup>

We tested the PEOPLE SKF, which, according to PHI is directly associated with the Employee allocator, defined in the CAM as follows:

A ratio the numerator of which is the number of employees of a Client Company, the denominator of which is the number of employees in all Client Companies using the service.

To test the inputs to the People SKF, we compared them to amounts shown in a published source, namely PHI's 10Ks. This comparison is shown below:

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<sup>12</sup> Response to Discovery, OC-858.

<sup>13</sup> Id.

<sup>14</sup> Response to Discovery, OC-780.

<b>Employees Per 10K As Of:</b>												
<b>Date</b>	<b>Pepco</b>		<b>DPL</b>		<b>ACE</b>		<b>PHISCO</b>		<b>Non-Reg</b>		<b>Total</b>	
12/31/2005	1,526	27.8%	898	16.4%	632	11.5%	1,709	31.2%	716	13.1%	5,481	100.0%
12/31/2006	1,413	27.4%	907	17.6%	588	11.4%	1,756	34.1%	492	9.5%	5,156	100.0%
12/31/2007	1,365	26.6%	916	17.9%	507	9.9%	1,805	35.2%	538	10.5%	5,131	100.0%
<b>People SKF Inputs</b>												
<b>Period</b>	<b>Pepco</b>		<b>DPL</b>		<b>ACE</b>		<b>PHISCO</b>		<b>Non-Reg</b>		<b>Total</b>	
Q1 2006	1,763	34.4%	1,295	25.3%	927	18.1%	-	0.0%	1,127	22.0%	5,112	100.0%
Q1 2007	1,698	35.8%	1,353	28.6%	864	18.3%	-	0.0%	815	17.2%	4,730	100.0%
Q1 2008	1,696	35.4%	1,378	28.8%	773	16.1%	-	0.0%	943	19.7%	4,790	100.0%

SKF totals for the periods comparable to year-end 10K figures are those in the following quarter (e.g. Q1 2008 is based on year-end 2007 employee data). We requested a reconciliation to understand the differences between 10K and SKF data. PHISCO reconciled the data for all three audit years. The significant differences are as follows:

- For cost allocation purposes, PHISCO employees either directly assigned to, or directly supporting a line of business, are added to the employees in that line of business.
- Corporate PHISCO employees are removed from the SKF calculation.
- PES employees excluded from the 10K data are added to the non-regulated total for SKF purposes.

In addition, there were small differences due to the cut-off dates for data. Cut-off differences accounted for 1% or less of total employees for PHI as a whole. The reconciliation adequately explains the differences between the employee data in public financial reports and the data used for the PHISCO allocation calculation. However, the CAM documentation describing the PEOPLE SKF calculation is inadequate. Specifically, it does not explain that PHISCO employees directly supporting a business unit are added to the employees in that business unit; that PHISCO employees supporting the corporation as a whole are excluded from the calculation; or the treatment of PES employees relative to the employees shown in public financial reports.

**AFFILIATE TRANSACTIONS AUDIT OF ATLANTIC CITY ELECTRIC  
PHI SERVICE COMPANY BILLING ANALYSIS  
June 2005 Sample Percentages**

Ref No.	Cost Ctrs	Function	Cost Pool	Description	ACE 1500	Power Delivery Segment	Conectiv Energy Segment	Pepco Energy Services Segment	Other Non-Reg (Potomac Capital) Segment	Holding Company Charges	Total All Companies
1	3	Human Resources	SC7902 Severance Allocation (Salaries)	Severance salaries for service company employees	17.7%	78.4%	13.4%	8.0%	0.2%	0.0%	100.0%
2	8013	Customer Services	SC7613 C3 System Support Costs	Operations mgt, IBM support and PHI mainframe costs associated with the Carneys Point Call Center (C3). Activities include\ maintenance of the database and other aspects of the C3 system, improvements in system functionality (per OC-604).	50.5%	100.0%	0.0%	0.0%	0.0%	0.0%	100.0%
3	931	Customer Services	SC7598 Carney CC-Revenue	Expenses of running the Carney's Point Call Center (reps, bill specialists, supervisors, contractors).	50.5%	100.0%	0.0%	0.0%	0.0%	0.0%	100.0%
4	812	Exec Mgt	SC7414 Sr VP & Chief Risk Officer	Professional services (provide a strategic planning template, Booz Allen, per OC-606), and employee salaries, etc. associated with the Chief Risk Officer.	15.5%	70.1%	12.3%	7.4%	0.2%	10.0%	100.0%
5	3	Human Resources	SC7400 Executive Management	Long term incentive pay and general amortization	16.6%	74.9%	13.2%	7.9%	4.1%	0.0%	100.0%
6	3000	IT	SC7691 IT Workstation	Desktop computer and server costs (hardware leases, software, setup, maintenance, supplies)	15.5%	95.6%	4.4%	0.0%	0.0%	0.0%	100.0%
7	8020	IT	SC7673 SAP Applications	Secondary cost receiver containing costs related to maintaining the SAP system	14.9%	84.9%	14.7%	0.4%	0.0%	0.0%	100.0%
8	888	Customer Services	SC7596 Customer Care Billing	Salaries and salary-related overheads associated with billing. (See questions about this process)	50.5%	100.0%	0.0%	0.0%	0.0%	0.0%	100.0%
9	HRREC	Human Resources	SC6755 HR Employee Services	Empl ben admin. Outside svcs & software amort were > half the budget, which was "direct chgd" at \$150/hr. Outside svcs & software amort are not usually proportional to the efforts of the charging the cost.	18.4%	90.3%	9.5%	0.2%	0.0%	0.0%	100.0%
10	375	Regulated E&G Delivery	SC7978 PHI Pwr Del Plan/Fin	Professional services and salaries associated with the function. The consulting in this case was associated with Sarbox. (OC-607)	21.4%	100.0%	0.0%	0.0%	0.0%	0.0%	100.0%
<b>SAMPLE NET TOTAL</b>					<b>29.4%</b>	<b>89.2%</b>	<b>6.7%</b>	<b>2.8%</b>	<b>0.4%</b>	<b>0.9%</b>	<b>100.0%</b>
<b>TOTAL PHISCO NET BILLINGS (IN AND OUT OF SAMPLE)</b>					<b>22.5%</b>	<b>80.8%</b>	<b>14.4%</b>	<b>3.4%</b>	<b>0.6%</b>	<b>0.8%</b>	<b>100.0%</b>

AFFILIATE TRANSACTIONS AUDIT OF ATLANTIC CITY ELECTRIC  
PHI SERVICE COMPANY BILLING ANALYSIS  
June 2006 Sample Percentages

Ref No.	Cost Ctrs	Function	Cost Pool	Description	ACE 1500	Power Delivery Segment	Connectiv Energy Segment	Pepco Energy Services Segment	Other Non-Reg (Potomac Capital) Segment	Holding Company Charges	Total All Companies
11	3	Human Resources	SC7400 Executive Management	Long term incentive pay, executive bonus pay and general amortization	17.3%	72.3%	13.9%	5.7%	3.0%	5.2%	100.0%
12	533	Human Resources	SC7990 PHISCO Pension Residual	The annual true-up for pension expense for PHISCO employees (OC-610). Estimates are accrued monthly. Each yr in June or July there is an updated actuarial val. This true up relates to the period Jan-June, 2006.	22.2%	80.1%	14.7%	2.9%	1.0%	1.3%	100.0%
13	931	Customer Services	SC7598 Carney CC-Revenue	Expenses of running the Carney's Point Call Center (reps, bill specialists, supervisors, contractors).	50.5%	100.0%	0.0%	0.0%	0.0%	0.0%	100.0%
14	8022	IT	SC7792 Network	Includes IT labor, vendor, leasing, contractor, depr expenses of maintaining the network & its hardware and the corporate email system. It also includes allocated platform costs (Intel, Unix and Storage. (per OC-612)	15.7%	92.0%	7.7%	0.2%	0.0%	0.0%	100.0%
15	8013	Customer Services	SC7613 C3 System Support Costs	Carney's Point Call Center ("C3"), mainframe operations mgt, IBM support and PHI mainframe costs associated with the C3.	50.5%	100.0%	0.0%	0.0%	0.0%	0.0%	100.0%
16	882, 2139, 2141, 2142 & others	Legal & IA	SC7490 Legal Services	Corporate legal expenses, mostly salaries, some outside services, Legal costs that are not directly charged. Also includes the costs of the General Counsel.	13.4%	90.3%	5.8%	1.4%	1.3%	1.3%	100.0%
17	2105	Financial	SC7503 External Reporting	Salaries and professional services related to external reporting. Prof services include the Price Waterhouse annual PHI audit. (per OC-614).	17.4%	72.8%	14.1%	5.0%	3.0%	5.2%	100.0%
18	888	Customer Services	SC7596 Customer Care Billing	Salaries and salary-related overheads associated with billing. (See questions about this process)	50.5%	100.0%	0.0%	0.0%	0.0%	0.0%	100.0%
19	380	Regulated E&G Delivery	SC7261 Emerg Preparedness	Salaries, salary related overheads related to the emergency prep function	22.0%	100.0%	0.0%	0.0%	0.0%	0.0%	100.0%
20	882	Legal & IA	SC6491 Legal	Direct legal expenses of the Legal department	17.0%	90.0%	9.4%	0.3%	0.3%	0.0%	100.0%
21	8007	Regulated E&G Delivery	SC7227 GIS System Support Allocation	IT and other expenses for the geographic information system containing locational and tracking data for electric distribution outside plant (per OC-616).	50.3%	100.0%	0.0%	0.0%	0.0%	0.0%	100.0%
<b>SAMPLE NET TOTAL</b>					<b>25.6%</b>	<b>84.9%</b>	<b>9.2%</b>	<b>2.6%</b>	<b>1.3%</b>	<b>2.0%</b>	<b>100.0%</b>
<b>TOTAL PHISCO NET BILLINGS (IN AND OUT OF SAMPLE)</b>					<b>21.1%</b>	<b>80.8%</b>	<b>14.3%</b>	<b>3.0%</b>	<b>0.9%</b>	<b>1.0%</b>	<b>100.0%</b>

AFFILIATE TRANSACTIONS AUDIT OF ATLANTIC CITY ELECTRIC  
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Ref No.	Cost Ctrs	Function	Cost Pool	Description	PD ACE 1500	Power Delivery Segment	Connectiv Energy Segment	Pepco Energy Services Segment	Other Non-Reg (Potomac Capital)	Holding Company Charges	Total All Companies
22	3	Human Resources	Incentive Allocation	up - Corporate and Power Delivery (utility) business unit executives. Also see sample item 23 below.	19.1%	86.8%	8.2%	4.5%	0.5%	0.0%	100.0%
23	669	Energy Business	SC7132 Energy VP	Primarily an incentive pay true up; but also contains salaries & salary-related costs - managers and execs in the Connectiv Energy business unit. Also see sample item 22 above.	0.0%	0.0%	100.0%	0.0%	0.0%	0.0%	100.0%
24	931	Customer Services	Carney CC-Revenue	Expenses of running the Carney's Point Call Center (reps, bill specialists, supervisors, contractors).	51.0%	100.0%	0.0%	0.0%	0.0%	0.0%	100.0%
25	8013	Customer Services	SC7613 C3 System Support Costs	Carney's Point Call Center ("C3"), mainframe operations mgt, IBM support and PHI mainframe costs associated with the C3.	51.0%	100.0%	0.0%	0.0%	0.0%	0.0%	100.0%
26	3	Human Resources	Executive Management	Executive Compensation	13.4%	64.7%	18.0%	11.0%	2.0%	4.3%	100.0%
27	8022	IT	SC7792 System Support	depr expenses of maintaining the network & its hardware and the corporate email system. It also	14.4%	91.9%	7.8%	0.2%	0.0%	0.0%	100.0%
28	5580	Customer Services	Customer Billing Insertion	of the expense (about 2/3) is postage. Also includes running the inserter, and the materials needed to	51.0%	100.0%	0.0%	0.0%	0.0%	0.0%	100.0%
29	2105	Financial Svcs	External Reporting	reporting. Professional services are the Price Waterhouse annual "integrated" PHI audit. (per OC-	16.1%	76.1%	10.4%	4.8%	2.7%	6.0%	100.0%
30	888	Customer Services	Customer Care Billing	Billing dept salaries and salary-related overheads	51.0%	100.0%	0.0%	0.0%	0.0%	0.0%	100.0%
31	2141, 2142 & others	Legal & IA	SC7490 Legal Services	outside services, Legal costs that are not directly charged. Also includes the costs of the General	13.8%	88.0%	7.1%	1.5%	1.0%	2.4%	100.0%
32	3000	IT	SC7691 IT Workstation	Desktop computer and server costs (hardware leases, software, setup, maintenance, supplies)	13.8%	95.1%	4.9%	0.0%	0.0%	0.0%	100.0%
33	2104	Financial Svcs	Excess Liab Ins Exp	Liability insurance expense	16.9%	77.8%	10.8%	11.3%	0.2%	0.0%	100.0%
34	882	Legal & IA	SC6491 Legal	Direct legal expenses of the Legal department	15.8%	85.9%	10.8%	1.4%	0.2%	1.7%	100.0%
35	985	Human Resources	SC7971 Strategic Staffing	Salaries and related overheads of Human Resources people working on the workforce recruiting, selection, planning and similar employee-driven activities.	18.9%	90.8%	9.1%	0.1%	0.0%	0.0%	100.0%
36	388	Regulated E&G Delivery	SC6249 CPD Planning Engineer	Salaries and overheads of planning engineers	10.4%	100.0%	0.0%	0.0%	0.0%	0.0%	100.0%
37	879	Human Resources	SC7804 Vacation Accrual	DPL vacation accrual	0.0%	100.0%	0.0%	0.0%	0.0%	0.0%	100.0%
38	878, 8019, HRREC	Human Resources	SC7974 HR Employee Srv Costs	Several HR cost ctrs. Includes salaries, contractor costs [employee benefits outsourcing and legal costs to defend the cash balance pension plan]. Includes one time \$94K of "general penalties" for to failing to pay a PBGC premium on time for '04. (OC617)	18.6%	90.9%	9.0%	0.1%	0.0%	0.0%	100.0%
39	903, 2120	Exec Mgt	SC7403 President & CEO	President, Chairman & CEO salaries, incentive pay and consulting expenses	16.1%	76.1%	10.4%	4.8%	2.7%	6.0%	100.0%
40	2116	Financial Svcs	SC7539 Accounting Research & Controls	Charges from Deloitte Consulting, which included: temporary filling of the Mgr of Acting Research, "shadow the 10Q process" and assist developing actcing policies. (OC-461)	15.9%	73.6%	16.5%	9.0%	1.0%	0.0%	100.0%
41	HRREC	Human Resources	SC6755 HR Employee Services	Salaries, contractor, depreciation associated with HR employee services (benefits administration)	17.0%	92.7%	7.2%	0.2%	0.0%	0.0%	100.0%
42	2143	Customer Services	SC7478 Utility of the Future	"Utility of the Future" - Primarily an accrual of contractor expenses associated with the Meter Data Management System project. Also includes some internal asset mgt and "strategic support svcs" labor. (OC-618).	22.3%	100.0%	0.0%	0.0%	0.0%	0.0%	100.0%
43	2104	Financial Svcs	SC7464 Property Insurance Expense	Property insurance expense accrual.	10.3%	55.5%	40.1%	4.4%	0.1%	0.0%	100.0%
44	2104	Financial Svcs	SC7463 D&O Insurance Expense	Directors and Officers liability insurance	16.1%	76.1%	10.4%	4.8%	2.7%	6.0%	100.0%
45	8007	Regulated E&G Delivery	SC7227 GIS System Support Allocation	IT and other expenses for the geographic information system containing locational and tracking data for electric distribution outside plant (per OC-616).	49.3%	100.0%	0.0%	0.0%	0.0%	0.0%	100.0%
46	604	Energy Business	SC7103 Engineering Admin	Engineering for Connectiv Energy business unit.	0.0%	0.0%	92.5%	7.5%	0.0%	0.0%	100.0%
47	975	Exec Mgt	SC7655 Governmental Affairs Services	Salaries & related expense for the VP of Govt Affairs and an assistant; gov't affairs "grassroots" . . . Advocacy" software; sponsorship payments (per OC-621)	16.1%	76.1%	10.4%	4.8%	2.7%	6.0%	100.0%
48	908	Exec Mgt	SC7402 Chief Financial Officer	Salary and related expense of the CFO; also includes over \$15K in meal expense - this is related to an "All Hands Meeting" held in June, 2007, 228 attendees, which was charged to the CFO's cost center. OC-620.	16.1%	76.1%	10.4%	4.8%	2.7%	6.0%	100.0%

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June 2007 Sample Percentages**

Ref No.	Cost Ctrs	Function	Cost Pool	Description	PD ACE 1500	Power Delivery Segment	Connectiv Energy Segment	Pepco Energy Services Segment	Other Non-Reg (Potomac Capital)	Holding Company Charges	Total All Companies
49	2100	Financial Svcs	SC7451 Shareholder Services	Postage, fees, licenses and about 12K per month in salaries associated with shareholder services	16.1%	76.1%	10.4%	4.8%	2.7%	6.0%	100.0%
50	893	Communications	SC7658 Media Relations	Primarily salaries and salary related expenses, aslo some contractor services, for the media relations function	15.9%	73.6%	16.5%	9.0%	1.0%	0.0%	100.0%
51	886	Communications	SC6634 Public Relations	Utility public relations.	29.2%	100.0%	0.0%	0.0%	0.0%	0.0%	100.0%
52	2135	Communications	SC7555 Government Affairs-B/L	Training & registration fees, sponsorships, donations, entertainment	16.1%	76.1%	10.4%	4.8%	2.7%	6.0%	100.0%
53	996	Financial Svcs	SC7484 Regulatory Strategy & Policy	Primarily salaries and salary related expenses	20.0%	100.0%	0.0%	0.0%	0.0%	0.0%	100.0%
54	398	Regulated E&G Delivery	SC6283 Government Affairs - DPL	Primarily salaries and salary related expenses for 1) DPL President, 2) Senior Wholesale (customer) Relations Mgr, and 3) an Admin Asst. (OC-623)	0.0%	100.0%	0.0%	0.0%	0.0%	0.0%	100.0%
55	630	Environmental & Safety	SC7706 VP Environment / Safety (Corp Env Svcs)	Primarily salaries and salary related expenses	16.7%	80.6%	11.8%	7.5%	0.1%	0.0%	100.0%
56	973	Communications	SC7537 Government Affairs-MD	Rent is the #1 cost, also salaries and salary-related expenses. Described in OC-624 only as a "resource cost center for two PHISCO employees"	0.0%	87.1%	0.0%	12.9%	0.0%	0.0%	100.0%
57	862	Financial Svcs	SC6504 Regulatory Reporting	Primarily salaries and salary related expenses	15.5%	100.0%	0.0%	0.0%	0.0%	0.0%	100.0%
58	2128	Communications	SC7469 Federal Corp Comm-B/L	Contractor (outside legal, professional, consulting)	16.1%	76.1%	10.4%	4.8%	2.7%	6.0%	100.0%
59	804	Exec Mgt	SC7401 Chairman of the Board	Facilities, vehicle and membership charges	16.7%	80.6%	11.8%	7.5%	0.1%	0.0%	100.0%
60	2127	Communications	SC7468 MD Gov't Affairs-B/L	Contractor (outside legal), \$500 in registration fees	0.0%	87.1%	0.0%	12.9%	0.0%	0.0%	100.0%
61	2129	Communications	SC7467 Political Action Committee-B/L	Labor expense associated with a "Budget & Ethics Compliance Analyst" who also serves as Political Action Committee administrator (OC-627)	16.1%	76.1%	10.4%	4.8%	2.7%	6.0%	100.0%
62	879	Human Resources	SC7990 PHISCO Pension Residual	Pension residual charges	22.0%	83.1%	12.4%	3.1%	0.8%	0.6%	100.0%
63	SCOPEB	Human Resources	PHISCO OPEB Residual	OPEB Medical residual charges	22.0%	83.1%	12.4%	3.1%	0.8%	0.6%	100.0%
64	3	Financial Svcs	SC7417 Corporate Expenses	Contractor accrual reversal	15.9%	73.5%	16.5%	9.0%	1.0%	0.0%	100.0%
<b>SAMPLE NET TOTAL 2007</b>					<b>23.7%</b>	<b>80.9%</b>	<b>16.2%</b>	<b>1.3%</b>	<b>0.4%</b>	<b>1.2%</b>	<b>100.0%</b>
<b>TOTAL PHISCO NET BILLINGS (IN AND OUT OF SAMPLE)</b>					<b>20.5%</b>	<b>80.9%</b>	<b>15.5%</b>	<b>2.4%</b>	<b>0.5%</b>	<b>0.7%</b>	<b>100.0%</b>



## **Chapter 4. Power Supply and Transmission Affiliate Issues**

PHI owns three regulated electric utilities and two non-regulated merchant power companies. The merchant affiliates are Conectiv Energy Supply, Inc. (CESI) and Pepco Energy Services (PES). CESI owns nine power plants in ACE's transmission control zone. The merchant affiliates engage in a wide variety of transactions in the PJM regional power and transmission markets.

ACE purchases power from CESI and provides transmission services to CESI and PES. The joint ownership of regulated electric utilities and merchant power companies creates the risk that: (1) utility interests will be subordinated to the interests of the merchant affiliates; and (2) utility resources will be used to provide an unfair competitive advantage to the merchant affiliates. This chapter addresses affiliate relations issues pertaining to power supply and transmission.

### **Summary of Findings**

The findings and recommendations contained in this Chapter are listed below.

1. The BGS process significantly reduces the risk of self-dealing in power procurement.
2. PJM's control over transmission tariff administration, operations and planning significantly reduces the risk of self-dealing in transmission.
3. The utility and merchant power procurement functions are adequately separated.
4. With one notable exception, the utility transmission function is adequately separated from the merchant power business. As noted below, utility and merchant participation in PJM committee activities is not adequately separated.
5. The FERC's Standards of Conduct for Transmission Providers provide limited protection to ACE ratepayers.
6. The joint participation of utility and merchant businesses in PJM committees creates unnecessary risk for ratepayers.
7. The joint representation of utility and merchant businesses in FERC proceedings creates unnecessary risk for ratepayers.
8. CESI and ACE are currently upgrading the metering at CESI's power plants.

9. ACE charged the cost of station power used at CESI's Deepwater plant to the BGS regulatory deferral for approximately four years.
10. ACE provided power to CESI's Missouri Avenue and Cumberland power plants without charge for almost nine years.
11. ACE's charges to CESI for interconnection administrative and maintenance services are sporadic and lower than expected.

**Recommendations**

1. Joint participation of the utility and merchant businesses in PJM committee activities should be prohibited.
2. ACE should credit a substantial portion of the CESI retroactive station power billings to the BGS deferral account.
3. PHI should conduct annual internal audits of ACE's interconnection and station power arrangements with CESI.

**Background**

CESI and PES own 4,499 MW of generating capacity, all located in the PJM region. The following table shows the capacity owned by CESI.

<i>Table 4-1</i> <b>Conectiv Energy Generation Capacity – MW</b> <b>As of December 2007</b>					
<b>Type</b>	<b>New Jersey</b>	<b>Delaware</b>	<b>Pennsylvania</b>	<b>Virginia and Maryland</b>	<b>Total</b>
Coal	80	260	0	0	340
Oil	86	450	0	22	558
Gas	502	1,186	1,092	26	2,806
<b>Total</b>	<b>668</b>	<b>1,896</b>	<b>1,092</b>	<b>48</b>	<b>3,704</b>
Source: PHI 2007 SEC 10-K Report					

All of CESI's plants in New Jersey were transferred to CESI from ACE as part of electric industry restructuring. CESI's Delaware capacity consists of plants transferred from Delmarva and 545 MW of new combined cycle capacity constructed in Wilmington Delaware. The Pennsylvania capacity consists of the 1,092 MW Bethlehem combined cycle plant. The

Bethlehem plant was completed in 2003 and is located approximately 50 miles north of Philadelphia.

CESI is currently constructing the 545 MW Delta combined cycle power plant. The Delta Plant is scheduled for completion in 2009 and is located in Pennsylvania approximately 50 miles southeast of Harrisburg. Conectiv has entered into a six-year tolling agreement to sell the output of the Delta plant to Constellation Energy. CESI completed construction of the 100 MW New Cumberland combustion turbine plant in Millville, New Jersey on June 1, 2009.<sup>1</sup>

PES's generating capacity is located in the Washington DC metropolitan area and consists of the following:

Type	Capacity
Oil	550
Gas	240
Landfill Gas	5
<b>Total</b>	<b>795</b>
Source: PHI 2007 SEC 10-K	

CESI and PES are relatively small compared to the total generation in PJM. As of December 2007, the total installed generating capacity in PJM was 163,498 MW.<sup>2</sup>

Generators are required to enter into interconnection agreements with the host transmission system owner. The interconnection agreements provide for the construction of facilities needed to interconnect the generation unit to the transmission system and for the operation of the interconnection, including metering.

ACE has three interconnection agreements with CESI. The first covers all of the plants that ACE transferred to CESI in 2000. The second covers the Deepwater plant, which was transferred to CESI in 2004. The third covers the new combustion turbine installed at the Cumberland plant. All interconnection agreements entered into after 2002 are required to utilize the standard PJM Interconnection Service Agreement template.<sup>3</sup>

<sup>1</sup> CESI's public web site contains a map showing the location of each plant and a brief description of each plant's capabilities and history.

<sup>2</sup> PJM 2007 State of the Market Report, page 145.

<sup>3</sup> Response to Discovery, OC-825.

CESI was one of several winning bidders in each of the past five annual BGS-FP auctions. The following table shows the results of each auction.<sup>4</sup>

Auction	CESI Tranches	Total Tranches	Percent CESI
February 2003 <sup>5</sup>	2	7	28.6
February 2004	1	7	14.3
February 2005	1	8	12.5
February 2006	1	7	14.3
February 2007	1	7	14.3
Source: BGS auction web site.			

BGS suppliers are the designated load-serving entity for BGS customers and are required to purchase transmission services for that load. The BGS suppliers, including CESI, purchase transmission services from ACE under the network integration transmission service tariff.<sup>6</sup>

### **Structural Separation and Other Safeguards**

#### **The BGS process significantly reduces the risk of self-dealing in power procurement.**

The BGS auction process is closely supervised by the BPU. The auction process is administered by an independent Auction Manager approved by the BPU. The auction process is overseen and monitored by a Board Advisor retained by the BPU. The auction procedures and results are reviewed and approved by the BPU. For the ACE zone, all winning bidders enter into identical standard contracts and are paid the same price.

During his interview with Overland, the utility power supply GM indicated:<sup>7</sup>

- PHI has not provided any information to CESI concerning ACE's end users or electric system that is not also made available to all BGS bidders.

<sup>4</sup> ACE provides two types of BGS. BGS-Fixed Price (BGS-FP) is supplied to residential and small commercial customers. BGS-Industrial and Commercial Energy Price (BGS-CIEP) is supplied to larger customers. ACE's BGS-FP load is approximately 2,198 MW. ACE's BGS-CIEP load is approximately 33 MW. PHI 2008 10-K Report, page 9.

<sup>5</sup> Results for 34 month contract term. Table excludes results for 10-month product which was also included in the 2003 auction.

<sup>6</sup> The BGS suppliers purchase transmission service from PJM under the ACE tariff. The BGS suppliers pay PJM for the services and PJM pays ACE on an aggregated basis.

<sup>7</sup> Overland interview with Peter Schaub, Power Delivery General Manager Bulk Power Supply, June 11, 2008.

- The direct participants in the BGS auction process have not raised any issues concerning CESI's participation in the auction, including the Auction Manager, Board Advisor, other bidders or other utilities.
- ACE has not granted any waivers or exceptions to the BGS supply contract terms to CESI or any other BGS suppliers.

The protections inherent in the BGS auction process are adequate to protect ratepayers from affiliate abuse in the awarding and administration of BGS contracts.

**PJM's control over transmission tariff administration, operations and planning significantly reduces the risk of self-dealing in transmission.**

In PJM, generation and transmission system owners do not purchase transmission services unless they are also a load serving entity. The BGS suppliers are responsible for procuring the transmission and associated ancillary services required to serve BGS load. CESI is both a BGS supplier and generation owner in ACE's control zone.

The BGS suppliers purchase all of the required transmission services under ACE's network integration transmission tariff. PJM administers all of ACE's transmission tariffs. ACE assists the BGS suppliers in making their business arrangements with PJM.<sup>8</sup>

All of the BGS suppliers pay the same price for network integration service. ACE does not provide discounts to any of the BGS suppliers, including CESI. In 2007, the network integration tariff accounted for 96% of ACE's transmission revenues.<sup>9</sup> Under that tariff, ACE's transmission revenue requirement is allocated to firm transmission customers based on peak demand. ACE's transmission revenues have very little variability based on energy throughput. The concept of wheeling is not relevant to ACE's transmission system.<sup>10</sup> Almost all of ACE's transmission revenues come from the BGS and Third Party Retail (TPR) suppliers that are designated as load serving entities for ACE distribution customers. The only transmission services CESI purchases from ACE are network integration services as a BGS supplier and non-firm point-to-point transmission for the self-supply of station power from CESI's other power plants.

PJM largely controls the operation of ACE's transmission system. ACE transmission data is telemetered to the PJM control room on a real time basis. The PJM control room has the full authority and responsibility for maintaining the reliability of the bulk electric system in its region, including ACE's system. PJM operates the PJM energy, capacity and ancillary services markets. PJM schedules generation and power transactions and dispatches generation in real time to balance the energy supply and demand on the system.<sup>11</sup>

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<sup>8</sup> Response to Discovery, OC-22.

<sup>9</sup> Response to Discovery, OC-478.

<sup>10</sup> Overland interview with Tsion Messick, Vice President Power Delivery Transmission, July 15, 2008.

<sup>11</sup> Response to Discovery, OC-210 and Messick interview, July 15, 2008.

ACE's control room monitors and analyzes ACE's transmission system and provides data to PJM. ACE's control room also:<sup>12</sup>

- Operates ACE's distribution system, independent of PJM.
- Operates transmission facilities under the direction of PJM.
- Dispatches first responders to investigate transmission equipment problems.
- Schedules maintenance outages on ACE's transmission system, subject to PJM approval.

ACE is responsible for all transmission system maintenance.

PJM is responsible for administering the interconnection process for new generation entrants, including processing interconnection requests and administering the new interconnection services request queues, system impact studies and facilities studies.<sup>13</sup> The transmission owner (ACE) participates in scoping and feasibility study meetings and may propose reasonable alternatives to the planned interconnection.<sup>14</sup> The transmission owner is a party to the resulting Interconnection agreement. During 2007 and 2008, 19 generation projects were proposed for ACE's service territory totaling 1,679 MW.<sup>15</sup>

PJM is responsible for transmission system planning within its region. The planning can be divided into two areas: reliability and economic expansion. The reliability planning is completed first and focuses on identifying violations of reliability standards, and proposing solutions for those violations. PJM identifies potential violations, and ACE recommends proposed solutions which are subject to PJM approval. Economic expansion planning looks at projects that lower overall system costs. PJM takes the lead in economic expansion planning.<sup>16</sup>

PHI provides data and analysis to PJM in the transmission planning process, including facilities ratings, substation loads and system impedance. PHI develops the capacity ratings of its transmission facilities using standards and guidelines issued by PJM. Both PJM and RFC have audited PHI's capacity rating methodology.<sup>17</sup>

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<sup>12</sup> Response to Discovery, OC-210.

<sup>13</sup> PJM Open Access Transmission Tariff, Section IV (Tariff Sheet 96).

<sup>14</sup> PJM Open Access Transmission Tariff, Section 36.1.5 and 36.2.

<sup>15</sup> Response to Discovery, OC-889, Excludes withdrawn projects. MW capacity for wind projects is reduced to capacity rights under PJM control.

<sup>16</sup> Messick interview, July 15, 2008.

<sup>17</sup> Messick interview, July 15, 2008. Reliability First Corporation is the regional electric reliability organization designated by the North American Electric Reliability Corporation (NERC).

PHI supports PJM's transmission planning standards and criteria. PHI's policy is to build all transmission facilities included in the PJM transmission expansion plan.<sup>18</sup> PJM has not rejected any transmission projects proposed by PHI, and PJM has not required any projects that PHI believes are not economically justified.<sup>19</sup>

In theory, a transmission owner could benefit its merchant generation affiliate by causing an increase in power prices. This could be accomplished by:

- Limiting transmission capacity by failing to build needed facilities or under-rating the capacity of its existing facilities.
- Using the interconnection process to delay the addition of new generating capacity.

Those risks are remote in this instance for the following reasons.

- ACE's transmission system currently has adequate capacity.
- PJM takes the lead on transmission economic expansion planning.
- PJM sets the standards and guidelines for facility ratings, and PHI's facility ratings procedures are audited by PJM.
- The generation interconnection application process is administered by PJM.
- The incentive to attempt to increase power prices is diluted because the price increase would benefit all generation owners, not just CESI.

ACE has not had any disputes with applicants for generation interconnections in recent years.<sup>20</sup>

**The utility and merchant power supply functions are adequately separated.** The management of merchant and utility power supply functions should be separated to reduce the risks that: (1) utility interests will be subordinated to the interests of PHI's unregulated merchant power business; and (2) the PHI's merchant power business will obtain an unfair competitive advantage over competing suppliers as a result of preferential access to utility services and information.

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<sup>18</sup> PHI adheres to PJM's planning process. PHI meets its construction obligation for transmission upgrades that are assigned to PHI utility companies pursuant the FERC approved PJM Regional Transmission Expansion Planning process. PHI recommends certain transmission projects to PJM for consideration. Determining the proper transmission projects is an iterative process. PHI works with PJM until both parties are satisfied the most cost effective projects that meet reliability and economic needs are chosen.

<sup>19</sup> Messick interview, July 15, 2008.

<sup>20</sup> Messick interview, July 15, 2008.

The BPU's Affiliate Relations Standards include separation and information disclosure requirements to protect ratepayers against those risks.<sup>21</sup> Additional standards adopted for ACE in 2002 require, among other things, that PHI have separate operating staffs for its merchant and utility power supply and transmission functions below the senior officer level, and require the merchant and utility staffs to be located in physically separate offices.<sup>22</sup>

All utility and merchant power procurement functions are performed by PHI service company employees. The service company has separate organizations to manage the utility and merchant power procurement functions. The utility functions are located in the Power Delivery organization and report to the Director and Process Manager, Supply Customer Energy, Peter Schaub. Mr. Schaub, reports to PHI's Vice President – Customer Care, Charles Dickerson. Mr. Dickerson reports to David Velazquez, PHI Executive Vice President – Power Delivery.

The merchant power procurement functions are located in PHI's merchant Wholesale Operations (commodity trading), Market Analysis, and Business Development departments. Those departments report to CESI's President and Chief Operating Officer, Gary Morsches.<sup>23</sup>

Management of the merchant and utility power supply functions merges at the CEO level. Mr. Morsches and Mr. Velazquez both report to PHI's President and Chief Operating Officer, Joseph Rigby.

The following table shows the PHI utility power procurement headcount by cost center.

<b>Cost Center</b>	<b>Headcount</b>
Power Delivery Power Procurement	11
Power Delivery Balance & Settlement	23
Third Party Retail Supplier Relations	4
<b>Total</b>	<b>38</b>
Source: Response to Discovery, OC-377 and OC-781	

The utility power procurement departments do not provide any services to the merchant functions.<sup>24</sup> PD Power Procurement manages the New Jersey BGS auction process and the

<sup>21</sup> Affiliate Relations, Fair Competition and Accounting Standards and Related Reporting Requirements, New Jersey Administrative Code, Title 14, Public Utilities, Chapter 4.

<sup>22</sup> Response to Discovery, OC-9, Updated Comprehensive Compliance Plan of Atlantic City Electric Company, January 31, 2008, Exhibit B.

<sup>23</sup> CESI public web site.



Delmarva and Pepco RFP processes that obtain Standard Offer Service supply. PD Power Procurement also manages and administers the BGS and SOS power contracts and ACE's NUG contracts.<sup>25</sup>

PD Balance and Settlement includes load settlements and market settlements groups. The load settlements group assigns load obligations by hour to each BGS, SOS and TPR supplier in each jurisdiction (New Jersey, Delaware, Maryland and the District of Columbia). Market settlements prepares the monthly wholesale financial settlements with each supplier, as well as the monthly financial settlements between the utilities and PJM.<sup>26</sup> The TPR Supplier Relations cost center manages PHI's business and contractual relationships with third party electric retail suppliers.

The following chart shows the merchant power supply function headcount by cost center.

<b>Cost Center</b>	<b>Headcount</b>
CESI President and CEO	4
Finance	8
Accounting Support	11
Energy Policy	2
Market Analysis	10
Portfolio Management	33
Structured Transactions	6
Operations and Risk Management	35
<b>Total</b>	<b>109</b>
Source: Response to Discovery, OC-377	

The merchant power supply cost centers provide gas trading services to Delmarva.<sup>27</sup> The merchant power supply departments provide very few other services to the PD power procurement function.<sup>28</sup> The PHI merchant power supply departments billed ACE approximately \$7,000 in 2007 and nothing in 2008.<sup>29</sup>

<sup>24</sup> Response to Discovery, OC-102 and OC-105.

<sup>25</sup> Response to Discovery, OC-781.

<sup>26</sup> Response to Discovery, OC-781.

<sup>27</sup> Overland Analysis of Service Company Billings.

<sup>28</sup> Schaub Interview, June 11, 2008.

<sup>29</sup> Response to Discovery, OC-900 and Overland analysis of service company billings. The costs billed in 2007 pertained to retained generation (BL England).

The merchant power organization provided the following services and information to ACE in 2007 and the first six months of 2008.<sup>30</sup>

- The Merchant Market Analysis Department regularly provides a 7-day load forecast for the ACE PJM control zone to ACE System Operations personnel.
- The Merchant Market Analysis Department provided PJM forward price information to ACE in 2007 for the PJM West Hub.
- In May 2007, a merchant business line employee provided a forecast of NUG contract costs and PJM energy prices to be used for budget purposes.<sup>31</sup>
- In June 2008, CESI provided ACE with PJM market actual price data for 1995 through 2007.

During his interview with Overland, the Director and PM, Supply Customer Energy indicated that.<sup>32</sup>

- The merchant power procurement organization does not provide any services to the regulated utilities other than those listed above.
- The utility and merchant power procurement organizations do not share any power market analysis. The merchant organization does not provide any market research to the utility organization.
- The utility power procurement organization does not provide any information to CESI concerning ACE's power grid or end users that it does not also make available to all BGS suppliers.

The operating staff responsible for utility power procurement is located at PHI's headquarters building in Washington DC.<sup>33</sup> PES is located in Arlington Virginia.

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<sup>30</sup> Response to Discovery, OC-102 and OC-104.

<sup>31</sup> Response to Discovery, OC-104 indicated that CESI provided the forecast. Response to Discovery, OC-891 clarified that the forecast was provided by a service company employee who provides services to CESI.

<sup>32</sup> Schaub Interview.

<sup>33</sup> Response to Discovery, OC-105 and PJM Market Implementation Committee Roster address for Reuter.

CESI's power supply staff is located at 500 N. Wakefield in Newark Delaware.<sup>34</sup> A small number of PHI Power Delivery information systems employees are located at 500 North Wakefield. Power Delivery does not have any other employees located at the 500 North Wakefield facility.<sup>35</sup>

PHI has a door card access system that controls access to areas within its buildings. Access is provided to individuals by access group. An access group is a group of doors. For example, the access group "99 All Doors w/no restricted doors" provides access to all doors within ACE and DPL, except for specific restricted doors.

The merchant power supply employees are assigned to the ET&C access group.<sup>36</sup> The ET&C access group provides general building access to 500 N. Wakefield and to PHI's New Castle Regional Office (NCRO) also located in Newark Delaware.<sup>37</sup> The NCRO is a Power Delivery facility. Power Delivery organizations located at the NCRO include transmission services and arrangements, distribution engineering, regulatory, construction and maintenance groups.<sup>38</sup>

PHI's October 2007 internal audit of ACE's Pleasantville District Operations identified an access group that gave a group of CESI employees door access to the Pleasantville District Operations Center.<sup>39</sup> CESI employees should not have access to any utility district operations offices.<sup>40</sup>

Overland concluded that PHI maintains adequate separation between its merchant and utility power procurement functions. However, Overland recommends three improvements in that separation. First, merchant power employees should not be provided access to the NCRO. The NCRO is a Power Delivery facility and it is inappropriate to allow merchant power business line employees access to that facility. Second, PHI should review the door access granted to all merchant power business line employees and eliminate inappropriate access to power delivery and corporate services facilities.<sup>41</sup> Third, transfers of market analysis between the merchant and utility functions should be prohibited, unless the transfer materially benefits the utility and is approved by Power Delivery management.

In 2007 and 2008 the merchant function provided the utility power procurement function with a NUG forecast, historical PJM pricing data and PJM futures pricing data. The transferred information did not have any significant value to the utility. While the transferred information was

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<sup>34</sup> Response to Discovery, OC-902 and PJM committee rosters. Newark is in the greater Wilmington metro area.

<sup>35</sup> Response to Discovery, OC-901 and OC-902.

<sup>36</sup> Response to Discovery, OC-887. The 500 N. Wakefield facility is referred to as the Energy and Technology Center. ET&C refers to that facility. Most PHI employees at the ET&C are assigned to the ET&C access group.

<sup>37</sup> Response to Discovery, OC-887. The New Castle Regional Office is at 401 Eagle Run Road.

<sup>38</sup> Response to Discovery, OC-887 and PJM Committee Rosters addresses for Messick, Mitchell and Summers.

<sup>39</sup> Response to Discovery, OC-727 (Restricted). Internal Audit of Pleasantville District Operations, Report dated October 23, 2007.

<sup>40</sup> The internal audit recommended an evaluation of the process for developing access groups. However, the only review conducted by PHI was limited in scope to the Pleasantville District Operations Center.

<sup>41</sup> The Pleasantville District Operations internal audit demonstrates the need for this review.

relatively benign, the value of the information did not justify an exception to the general prohibition against transfers.

The additional ACE affiliate standards explicitly prohibit ACE from providing “competitive information” to generation affiliates related to operations, output or expansion of any NUG generation.<sup>42</sup> A merchant function contract employee provided a forecast of NUG capacity costs, energy prices and other statistics to ACE in May 2007 to be used for budget purposes.<sup>43</sup>

The NUG forecast included monthly forecasts for the Logan, Chambers and DRMI contracts through the year 2024. The forecast report shows monthly generation, heat rate, fuel prices, contract capacity charges, resale revenues and gross margin. ACE indicated that ACE did not provide the contract employee with any specific contract terms or operating data and the contract employee was able to prepare the forecast based on “his historic knowledge of [NUG] operations from the time prior to 2000 when he was an ACE employee or assigned to ACE operations.”<sup>44</sup> Overland did not investigate whether ACE transferred any prohibited information to the merchant power business line in connection with the forecast and did not conclude that ACE violated the additional affiliate standards.

The forecast was prepared using the merchant business line’s PJM dispatch model.<sup>45</sup> Having a merchant function employee model NUG operations and contract costs for ACE creates an unnecessary risk that competitively sensitive NUG information will be transferred to the merchant function. PHI Power Delivery should develop the capability to forecast NUG contract costs without assistance from merchant function employees.

**With one notable exception, the utility transmission function is adequately separated from the merchant power business.** The utility transmission function should be structurally separated from the non-regulated merchant power function to protect ratepayers from affiliate abuse. The Power Delivery Transmission Department is responsible for the following:

- Transmission system planning and participation in the PJM regional planning process.
- Participation in the PJM generation interconnection process.
- Compliance with NERC/RFC transmission reliability standards.

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<sup>42</sup> Response to Discovery, OC-9 Exhibit B to ACE Compliance Plan, Additional Standards of Conduct from Attachment A to the Stipulation of Settlement as of April 15, 2002, Approved by the BPU Order of Approval dated July 3, 2002 in Docket No. EM01050308.

<sup>43</sup> Response to Discovery, OC-104 and OC-891. See also, PHI Comments on Overland Draft Report, response to additional request for information. PHI notes that the contract employee works for the service company. That observation is not significant because many merchant function employees are service company employees. PHI did not response to Overland’s request to identify the cost center that employees the contract employee.

<sup>44</sup> Response to Discovery, OC-891.

<sup>45</sup> Dispatch models are also called production cost models. The format of the NUG forecast makes it clear that CESI’s standard model was used. (Response to Discovery, OC-104).

The PD Transmission Department does not provide services to CESI. The PD Transmission Department reports to PHI's Vice President of Power Delivery Transmission, Tsion Messick. Ms. Messick reports to PHI's Senior Vice President Asset Management and Planning, William Gausman. The PD transmission planning function is located in PHI's headquarters in Washington DC and the New Castle Regional Office (NCRO) near Wilmington Delaware.<sup>46</sup>

The Power Delivery Electric System Operations Department operates PHI's control rooms, including the ACE control room. The Director of the systems operations department reports to the Power Delivery Vice President Operations, Stanley Wisniewski.

Prior to October 2008, the FERC's Standards of Conduct For Transmission ("The FERC Standards") required the physical separation of utility transmission employees and CESI employees. During her interview with Overland, the PD Vice President - Transmission indicated that PHI has never been found to be in violation of the FERC Standards and that she was not aware of any complaints or allegations of violations. She also indicated that she is not allowed access to CESI's business plans and that PHI's public financial reports are her only source of information about CESI's power contracts.<sup>47</sup>

**The FERC's Standards of Conduct provide limited protection to ACE ratepayers.** The FERC significantly weakened the separation requirements included in the FERC Standards in October 2008.<sup>48</sup> The revised FERC Standards require the separation of marketing function employees from transmission function employees. Marketing function employees "actively and personally engage on a day-to-day basis" in the sale or purchase of power, demand response or transmission rights. Transmission function employees are engaged in "planning, directing, organizing or carrying out of day-to-day transmission operations, including the granting or denying of transmission service requests." The FERC emphasized the limiting nature of the qualifier "day-to-day operations" in the order adopting the revised standards.

The revised FERC Standards clearly require merchant power traders to be physically separated from the following employee groups:

- The system operators in the transmission control room.
- The employees who participate directly in the generation interconnection application process.

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<sup>46</sup> The PHI web site FERC Standards of Conduct, Shared Facilities Page indicates transmission planning functions are located at the Washington headquarters building. The membership rosters for the PJM MRC and planning committee indicates Messick, Mitchell and Summers are located at the NCRO.

<sup>47</sup> Messick interview, July 15, 2008. Ms. Messick does have access to PHI's Business Plan.

<sup>48</sup> 18 C.F.R., Part 358, Standards of Conduct for Transmission Providers. Also see, FERC Order No. 717, Issued October 16, 2008. That order revises 18 C.F.R., Part 358, Standards of Conduct for Transmission Providers.

- The employees who respond to direct requests for transmission service.<sup>49</sup>

Any further separation beyond that is not assured. For example, the revised standards may not require separation of all utility and merchant employees in the areas of long-term transmission planning, integrated resource planning, transmission market design policy and risk management policy.

The revised FERC standards prohibit the transfer of transmission function information to CESI's power traders. Transmission function information is defined as information "relating to" day-to-day transmission operations functions. The standards allow CESI employees who are not active power traders to have access to utility transmission function information.

The scope of the FERC Standards is very limited in terms of employee groups and information covered. The FERC Standards provide very limited value for ACE ratepayers.<sup>50</sup>

### **Joint Participation in PJM Committee Activities**

**The joint participation of utility and merchant businesses in PJM committees creates unnecessary risks for ratepayers.** PJM is governed by an independent Board of Managers. The Board is appointed by the Members Committee. The Members Committee advises the Board by voting on proposed changes in PJM's market structure and operating procedures. The Members Committee oversees a hierarchy of committees and working groups that address policy and operational issues.<sup>51</sup> PJM's web site lists 22 committees, 7 subcommittees, 12 working groups and 7 task forces.<sup>52</sup>

The Members Committee and the Markets and Reliability Committee (MRC) are the two senior committees in the PJM structure. The MRC reports to the Members Committee. The Operating, Market Implementation and Planning Committees report to the MRC.

PJM has over 500 members. ACE, Delmarva, Pepco, CESI, CESI - Bethlehem and PES are all members of PJM.<sup>53</sup> Only one member of a corporate family is allowed to vote on the two senior committees. Although six PHI affiliates are PJM members, the PHI corporate family only gets one vote on the Members Committee and the MRC.

PHI's voting representative on the Members Committee is Tsion Messick, PHI's Vice President - Power Delivery Transmission. PHI has six other non-voting representatives on the Members

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<sup>49</sup> PJM administers ACE's transmission tariffs. PHI does not have employees who respond directly to requests for transmission services.

<sup>50</sup> In its comments on this report, PHI noted that it had not relaxed its procedures regarding merchant/utility interfaces as a result of the revised FERC standards. According to PHI, it is inaccurate to state that the revised FERC standards significantly weakened separation requirements.

<sup>51</sup> PJM public web site, Governance page.

<sup>52</sup> PJM public web site, Committees and Groups page.

<sup>53</sup> PJM Operating Agreement, Schedule 12, PJM Members List.

Committee, four from CESI and two from PES.<sup>54</sup> PHI's voting representative on the MRC is Gloria Godson, CESI Vice President Energy Policy.<sup>55</sup>

In addition to the Members Committee and MRC, PHI has members on 13 other PJM committees.<sup>56</sup> Those committees allow multiple affiliates of one holding company to be voting members. As of July 2008, the PHI corporate family had 33 voting and non-voting representatives on PJM committees. Of that total, 11 were from CESI or PES.

The PHI utility and merchant representatives on the various PJM committees jointly prepare committee meeting notes. Those notes are distributed via e-mail. The e-mail distribution list includes 44 people, 10 of whom are from CESI or PES.<sup>57</sup>

Regardless of which affiliate they work for, each committee member is expected to support a unified PHI position. The PHI position is determined at the PHI Briefing Meeting. Those meetings are held as telephone conference calls immediately before PJM Members Committee and MRC meetings.<sup>58</sup> The purpose of the PHI briefings meetings is to review the PJM meeting agendas and to formulate a unified PHI position for PJM voting items. The primary voting member of each PJM committee must participate in the briefing meeting. The PHI position is communicated to the voting member at that time.

The PHI briefing meetings are chaired by the Vice President - Power Delivery Transmission. During her interview with Overland, she indicated that the PHI positions were reached through consensus taking a balanced approach that preserves PHI's credibility at PJM. Having efficient markets that provide adequate investment returns for generation and transmission owners is in the long-term best interests of PHI's utility and merchant businesses.<sup>59</sup>

Overland reviewed the notes for the nine PHI briefing meetings held during the first six months of 2008.<sup>60</sup> The briefing meetings covered a broad range of issues at PJM. The meetings had an average of 11 participants, including an average of 3 participants from merchant affiliates. The notes indicate how PHI will vote and provide cryptic descriptions of the basis for PHI's position.

The following CESI and PES participants attended at least one briefing meeting during the first six months of 2008.

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<sup>54</sup> PJM public web site, Members Committee Roster.

<sup>55</sup> PJM web site, Markets and Reliability Committee Roster. PHI has three other non-voting representatives on the MRC, one from CESI, one from PES and one from Power Delivery transmission. Ms. Godson is a service company employee,

<sup>56</sup> Response to Discovery, OC-101.

<sup>57</sup> Response to Discovery, OC-205.

<sup>58</sup> Response to Discovery, OC-201.

<sup>59</sup> Messick interview, July 15, 2008.

<sup>60</sup> Response to Discovery, OC-201.

Name	Company	Meetings	Job Title
Gloria Ogenyi	CESI	8	Vice President Energy Policy
Rick Douglass	CESI	4	Pricing & PJM Director
Marj Garbini	CESI	1	Sr. Power Trading Engineer
Mario Giovanni	CESI	1	Director Operations & Credit Risk
Wayne Hudders	PES	5	Senior Analyst
James Newton	PES	6	Vice President Commercial Operations
Carolyn Moses	PES	1	Subsidiary Employee
Source: Response to Discovery, OC-203 and OC-205			

The CESI and PES participants took an active role in formulating the PHI positions. The notes describe CESI's and PES's positions on several issues and make it clear that the interests of CESI and PES were considered in formulating the PHI position. In two instances, the PHI position was conditioned on receiving additional feedback from CESI.<sup>61</sup>

The following examples illustrate affiliate relations concerns raised by the briefing committee notes.

- The RPM capacity market prices reflect the intersection of an administratively determined demand curve and a supply curve reflecting capacity offers made in the annual RPM auctions. The demand curve is a function of reserve levels and the estimated cost of building a new power plant. Those costs are referred to as the cost of new entry (CONE). Higher CONE estimates produce higher capacity prices. As a generator, CESI benefits from higher capacity prices. PJM retained consultants to estimate the CONE. The new CONE estimates were significantly higher than the prior estimates. At the briefing meeting, CESI's Vice President Energy Policy recommended voting to endorse the new higher CONE estimates and that recommendation was adopted as the PHI position. The stated reason for adopting that position was that "PJM is following the procedure previously established."<sup>62</sup> The new higher CONE estimates were rejected by the MRC by a vote of 25 for and 34 against.
- Transmission capacity additions that increase import capacity can be included in the RPM. The RPM auctions cover a three year future period. Transmission projects scheduled for completion during that three year period are included as of their scheduled completion date. That creates a risk that the projects will not be completed on schedule. The PJM Markets and Reliability Committee considered two alternatives for allowing

<sup>61</sup> Response to Discovery, OC-201 meeting notes for January 9, 2008 and March 17, 2008.

<sup>62</sup> Response to Discovery, OC-201, January 9, 2008 meeting notes.



future backbone transmission additions into the RPM. The more restrictive option required the project to have a certificate of convenience and necessity before it could be included. The more lenient option did not require a CPCN. Under the more restrictive option the proposed Louduin transmission project would not be included in the RPM auction for 2011. Under the more lenient option that project would be included for that year. Reducing the amount of capacity included in the RPM benefits CESI by raising capacity prices. CESI's Vice President Energy Policy noted that market participants take a financial hit for unrealistic project completion date forecasts, and recommended the more restrictive option. PHI adopted the more restrictive option. The stated reason for adopting the more restrictive option was system reliability.<sup>63</sup>

- The PES participants took the lead role on demand response issues in the briefing meetings. At the March 24 meeting, a PES participant reviewed the activities of the Demand Response Working Group and recommended approval of a proposal for calculating the threshold rate by zone. In the April 24 meeting, PES noted that PJM had proposed limiting economic demand response reimbursements to the LMP "G" rate instead of the higher LMP "G & T" rate. PES indicated this would harm third party suppliers and that both the "G" and "T" rates should be recoverable. At the June 16 meeting, PES recommended that PHI endorse proposals to change the demand response customer baseline calculation methodology.
- Utilities that are also load serving entities have an option of satisfying their capacity obligations by submitting and adhering to a Fixed Resource Requirement (FRR) capacity plan. AEP proposed a change to the existing requirements that would allow FRR utilities to offer additional capacity in the RPM auctions. Offering additional capacity into the RPM auction would harm CESI by reducing capacity prices. CESI indicated the proposal was gaming on AEP's part. The PHI position was to oppose the proposal. The stated basis for that position was that proposed revision "is just an attempt to increase the amount of MW's in RPM auctions."<sup>64</sup> The MRC supported the proposal by a vote of 38 for to 19 against. All 11 end user representatives on the committee voted in favor of the proposal.<sup>65</sup> The motion failed because of PJM's sector voting rules.

A thorough evaluation of PHI's positions on the issues listed above is beyond the scope of this audit. Those positions may or may not be in the best long-term interests of ACE's ratepayers.

The briefing meetings provide CESI and PES with insight into the thinking of transmission owners and provide a opportunity for transferring information about PHI's utility operations to

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<sup>63</sup> Response to Discovery, OC-201, January 9, 2008 meeting notes.

<sup>64</sup> Response to Discovery, OC-201, March 17, 2008 meeting notes.

<sup>65</sup> Response to Discovery, OC-203, March 19, 2008 meeting notes for MRC.

CESI and PES. The meetings also provide CESI and PES with an opportunity to influence the policy positions taken by the utilities at PJM and FERC.<sup>66</sup>

The process of formulating the PHI position on PJM matters clearly includes extensive commingling of utility and merchant interests and views. The process also involves substantial information sharing between PHI's utility operations and its merchant businesses. The interests of PHI's merchant businesses do not necessarily coincide with the interests of its utility customers. The extensive participation of merchant employees creates the risk that utility interests will be subordinated to merchant interests.

**Joint participation of the utility and merchant businesses in PJM committee activities should be prohibited.** Joint utility and merchant participation in PJM committee activities creates an unnecessary risk of affiliate abuse. CESI and PES should participate separately from the three PHI utilities.

CESI and PES representatives should not participate in PHI's briefing meetings. CESI and PES representatives should make it clear that they do not speak for PHI's utilities in PJM committee activities.

CESI and PES representatives should not be included on PHI's e-mail distribution lists pertaining to PJM committee activities. Utility and merchant personnel should prepare separate PJM meeting notes and those notes should not be shared between the two groups.

PHI only has one vote on the Members Committee and the MRC. Those votes should be controlled by PHI's dominant business segment, the utilities. Placing control over those votes firmly in the hands of the utilities does not significantly harm CESI and PES. PHI presumably votes in the interests of its utilities most of the time under the current joint participation arrangement. PHI only has one vote and other merchant generating companies have votes in those committees. CESI and PES would continue to have non-voting representatives on the Members Committee and the MRC.

The incentives created by the joint ownership of regulated and merchant affiliates cannot be eliminated, but they can be managed. Two primary methods for managing the risks in this area are separation and regulatory review. The regulatory reviews assess whether the positions taken by PHI were improperly influenced by the interests of CESI or PES. Adequate documentation of the basis for the positions promotes effective and efficient regulatory review. Currently, the documentation for the "PHI positions" typically consists of one sentence in the briefing notes. PHI should improve the documentation of the basis for votes on PJM committees.

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<sup>66</sup> The PHI briefing meeting agendas have a FERC standards-of-conduct reminder. Participants are reminded of the importance of complying with the FERC standards at the start of every meeting.

**The joint representation of utility and merchant interests in FERC proceedings also creates unnecessary risks for ratepayers.** The PHI policy is to have one unified position in FERC proceedings.<sup>67</sup> The PHI regulatory position is developed by the PHI Regulatory Policy Committee. CESI's President is the only member of the regulatory policy committee from PHI's merchant business.<sup>68</sup>

PHI typically uses in-house counsel for FERC proceedings. Depending on the subject matter, PHI affiliates intervene separately or as a group. During the first seven months of 2008, PHI and its affiliates were a party to 32 FERC cases.<sup>69</sup> All of the utility and merchant affiliates intervened as a group with joint legal representation in 16 of those cases. The merchant affiliates only participated in one other case.<sup>70</sup>

The topics addressed in cases with joint utility and merchant representation included:

- The RPM buyers complaint filed by the Maryland, Delaware and New Jersey state regulatory commissions.
- PJM economic demand response tariff revisions.
- PJM transmission outage scheduling revisions.
- PJM Cost of New Entry (CONE) revisions.

Overland reviewed meeting notes for six regulatory policy committee meetings that occurred over a seven month period.<sup>71</sup> CESI's Vice President Energy Policy attended three of the six meetings.<sup>72</sup> Those three meetings covered a broad range of topics, including:

- The status of PHI's Blueprint for the Future in Maryland, Delaware and New Jersey.
- Demand Response programs.
- Updates of regulatory activity in the FERC, Washington DC, Maryland, Delaware and New Jersey jurisdictions.
- The status of ACE's NUG contract restructuring negotiations.

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<sup>67</sup> Messick Interview.

<sup>68</sup> Response to Discovery, OC-99. CESI's President is a service company employee.

<sup>69</sup> Response to Discovery, OC-106.

<sup>70</sup> Response to Discovery, OC-106. That case was a compliant filed by PES against PJM seeking higher RPM capacity payments to peaking units that operate for less than 50 hours a year during peak periods. The utilities did not intervene in that case.

<sup>71</sup> Response to Discovery, OC-100 and OC-467.

<sup>72</sup> CESI's VP Energy Policy attended the meetings on December 13, 2007, February 6, 2008 and June 11, 2008. CESI's VP Energy Policy is a service company employee.

- Pending Federal Legislation.
- The Stafford Park Renewable Energy project proposed in New Jersey.
- The RPM Buyers Group complaint at the FERC
- The New Jersey Energy Master Plan.

CESI's Vice President Energy Policy gave a presentation on the RPM Buyers Complaint and CESI's position on the complaint at one meeting.<sup>73</sup>

The meeting notes indicate that CESI and PES participants left the room for discussions of: (1) the MAPP transmission project; (2) Delmarva's integrated resource plan; and (3) Delmarva's power supply request for proposals.<sup>74</sup> Presumably, the merchant participants were in the room for the discussions of the other matters listed above. Having CESI in the room for a presentation on the renegotiation of ACE's NUG contracts is not appropriate.

### **Interconnection Agreements**

**CESI and ACE are currently upgrading the metering at CESI's power plants.** The metering at each of CESI's generating plants consists of a billing quality meter on the output of each generating unit at the plant. Each plant also has an auxiliary power feed from ACE's system that is separate from the generator bus.<sup>75</sup> The auxiliary power feeds provide essential site power when the generator is off-line and power to start the units.

With one exception, the auxiliary power feeds are not metered.<sup>76</sup> CESI and ACE have agreed on estimated values for auxiliary power that are netted against the gross generation metered values.

The generation output meters are equipped with telecommunications capability and send data to ACE's control center. The CESI plants are dispatched by PJM based on incremental production cost. CESI sells the output of the plant into PJM's energy markets. PJM pays CESI based on the adjusted net generation of the plant (gross generation less auxiliary power).

The original July 2000 Interconnection agreement provided that ACE would own and maintain the meters. However, that agreement was amended in 2007 to allow CESI to own the meters.<sup>77</sup>

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<sup>73</sup> Response to Discovery, OC-100. June 11, 2008 meeting.

<sup>74</sup> Response to Discovery, OC-100 and OC-467.

<sup>75</sup> Response to Discovery, OC-895, revised.

<sup>76</sup> The auxiliary feed at the Deepwater plant is metered.

<sup>77</sup> Response to Discovery, OC-825.

ACE transferred the interconnection meters to CESI in January 2007 for all of the plants except Deepwater. ACE continues to own the meters at the Deepwater plant.

At the request of ACE, CESI is in the process of installing metering on the auxiliary feeds and new metering on the generation output interconnections. CESI and ACE are jointly commissioning the 25 new meters. All of the new meters are expected to be in operation by the end of 2009.<sup>78</sup>

**ACE charged the cost of station power used at CESI's Deepwater plant to the BGS regulatory deferral for approximately four years.** ACE does not bill CESI for the auxiliary power used at any of its generating units. Instead, the station power used by the plants is accounted for as a reduction in the plant's generation and energy sales to PJM. CESI is paid the PJM energy price for the output of the plant, net of auxiliary power. This has the same impact as CESI selling the gross plant generation to PJM and purchasing the required station power from PJM.

ACE does not pay for station power energy costs if the power is properly deducted from the generation amounts reported to PJM. ACE purchases energy equal to the BGS load. The BGS load equals the net power input into ACE's system, less the load of third party retail suppliers (TPRS). Station power is deducted from the generation of the CESI plants included in ACE's zone, and is not included in the BGS load. This has the same impact as including gross generation in system inputs and including station power use in TPRS sales.<sup>79</sup>

ACE transferred the Deepwater plant to CESI in February 2004. In July of 2007, ACE discovered it had failed to deduct station use from the generation data provided to PJM since the transfer date. **[BEGIN CONFIDENTIAL]**

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<sup>82</sup> **[END CONFIDENTIAL]** ACE accounted for the PJM credit as a reduction in BGS purchased power expense and flowed the credit through to ratepayers via the BGS cost

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<sup>78</sup> Response to Discovery, OC-826.

<sup>79</sup> Net power inputs include zonal generation, imports and exports. The generation kwh amounts are net of station power.

<sup>80</sup> Response to Discovery, OC-497 (Restricted).

<sup>81</sup> The overstatement of net generation increased BGS load, which increased the payments ACE made to the BGS suppliers. The overstatement of generation basically increased reported line losses and line losses are included in the energy purchased from BGS suppliers.

<sup>82</sup> Response to Discovery, OC-497 (Restricted). **[BEGIN CONFIDENTIAL]**

**[END**

**CONFIDENTIAL]**

recovery true up mechanism. The credit to ratepayers averaged 5.9 cents per kwh. That is about 10 percent less than the average BGS-FP auction prices for the applicable months.<sup>83</sup>

BGS prices are expected to be higher than PJM prices over time because suppliers charge a premium for offering a fixed price product. The Deepwater error resulted in BGS suppliers being paid for more power than they supplied. The correction made by ACE credited the BGS deferral based on PJM spot market energy prices, not BGS prices. ACE should reduce the BGS deferral balance to fully remove the excessive amounts paid to the BGS suppliers.

**ACE provided power to CESI's Missouri Avenue and Cumberland power plants without charge for almost 9 years.** CESI's power plants require power for lighting, heating and cooling and equipment operations. In most instances, CESI self-supplies the station power for its plants under the station power provisions of PJM's Operating Agreement.<sup>84</sup> The station power provisions of the PJM Operating Agreement do not apply when distribution facilities are used to deliver station power.

ACE provides a portion of the station power used by CESI's Missouri Avenue and Cumberland plants from its distribution system.<sup>85</sup> The following table shows the power that ACE provided to the two plants in 2007 and 2008.

Plant	2007	2008
Missouri Avenue	591	547
Cumberland	316	277
<b>Total</b>	<b>907</b>	<b>824</b>
Source: Response to Discovery, OC-958 and OC-960		

ACE should have charged CESI for the station power under its Monthly General Service (MGS) secondary tariff.<sup>86</sup> ACE did not charge CESI because the required billing accounts were not set up when ACE transferred the plants to CESI in July 2000.<sup>87</sup>

<sup>83</sup> Overland calculated an average BGS price of 6.6 cents for the four year period ended December 2007. The price reflects the contract periods and prices reported on the BGS auction web site and is not load weighted.

<sup>84</sup> PJM Operating Agreement, Schedule 1, Section 1.7.10. When the station has negative generation for the entire month, the generation owner is deemed to have self-supplied the power from its other plants and is charged non-firm point-to-point transmission between its plants with positive generation and the plant with negative generation.

<sup>85</sup> Response to Discovery, OC-895. The Missouri Avenue plant is located in Atlantic City and has a total capacity of 60 MW. The power supply for the plant buildings is obtained from ACE's Ontario substation via two 12 kv distribution feeder lines. Two of the combustion turbines are located inside the former Missouri Avenue steam plant which was retired from service in 1966. The unusual station power arrangements are a legacy of the plant's design. The Cumberland plant is a 100 MW plant completed in 1990. The Cumberland plant has a power feed from ACE's Union distribution substation via a 1.2 mile 12 kv distribution line. When the power plant was constructed, the Cumberland substation did not have voltages below 138kv. ACE provided a station power feed from the Union substation because the lower voltages were easier to work with. The distribution feed also supported the plant's black-start capability. Overland telephone conference with Tsion Messick, Mike Mayer and Greg Parsons, March 19, 2009 and Response to Discovery, OC-957 and OC-959.

ACE's BGS customers were charged for the cost of the energy that ACE failed to bill to CESI. ACE included the energy in the company use category in its energy account reconciliations.<sup>88</sup> BGS customers pay for most of the costs of company use energy through the BGS rate surcharge.

During the course of this audit, ACE recognized that it had failed to charge CESI for the power. In March 2009, ACE billed CESI for the power retroactive to the July 2000 transfer date, as shown in the following table.

Plant	Amount
Missouri Avenue	707,733
Cumberland	381,311
<b>Total</b>	<b>1,089,044</b>
Source: Response to Discovery, OC-958 and OC-960.	

PHI's cooperation during the review of this issue was commendable. Once the error was recognized, PHI moved quickly to resolve the matter.

**ACE should credit a substantial portion of the CESI retroactive station power billings to the BGS deferral account.** ACE retroactively billed \$1.09 million to CESI for power sold to CESI's Missouri Avenue and Cumberland plants. Those sales were BGS sales.<sup>89</sup> Therefore, a substantial portion of the retroactive billings should be credited to the BGS deferral account.<sup>90</sup>

ACE should calculate the impact of the billing error on the BGS deferral balance and credit the deferral account, with interest. ACE should submit a complete analysis of the required credit in its response to this recommendation.

**ACE's charges to CESI for interconnection administrative and maintenance costs are sporadic and lower than expected.** ACE provides the interconnection for 8 CESI power plants with a total capacity of 760 MW. The standard PJM interconnection agreement provides for the transmission owner to make the following charges to the generation owner.<sup>91</sup>

- Administrative charge, including the cost of processing interconnection energy flow data.

<sup>86</sup> Response to Discovery, OC-958 and OC-960.

<sup>87</sup> Response to Discovery, OC-958, OC-960 and OC-961.

<sup>88</sup> Response to Discovery, OC-1051.

<sup>89</sup> CESI did not purchase the power from a Third Party Retail supplier. Instead, CESI purchased the power from ACE as a BGS-FP purchase.

<sup>90</sup> ACE billed CESI under its Monthly General Service -Secondary tariff. Sales under that tariff are subject to the BGS Rider. The revenue produced by the BGS Rider should be credited to the BGS deferral account.

<sup>91</sup> The standard interconnection agreement is included in Attachment O to the PJM Open Access Transmission Tariff. Attachment 2, Section 10 of the standard agreement lists the charges (Tariff sheet 516.01B.18)

- Metering charge including operation, maintenance, capital, inspection and testing costs.
- Telemetry charge, including the cost of maintaining the remote terminal unit.
- Operation, maintenance and capital charges for interconnection facilities owned by the transmission owner.

The following table shows ACE’s charges to CESI under its interconnection agreements in 2007 and 2008.

<b>Table 4-9 ACE Charges to CESI Under Interconnection Agreements 2007 and 2008</b>			
<b>Plant</b>	<b>Description</b>	<b>2007</b>	<b>2008</b>
Not Listed	Rubber Glove Maintenance	348	114
Not Listed	Electric Generator Maintenance	1,820	0
Not Listed	New Meter Field Commissioning	0	5,000
Cedar	Generator Substation Work	2,096	0
Cedar	Communication Interface Work	646	0
Cumberland	Generator System Protection	260	0
Cumberland	Communication Interface Work	6,292	0
Cumberland	Generation Substation Work	0	1,248
Middle	Generation Switch Repair	3,275	0
Middle	Communication Interface Work	645	0
Sherman	Communication Interface Work	1,672	0
<b>Total</b>		<b>17,053</b>	<b>6,362</b>
Source: Response to Discovery, OC-897			

ACE did not make any charges to the following plants during the two year period.

- Carl’s Corner (73 MW)
- Deepwater (158 MW)
- Mickleton (59 MW)
- Missouri Avenue (60 MW)

Only one of CESI’s plants was charged for equipment maintenance in 2008.

ACE owns interconnection facilities, including circuit protection equipment located on ACE’s side of the interconnection at all of the plants. ACE owns the interconnection metering,



telemetering equipment and remote terminal units at Deepwater. CESI owns that equipment at all of the other plants.<sup>92</sup>

ACE does not charge any administrative costs or metering and interconnection equipment capital costs to CESI. The low and sporadic nature of the maintenance charges may also be indicative of inadequate charges

**PHI should conduct annual internal audits of ACE's interconnection and station power arrangements with CESI.** Affiliate transactions require special attention because the usual protections afforded by arms-length business dealings are not present. The CESI power plants used to be components of ACE's regulated utility system.- That creates a risk that practices and attitudes dating back before the transfer may continue, even though they are no longer appropriate.

PHI should conduct annual internal audits of ACE's interconnection and station power arrangements with CESI. The audit report should provide a clear and transparent description of those arrangements, and a schedule of associated billings between the parties. The audit report should describe how ACE effectively used its rights under the interconnection agreement to protect the interests of its ratepayers.

The audit should also describe:

- The metering arrangements at the plant.
- The meter testing and verification measures undertaken during the audit year.
- The utility owned facilities pertaining to the plant, including protective relay schemes, auxiliary power distribution equipment, and telemetering equipment.
- A review of the ACE's charges to CESI for consistency with PJM's interconnection agreement standard terms and conditions, including charges for administrative costs and facilities maintenance.
- The justification for any deviations from the PJM standard terms and conditions.

CESI owns eight power plants in ACE's service territory. The annual internal audits should provide detailed coverage of each of those plants at least once every three years on a rotating basis.

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<sup>92</sup> ACE owned the meters prior to January 2007. ACE transferred ownership of the meters to CESI at no charge in January 2007 (OC-897).

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## Chapter 5. Millennium Account Services (MAS)

MAS is a joint venture of South Jersey Industries (SJI), the holding company for South Jersey Gas (SJG), and Conectiv Solutions, owned by Conectiv, the holding company for ACE. SJI and Conectiv Solutions are equal owners of MAS and share equally in its profits.<sup>1</sup> MAS' primary business purpose is to read meters for ACE and SJG, which it has been doing since its inception in January 1999. MAS has been reviewed in previous NJBPU audits. Its operations have not changed significantly in the ten years it has been in business.<sup>2</sup>

### Audit Scope and Objectives

Overland reviewed MAS' operations for the period January, 2005 through December, 2007 (the audit period). We also considered how changes in technology and operations might affect MAS and its relationship with its owners in the future. Our main objectives were 1) to determine whether MAS' ownership relationships, operations and service relationship with ACE create regulatory issues that warrant additional NJBPU oversight and 2) to assess current pricing to determine the potential for cross-subsidization of PHI and its shareholders by ACE and its regulated customers.

Our review of MAS consisted of the following:

- Review of the Services Agreement between MAS, South Jersey Gas and Atlantic City Electric.
- Review and follow-up on recommendations from the prior audit.
- Analysis of changes in the pricing of MAS services over time, as reflected in Services Agreement Schedule B - Compensation and Performance Measures.
- Documentation of the facts surrounding the ACE / SJG Request for Proposals (competitive bid for meter reading services) issued in 2006.
- Review of MAS' operations, business plans and budgets.

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<sup>1</sup> Response to Discovery, OC-93.

<sup>2</sup> MAS was reviewed as part of the Audit of the Competitive Service Offerings of Atlantic City Electric Company, Docket No. EA0200095, March 31, 2003, and as part of the Audit of the Competitive Service Offerings of South Jersey Gas Company, Docket No. GA02020101, March 14, 2003.

## **Summary of Findings**

### **Management and Operations**

1. MAS is a stable, efficiently run and well-managed operation. Its business plan and level of oversight (governance by an executive committee) are appropriate for the characteristics of the business. Because it is efficient and because of the economies provided by having one person, instead of two, read the electric and gas meters at most premises, MAS is able to achieve a savings over the combined cost of its client utilities reading their own meters. However, as discussed below, it is not clear whether or to what extent the savings produced by joint meter reading are realized by the utilities or their customers, or whether they flow entirely to MAS' holding company owners, Conectiv and South Jersey Industries.

### **Affiliate Relationship and Transfer Pricing**

1. The business relationship between ACE and MAS is not arms-length. MAS is governed by an executive committee consisting of representatives of its owners, Conectiv and South Jersey Industries. These owners are holding companies which also own MAS' two customers, ACE and South Jersey Gas.
2. The prices MAS charged ACE for meter reading during the audit period were not based on any regulatory cost standard, and were significantly higher than a regulated price based on the sum of operating expenses, income taxes and a regulated return on investment. Despite the fact that MAS' customers are regulated utilities, and are effectively captive customers of MAS, since 1999 Conectiv Solutions and SJI have set the prices MAS charges to ACE and SJG at levels they, as owners, determined to be reasonable. During the audit period, it appears the prices were set to deliver an operating margin of approximately 25% of revenue (33% of operating expenses.)
3. The prices MAS charged ACE for meter reading during the audit period were not market-based. As discussed above, since its inception, MAS' prices have been set by Conectiv Solutions and SJI. The prior EDECA audit recommended that the owners solicit bids for the joint meter reading operation. As the existing contract between MAS, ACE and SJG approached renewal in 2006, ACE and SJG issued a Request for Proposals (RFP) to solicit bids from the marketplace. MAS was the only bidder and was awarded the three-year contract renewal in place today. MAS' bid did not reflect lower prices in anticipation of competition and the renewal terms remained essentially unchanged from the contract in place prior to the RFP. To date, Conectiv Solutions and SJI have been unable to provide any evidence that MAS' pricing is related in any way to prices that would be charged in a competitive market.
4. MAS' audit period operating margins were high enough (33% above operating expense with minimal plant investment) that Overland believes the amounts charged to ACE by MAS could have exceeded ACE's cost of performing the meter reading function itself. An up-to-

date study comparing ACE's meter reading costs to amounts charged by MAS would be necessary to confirm whether ACE realizes any of the savings provided joint meter reading.

5. The prior NJBPU audit of ACE recommended charging MAS for the costs of Conectiv Solutions executives who provide oversight and governance services to MAS and for minor amounts of insurance and tax services provided by PHI Service Company. During the process of implementing recommendations, the NJBPU Staff essentially agreed with ACE that the amount of service provided to MAS by PHISCO was *de-minimis* and did not need to be charged to MAS. We found that the other part of this recommendation - that PHI charge MAS for the costs of executive oversight and governance - was implemented. During 2006 and 2007, Conectiv Solutions charged MAS \$6,332 for executive oversight and governance.

### **EDECA Standards**

1. The previous NJBPU audit found that MAS was a related competitive business segment (RCBS) of ACE's holding company, Conectiv, making it subject to EDECA standards. This was based on an interpretation that ACE and South Jersey Gas (SJG), MAS' customers, were "end users" of MAS' service. There has been no change in MAS' operations or customers to warrant a change in this finding.
2. EDECA section 14:4-5.6(t)(6) states that services provided to a New Jersey utility by an RCBS that are "not produced, purchased or developed for sale on the open market . . . shall be priced at the lower of fully allocated cost or fair market value." As discussed above, MAS' prices were not market based and were significantly higher than a fully allocated cost-based price. As far as Overland can determine, MAS has never been in compliance with EDECA's transfer pricing requirements with respect to meter reading services supplied to ACE or South Jersey Gas.
3. MAS complied with EDECA standards requiring the separation of accounting (books), information systems, physical assets, employees and management from its utility clients, ACE and SJG.
4. Overland found no examples in which MAS and ACE engaged in any joint marketing or promotion.
5. In its first few years of operation MAS relied on ACE to supply assets (vehicles) and employees to assist MAS in conducting its meter reading activities. There was no sharing of employees or assets during the audit period.
6. A "termination for convenience" clause in the existing joint meter reading contract between MAS, ACE and SJG effectively transfers the risk of liquidation costs from MAS to ACE and SJG.

7. MAS exists to provide what is essentially a utility function shared by two utilities not linked by ownership. During the audit period MAS had no significant impact on New Jersey competitive service markets.

## **Recommendations**

1. Modify the current Joint Meter Reading Services Agreement to eliminate the provision requiring ACE to pay “reasonable cost” claims in the event of “termination for convenience.”
  - At some point, possibly within the next five years, MAS’ operations may cease as ACE installs automated metering. Through the Services Agreement, MAS’ owners have effectively transferred the risk of business liquidation to ACE by requiring it to pay MAS “reasonable costs” in the event ACE no longer needs MAS’ services. MAS’ transfer pricing, determined by its holding company owners, has never been based on a traditional regulatory standard of fully allocated cost plus a regulated return on investment. For a decade MAS has earned what amounts to a risk-free profit, significantly higher than a regulated rate of return on investment, from two captive customers - ACE and SJG. We recommend modifying the Services Agreement between ACE and MAS to remove the requirement that ACE bear any risk relating to any liquidation of MAS. Specifically, the requirement that ACE pay “reasonable costs” in the event of a “termination for convenience” should be removed. If ACE successfully argues to the NJBPU that modifying the agreement is not possible, we recommend the NJBPU prevent such costs from being passed on to ACE’s ratepayers by prohibiting ACE from recording them, should they be incurred, in regulated, above-the-line accounts.
2. As part of ACE’s next rate proceeding, provide testimony and updated cost-benefit information demonstrating that MAS provides a net savings to ACE compared with the cost of ACE providing its own meter reading. The most recent cost-benefit analysis asserting that ACE realizes savings from having MAS read its meters is currently almost 8 years old. Some of cost information in this very basic analysis, which includes ACE’s internal meter reading costs from 1997 (priced in 2001 dollars), is now 12 years old. During the audit period, MAS’ prices to ACE and SJG produced a pre-tax profit equivalent to approximately 25 percent of revenues (i.e., 33 percent over operating cost). It is not at all clear that this pricing level leaves room for ACE to benefit in the form of savings compared with the cost of reading its own meters. Given that MAS’ owners have had complete control of MAS’ pricing and that the pricing has never complied with the traditional regulatory pricing standard for affiliate services (lower of cost or market), Overland recommends ACE document and demonstrate the benefits it currently receives from its relationship with MAS. Specifically, we recommend ACE file testimony and cost-benefit data in its next rate proceeding supporting the assertion that, under the pricing and terms of its current Services Agreement, ACE continues to benefit in the form of a net savings from paying MAS to read its meters.

3. As required by EDECA transfer pricing rules, calculate the fully-allocated cost-based price for meter reading services provided by MAS to ACE. Cease charging ACE for amounts exceeding fully-allocated cost. Alternatively, record any amounts charged to ACE in excess of fully allocated cost below-the-line on ACE's books – As discussed above, EDECA Section 14:4-5.6(t)6 requires that “transfers of services [to a utility] not produced, purchased or developed for sale on the open market” be priced at “the lower of fully allocated cost or fair market value.” Despite findings in prior audits of both ACE and South Jersey Gas that EDECA rules are applicable to MAS, MAS has never complied with EDECA’s “lower of fully allocated cost or market” transfer pricing requirement. In fact, MAS has consistently earned a return far above what a regulated, fully allocated cost-based rate would provide. MAS has never demonstrated that its prices, which are established by fiat by its holding company owners, are equivalent to market-based prices. As discussed below, in 2007 MAS earned more than **[BEGIN CONFIDENTIAL]** **[END CONFIDENTIAL]** (pre-tax) from ACE. Based on MAS’ 2007 level of investment, Overland estimates a regulated cost-based price would have resulted in pre-tax earnings of \$100,000 or less. ACE should be prohibited from charging ratepayers any amounts exceeding those determined by EDECA transfer pricing requirements (in this case, fully allocated cost since market-based prices have not been determined). The most straightforward way to accomplish this is for MAS to reduce its transfer price to one based on fully allocated cost (i.e. operating expense, depreciation, tax and regulated return on investment). Should this be determined to be infeasible under the existing contract, we recommend that NJBPU prevent amounts charged to ACE that exceed fully allocated costs from being passed on to ACE’s ratepayers by requiring ACE to record the excess charges below-the-line.

## **Management**

MAS is managed through an executive committee consisting of two representatives of each of its owners, SJI and Conectiv Solutions.<sup>3</sup> Executive committee representatives from Conectiv Solutions currently include Art Agra, Chief Financial Officer, Conectiv Energy, and Richard Percel, Manager, Non-Utility Generation. Messrs. Agra and Percel are employed by PHI Service Company (PHISCO). They oversee operations and provide direction to MAS Vice President Joseph Scaffidi, who is in charge of day-to-day operations, accounting and administration.<sup>4</sup> The minutes of audit period executive committee meetings show that the executive committee met with Mr. Scaffidi on nine occasions during the audit period. The executive committee reviewed and approved MAS budgets, cash distributions to owners, and the performance of and compensation for the Vice President and Associate Vice President of Operations. Mr. Scaffidi receives incentive compensation that is dependent on achieving certain performance and financial standards. A review of the minutes of executive committee meetings showed that he was able to meet his incentive targets during the audit period.

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<sup>3</sup> Response to Discovery, OC-88, Operating Agreement of Millennium Account Services LLC.

<sup>4</sup> Mr. Scaffidi is MAS’ highest-ranked employee. MAS does not have an employee with the title of President.

MAS maintains a very basic business plan. During the audit period it consisted of a “working document” containing boilerplate language with the Company’s history and an overview of the business and its ownership. Attached to this were some basic performance statistics (which were out of date since 2004), a financial plan, and an “expansion of business scenarios” containing plans to expand beyond the meter reading services provided to SJG and ACE. To date, this expansion has consisted of reading meters for some master-metered water accounts, advertising by local businesses on meter reading vehicles, distributing some pamphlets and surveying pipe corrosion for SJG. The revenue produced by these ancillary activities was insignificant, amounting to about [BEGIN CONFIDENTIAL] [END CONFIDENTIAL] annually during the audit period.<sup>5</sup>

Overland believes MAS’ business plan, and the meeting frequency and level of oversight provided by the executive committee, are adequate to meet its needs, given the stable and simple characteristics of the business. We believe the executive committee would be better served by the business plan if the performance statistics documented in the plan were kept up to date.

### **Organization and Operations**

During the audit period MAS operated with approximately 80 full time employees. Meter readers were dispatched from four regional offices (Greenfield, Cardiff, Hopewell and Washington Township) to a total of approximately 2,400 meter routes.<sup>6</sup> In 2006, MAS read approximately 580,000 electric and 333,000 gas meters each month (approximately 11 million annually).<sup>7</sup> The organization structure consisted of about 70 readers, 8 supervisors, an Associate Vice President – Operations, and Mr. Scaffidi, the Vice President. We interviewed Mr. Scaffidi.

MAS is a lean operation, relying on inexpensive leased office space and leased vehicles. The only significant property, plant and equipment on the balance sheet at the end of the audit period were the hand-held electronic units, known as Itron units, and related software upgrades. These are used to collect and relay meter readings from the field. MAS’ internal information needs are so basic that it relies on Quickbooks and Excel to store accounting and operational information related to its client utilities.<sup>8</sup> These systems are not shared with ACE, or, presumably, with SJG.

As part of its “Utility of the Future” program, during the audit period PHI announced plans to install automated metering throughout its utility territories, something that could negate the need for MAS. If MAS is eventually replaced by automated metering, the costs to shut it down appear

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<sup>5</sup> Interview of Joseph Scaffidi, October 8, 2008.

<sup>6</sup> Response to Discovery, OC-85.

<sup>7</sup> Response to Discovery, OC-80, Statement of Work for Joint Meter Reading Services, Atlantic City Electric and South Jersey Gas Co., October 24, 2006, Scope of Work, Meter Reading.

<sup>8</sup> Response to Discovery, OC-87.



to be relatively minor, likely consisting of severance pay for employees and possibly payments remaining under the terms of building and vehicle leases. Based on the current status of PHI's plans to install automated metering, Mr. Scaffidi does not expect this happen over the next five years.<sup>9</sup>

### **MAS Services Agreement**

There have been several iterations of the Services Agreement between MAS, ACE and SJG since 1999. Overland reviewed agreements implemented since 2002. These versions of the agreement cover MAS meter reading services for the period December 1, 2001 through November 30, 2009. They include.

- Interim Meter Reading Services Agreement (ACE and MAS) dated March 8, 2002, applicable to services between December 1, 2001 and November 30, 2006.
- Schedule B (Compensation and Performance schedule) Amendment (ACE and MAS) dated October 29, 2004, with meter read pricing increases retroactively applied from July 1, 2002, applicable to services through December 31, 2006.
- Joint Meter Reading Services Agreement (ACE, SJG and MAS) signed by MAS February 16, 2007, applicable to services between February 1, 2007 and January 31, 2010.

During this time, the rate per meter read has increased by about 25 percent, from 42.9 cents per meter to 53.5 cents per meter. Most of the increase occurred in 2004, prior to the audit period. The current Services Agreement calls for a minimum performance standard for meter reads of 98.5 percent for ACE (electric meters) and 91 percent for SJG (gas meters).<sup>10</sup>

### **Summary of Financial Results**

Following is a summary of MAS' financial results during the audit period.

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<sup>9</sup> PHI is in the process of selecting a vendor to install advanced metering in Delaware, scheduled to begin in 2009. A smart metering pilot program began in Washington, D.C. in 2008. However, Mr. Scaffidi informed Overland during our interview that he believes regulatory considerations will keep MAS in operation in New Jersey until about 2014.

<sup>10</sup> Response to Discovery, OC-81, Joint Meter Reading Services Agreement, signed by SJG, ACE, and MAS representatives in February, 2007.





the buyer, but given the relatively small number of independent meter reading companies in business, it seems likely that they were aware of MAS and its status as an affiliate.

2. The prior audit recommended that service company employees performing insurance and tax work for MAS charge MAS for the work.<sup>15</sup> During our interview, MAS Vice President Joseph Scaffidi was unaware of any billing made by PHI Service Company to MAS. The most recent company “Compliance Summary” response to this audit recommendation includes the following:

[T]he Company has developed a process to track and assign costs of executives who provide governance services to Millennium. As of May, 2006, employees representing Conectiv Solutions, LLC as Executive Committee Members will directly charge all future time spent to Conectiv Solutions Cost Center Code SOL-EN-923.

Based on this and early ACE responses to this audit recommendation, it appears that the BPU Staff agreed that ACE did not need to have PHI Service Company charge MAS for the costs of providing tax preparation and insurance procurement, but that executive committee members did need to record and bill their time. ACE indicated that Conectiv Solutions (MAS’ joint venture owner on the PHI side) was billed \$4,862 in 2006 and \$1,470 in 2007 for meetings attended by Conectiv executives.<sup>16</sup>

In its Compliance Summary from the prior audit, ACE stated that the time commitment of the executive committee members was small, involving meetings averaging 2-3 hours per quarter.<sup>17</sup> For two executive committee members, this indicates a total annual commitment of around 20 hours per year. Based on this, the amounts charged in 2007 imply a fully distributed cost-based hourly rate of less than \$75. It therefore appears less than likely that all executive committee time was charged in 2007. The amount billed in 2006 appears adequate to have complied with the recommendation.

## **The Affiliate Relationship Between ACE and MAS**

The key issues raised by the affiliate relationship between ACE and MAS are as follows:

1. The business relationship between ACE and MAS is not arms-length. MAS is governed and its budget and pricing are approved by executives from Conectiv Solutions and SJI, which are affiliated with its two customers, ACE and SJG. Because MAS is owned by the same holding companies that own ACE and SJG, and because its existence is

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<sup>15</sup> Liberty Audit Report, p.16.

<sup>16</sup> Response to Discovery, OC-194.

<sup>17</sup> Letter to the NJBPU dated April 21, 2006, Response to Board Order dated November 14, 2005 and March 29, 2006 (OC-1)

directly dependent on the utilities, ACE and SJG are effectively captive customers of MAS.

2. The price MAS charges ACE for meter reading is not based on any regulatory cost standard, is significantly higher than a regulated return on investment-based price, and is not market-based. There is no documentation to support the prices MAS charges to ACE and SJG or how they are determined. A cursory review of financial results summarized above suggests that prices, which are entirely within the control of Conectiv and SJI, are set to yield operating margins of about 25 percent of revenue (33 percent of operating cost). Overland demonstrated in a previous audit that the price MAS charged ACE was significantly higher than justified by a traditional regulated rate of return-based price.<sup>18</sup> We found the same thing in this audit. If ACE performed its own meter reading and had the same plant investment as MAS, Overland estimates its 2007 pre-tax return would have been \$100,000 or less.<sup>19</sup> By comparison, Overland estimates that ACE contributed approximately **[BEGIN CONFIDENTIAL]** **[END CONFIDENTIAL]** in operating profit to MAS in 2007.<sup>20</sup>

In the last ACE audit, Liberty Consulting found MAS' pricing to be a violation of EDECA subsection 14:4-5.3(b)(2), which requires that services provided to a utility by a competitive segment of the holding company be subject to competitive bidding.<sup>21</sup> Since then, as discussed above, ACE and SJG solicited bids for meter reading, but other than MAS, none of the companies responded with a proposal. Thus, despite an RFP being prepared and in 2006, the meter reading services provided by MAS have still not been subjected to a competitive process,

As noted above, the EDECA transfer pricing rule for an RCBS that provides services to a New Jersey utility (Section 14:4-5.6(t)(6)) requires that the services be priced at the *lower* of fully allocated cost or fair market value if "not produced, purchased or developed for sale on the open market." MAS' services have never been developed for or provided to the "open market". They have also never been priced at the lower of fully

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<sup>18</sup> Overland Consulting, Audit of the Competitive Service Offerings of South Jersey Gas Company, Docket GA02020101, March 14, 2003, Chapter 5, Table 5-2. In this audit, return on investment was based on a "rate base" of approximately \$1.8 million. Since then, MAS' net plant has declined to less than \$400,000, implying a much lower profit margin.

<sup>19</sup> Per response to Discovery, OC-5, during 2007 MAS had approximately \$400,000 in net rate base, consisting primarily of Itron meter reading units. Allowing for a return on investment of approximately 10 percent and the inclusion of some working capital in rate base, we estimate ACE's regulated after-tax return on similar assets at approximately \$50,000 to \$60,000 and its pre-tax return at \$80,000 to \$100,000.

<sup>20</sup> Per MAS Income Statements provided in response to Discovery, OC-5, profit from meter reading activities was **[BEGIN CONFIDENTIAL]** **[END CONFIDENTIAL]** in 2007. Because Conectiv Solutions and SJI share equally in MAS' profits, it is reasonable to assume that they set the relative pricing for gas and electric meters at a level consistent with an equal contribution by each utility to profitability. For 2007, this was about \$850,000 per utility.

<sup>21</sup> Liberty Consulting, Audit of the Competitive Service Offerings of Atlantic City Electric, Docket EA0202009, March 31, 2003, p. 15.

allocated cost or fair market value, and have therefore not been in compliance with EDECA's transfer pricing requirements.

3. It is more cost-effective for one meter reader to read both the electric and gas meters at a premises than to have two readers each responsible for one meter. Given this, and given MAS' lean operating structure, it is clear that MAS can read ACE's meters at a lower cost than ACE could read them. However, because of the significant markup MAS adds in charging ACE, it is not clear that ACE realizes any savings compared with the cost of reading its own meters. Because MAS can read two meters where ACE and SJG are able to read only one, it is all but certain that during the audit period MAS performed the meter reading function at a lower cost per meter than the *combined* cost of ACE and SJG each performing the reading function separately. However, whether this translates into savings for ACE depends on what MAS charges ACE, not on the cost MAS incurs to read the meters. Between 2001 and 2007 MAS' owners raised ACE's price per meter by almost 25 percent, from **[BEGIN CONFIDENTIAL]**

**[END CONFIDENTIAL]** and increased the performance incentive payments ACE pays to MAS.<sup>22</sup> The most recent cost-benefit analysis ACE was able to provide was based on ACE's 1997 (pre-MAS) internal meter reading costs, inflated to 2001 dollars. This very basic analysis asserted that in 2001 MAS saved ACE \$582,000, or about 10 cents per meter read.<sup>23</sup> In comparison, as noted above, Overland estimates that ACE contributed more than **[BEGIN CONFIDENTIAL]** **[END CONFIDENTIAL]** in pre-tax operating profit to MAS in 2007. Assuming the 2001 cost-benefit analysis was reasonable, unless the savings ACE realizes from outsourcing the meter reading function has grown since 2001, it is possible that under current pricing ACE is paying MAS more than the cost of performing the meter reading function itself.

Although the current Services Agreement expires in 2010, given the unsuccessful prior attempt to solicit competitive bids, and the probability that meter reading services will become obsolete due to automation, Overland believes it is very unlikely that a market price for joint meter reading can be determined by sending another RFP to the small universe of meter reading contractors. Even if a competitor determined that automated meters would not render the operation obsolete, and assuming they determined they would be viable from a cost standpoint (which would probably require that they have established operations somewhere nearby the ACE/ SJG service territory), they would probably conclude, rightly or wrongly, that Conectiv Solutions and SJI were unlikely to abandon their own subsidiary and the profit it generates. Given the practical impossibility of determining a market-based price for the services MAS provides, we believe it is important for the NJBPU to consider the following:

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<sup>22</sup> Response to Discovery, OC-81, Joint Meter Reading Services Agreements dated March 2002, (Schedule B, with prices applicable for the period 10/1/2001 through 12/31/2006), and Statement of Work for Joint Meter Reading Services, ACE and SJG together as Buyer, dated February, 2007.

<sup>23</sup> Response to Discovery, OC-90.

- Whether MAS currently generates a net savings for ACE (compared with the ACE's cost of performing its own meter reading).
- Whether the price ACE pays to MAS should be limited, as required under EDECA transfer pricing requirements, to a fully allocated cost-based price (operating expense, depreciation, return on investment and taxes). Overland recommends this option.
- If transfer pricing is not limited to fully allocated cost, whether amounts charged to ACE in excess of fully allocated cost should be recorded below-the-line to prevent them from being charged to ratepayers. Overland recommends this option if our MAS' price to ACE is not reduced to fully allocated cost.
- If MAS is not limited to pricing based on fully allocated cost, whether its operating margins should at least be capped and its earnings shared between utility customers and holding company shareholders.<sup>24</sup>

### **Compliance with EDECA Standards**

Prior audits have found MAS is an RCBS subject to EDECA. Overland found no changes in MAS that would alter this finding. The following discussion summarizes applicability of key EDECA areas to MAS, and MAS' compliance with the rules in those areas.

1. Separation – MAS' accounting, physical assets and employees are effectively separated from ACE. Separation is sufficient to prevent the co-mingling of operations.
2. Transfer Pricing – EDECA section 14:4-5.6(t)(6) states that services provided to a New Jersey utility by an RCBS that are “not produced, purchased or developed for sale on the open market . . . shall be priced at the lower of fully allocated cost or fair market value.” As discussed at length above, MAS' pricing was not in compliance with this EDECA transfer pricing requirement.
3. Management Separation – None of MAS' employees have duties connected with ACE. Oversight of MAS is provided by two executive committee members, Art Agra (PHISCO's CFO for the Competitive Energy segment) and Richard Percel (PHISCO Manager – Non-Utility Generation), neither of whom are employees of ACE. However, as discussed above, the management of ACE and MAS are effectively linked through Conectiv, the holding company that owns 100 percent of ACE, and a 50 percent interest in MAS.

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<sup>24</sup> Operating margins must be capped in order to prevent the owners from simply raising prices to a level that would negate the benefit of the utility ratepayers' share of earnings at the existing pricing level.

4. Access to ACE Information Systems – MAS indicated that it maintains its own accounting and operational information systems. It does not share information systems with ACE.
5. Marketing and Promotion – Overland’s examination of MAS’ operations did not indicate the companies were engaged in joint marketing. Given the nature of MAS’ service, joint marketing is extremely unlikely.
6. Transfer of Risk to ACE – The current Joint Meter Reading Services Agreement contains a provision for ACE to contribute to the “reasonable costs” claimed by MAS if the agreement is terminated for convenience. Overland’s interpretation is that this could permit MAS to charge ACE for shutdown costs should MAS cease operations within a contract period triggered, for example, by something like the implementation of automated meter reading. As discussed above under the Summary of Recommendations, we recommend this transfer of risk from MAS to ACE be eliminated from the Services Agreement. Should ACE claim that the agreement cannot be amended, we recommend that the NJBPU prohibit ACE from recording any such costs, should they be incurred, in “above-the-line” accounts (that is, in accounts that record expenses funded by ACE’s ratepayers).
7. Charges for Utility Services Provided to MAS – Several years prior to the audit period ACE provided meter readers and vehicles to MAS. During the audit period MAS did not rely on ACE for assets or services.
8. Employee and Asset Transfers – There were no employee or asset transfers between ACE and MAS during the audit period.
9. Market Impact – MAS exists only to serve the affiliated utilities of its two owners. An attempt to issue an RFP to permit other meter reading companies to compete to provide the service to ACE and SJG yielded no proposals. Effectively, MAS provides a joint utility service to two utilities not connected with one-another by ownership. Its market impact does not extend beyond the meter reading function of the two utilities.



## Chapter 6. Income Taxes

### Introduction and Summary

This Chapter addresses two issues pertaining to income taxes. The first issue is the allocation of parent company tax net operating losses (NOLs) to subsidiaries. The second issue is compliance with the BPU's consolidated tax savings policy.

The findings and recommendations contained in this Chapter are listed below.

### Summary of Findings

1. PHI stopped allocating parent company tax NOLs to its subsidiaries in March 2006. Prior to the repeal of PUHCA, PHI allocated parent company NOLs to its subsidiaries. PUHCA was repealed in February 2006 and PHI stopped allocating parent company NOLs in March 2006.
2. PHI's utility operations generate large tax benefits for non-regulated affiliates. PHI's three utility subsidiaries generated \$420 million in tax benefits for its non-regulated affiliates during 2003 through 2007. Most of those benefits went to Potomac Capital Investment Corporation (PCI).
3. The IRS has challenged the tax benefits produced by PCI's lease investments. PCI has invested \$1.3 billion in cross-border sale and leaseback transactions with tax indifferent entities. The transactions generate tax deductions from property used by non-taxable entities. The IRS has identified those types of transactions as tax avoidance schemes. The IRS staff recommended the disallowance of the excess tax deductions generated by PCI's lease investments in its most recent audit of PHI. PHI is protesting that disallowance.
4. The BPU has a long-standing policy of allocating a fair share of consolidated tax savings to ratepayers. The BPU policy is well-settled and has been repeatedly upheld by New Jersey courts. The sharing is accomplished by deducting the utility's share of the cumulative tax savings from rate base.
5. The BPU has an established methodology for calculating consolidated tax savings. The BPU methodology was adopted in 2004.
6. The methodology ACE used to recalculate Staff's proposed consolidated tax savings adjustment in its 2004 rate case is flawed. ACE's approach allows PHI to maintain that each of its three regulated utilities do not produce consolidated tax savings, even when PHI's utility line of business clearly produces substantial savings.

## **Recommendations**

1. PHI should allocate parent company tax NOLs to subsidiaries in 2009 and future years. The parent company's costs are funded by the dividends it receives from its subsidiaries. The subsidiaries do not receive a tax deduction for the dividends they pay and the dividends are not included in the parent's taxable income. The subsidiaries fund the parents costs. Therefore, they should receive the tax deductions arising from those costs.
2. ACE should prepare annual calculations of its cumulative consolidated tax savings using the BPU approved methodology. The calculations should be prepared on a calendar year-end basis when final tax return amounts become available.

## **Background**

PHI files a consolidated federal income tax return that includes the parent company and its direct and indirect subsidiaries.<sup>1</sup> The consolidated tax return combines the income and deductions of all of the PHI entities to determine a consolidated income tax liability for the year. The consolidated income tax liability is allocated to PHI's parent company and subsidiaries pursuant to the PHI Tax Allocation Agreement. The individual members of the agreement can be allocated either a positive or negative tax liability, and make or receive payments accordingly. The net amount of the payments made by the individual members equals the consolidated tax liability payable to the government.<sup>2</sup> The positive tax liabilities allocated to ACE during the audit period are summarized below:

Year	Amount (000s)
2005	55,132
2006	79,774
2007	20,876

Source: OC-750 and OC-78

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<sup>1</sup> Response to Discovery, OC-78. Note: New Jersey does not permit consolidated state income tax returns. ACE files its state income tax return on a stand-alone basis.

<sup>2</sup> Response to Discovery, OC-78, PEPCO Holdings, Inc. And Affiliated U.S. Corporations, Form of Federal and State Income Tax Allocation Agreement, made as of August 1, 2002.

The Public Utility Holding Company Act of 1935 (PUHCA) was repealed in February 2006.<sup>3</sup> PHI was subject to the requirements of PUHCA.<sup>4</sup> The Securities and Exchange Commission (SEC) set rules for electric utility holding company tax allocation agreements pursuant to PUHCA.<sup>5</sup>

The SEC rules prohibit the parent company from receiving an income tax payment for its negative taxable income.<sup>6</sup> The rule effectively requires the allocation of parent company net operating losses (NOLs) to its subsidiaries, without payment to the parent company.

The SEC observed that parent company costs that are passed on to subsidiaries do not create a parent company loss, because the subsidiary reimburses the parent for the cost. The SEC observed that parent company losses arise from costs that the parent is prohibited from passing on to its subsidiaries by its rules. Requiring the subsidiaries to pay the parent company for the resulting tax losses would result in the subsidiaries reimbursing the parent for a portion of the prohibited costs.<sup>7</sup>

The SEC granted an exception to the general rule to several holding companies.<sup>8</sup> The exception allows the parent to be paid for losses resulting from interest paid on debt issued for major corporate acquisitions. The SEC concluded that issuing the acquisition debt did not impact the subsidiaries. Therefore, they should not receive the tax benefit of the interest. The SEC authorized PHI to retain the tax benefits of approximately \$700 million in debt issued for its acquisition of Conectiv.<sup>9</sup>

The SEC Staff reviewed PHI's Tax Allocation Agreement in 2005 and recommended amending the agreement to include the following provision:<sup>10</sup>

The Parent Company shall pay its own separate return tax liability if profitable and not recoup its net operating losses.

PHI agreed to include that provision in the agreement. However, PHI subsequently determined the amendment was not necessary because of the repeal of PUHCA.<sup>11</sup>

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<sup>3</sup> Response to Discovery, OC-753

<sup>4</sup> Response to Discovery, OC-752

<sup>5</sup> The tax allocation agreement rules were contained in SEC Rule 45 (c). The rule was contained in CFR Title 17, Chapter 11, Section 250.45.

<sup>6</sup> Response to Discovery, OC-752, PHI Form U-1, Application for the approval of the acquisition of Conectiv by PHI. July 24, 2002, page 71. The rule provides for safe-harbor approval of tax allocation agreements that comply with the rules. Tax allocation agreements that do not comply with the rules require explicit SEC approval.

<sup>7</sup> SEC Holding Company Act Release No. 21767, October 29, 1980.

<sup>8</sup> See SEC Holding Company Act Release Nos. 27694 (FirstEnergy, 2003), 27643 (Energy East, Corporation, 2003) and 27522 (Progress Energy, 2002),

<sup>9</sup> Response to Discovery, OC-752, Holding Company Act Release No. 27553, dated July 24, 2002, pages 26 and 29.

<sup>10</sup> Response to Discovery, OC-78 and OC-757. The Staff determined the agreement was not in compliance with Rule 45 (c) and recommended three changes. The other changes included adding a definition of acquisition debt and clarifying the allocation of subsidiary tax losses.

<sup>11</sup> Response to Discovery, OC-757.

Under the Tax Allocation Agreement, a member's liability can never exceed the amount it would have paid if it had filed a stand-alone tax return. During years when consolidated taxable income is positive the following generally applies:<sup>12</sup>

- Members with positive stand-alone taxable income pay their stand-alone liability less their allocated share of the parent company loss.
- Members with negative stand-alone taxable income are paid for their tax loss at the statutory tax rate.

During periods when consolidated taxable income is negative, the following generally applies.

- Members with positive stand-alone taxable income pay their stand-alone liability, less their allocated share of the parent company loss.
- The amount paid to the government is subtracted from the total amount paid by members with positive taxable income. The remaining net cash balance is allocated to the members with negative taxable income based on their stand alone negative taxable incomes.

### **Parent Company NOL Allocation**

**PHI stopped allocating parent Company tax NOLs to subsidiaries in March 2006.** Prior to the repeal of PUHCA, PHI allocated its parent company stand-alone NOLs to its subsidiaries. The amount allocated to the subsidiaries equaled the total parent company loss, less the interest deduction generated by \$700 million in acquisition debt. The parent company loss allocations reduced ACE's income tax liability by \$7.2 million in 2004 and by \$3.1 million in 2005.<sup>13</sup>

PUHCA was repealed in February 2006. The PHI Tax Agreement indicated the agreement's parent company NOL allocation requirements would no longer be effective if PUHCA was repealed.<sup>14</sup> PHI stopped the allocation of parent company losses to subsidiaries based on that provision.<sup>15</sup>

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<sup>12</sup> The Agreement also contains provisions for net operating loss carryforward utilization and alternative minimum tax.

<sup>13</sup> Response to Discovery, OC-750.

<sup>14</sup> Response to Discovery, OC-755 and OC-78. Referring to Section IV of the Tax Allocation Agreement.

<sup>15</sup> Response to Discovery, OC-755. PHI continued the allocations through March 31, 2006 because its tax allocations are prepared on a quarterly basis (OC-753)

PHI concluded it did not need any regulatory approvals to stop the allocations and did not notify any state or federal regulators of the change in allocation procedures.<sup>16</sup>

**PHI should allocate parent company NOLs to subsidiaries in 2009 and future years.** The parent company's primary asset is the common stock of its subsidiaries. The subsidiaries pay substantial dividends to the parent. The parent's costs are funded by those dividends. The subsidiaries do not receive a tax deduction for the dividends they pay to the parent and the dividends are not included in the parent's taxable income.

The subsidiaries either directly or indirectly fund the parent's costs. Therefore, they should receive the tax deductions arising from those costs. Parent company tax NOLs should be allocated to PHI's subsidiaries to properly match income tax benefits with the funding of the costs.

PHI maintains the allocation of parent company tax NOLs and the payment of dividends by a utility are two completely different matters. PHI maintains that dividends paid by the subsidiaries are not paid to reimburse the parent's costs.<sup>17</sup>

PHI has substantial stand-alone parent company book income. The following table shows the details of PHI's stand-alone pre-tax income.

Description	Amount
Dividends From Subsidiaries	390
Other Investment Income	1
Operating Expenses	(3)
Interest Expense	(91)
Pre-Tax Income	297
Source: Response to Discovery, OC-47	

The parent company tax NOL was \$98 million in 2007.<sup>18</sup> The tax loss consisted primarily of interest on parent company debt.<sup>19</sup>

The parent's substantial book income demonstrates that it fully recovers its costs. Parent company costs that are reimbursed through non-dividend payments from subsidiaries or third parties do not create parent company tax NOLs because those payments offset the costs. Parent company tax NOLs are created when costs are recovered through subsidiary dividends because the dividends are not included in the parent's taxable income. The funding of parent

<sup>16</sup> Response to Discovery, OC-755.

<sup>17</sup> Response to Discovery, OC-758.

<sup>18</sup> Response to Discovery, OC-750.

<sup>19</sup> Dividends from subsidiaries are not included in the Parent's taxable income. The PHI parent company has relatively minor book/tax temporary differences for loss on debt reacquisition, amortization and other deductions (Response to Discovery, OC-751).

company costs through subsidiary dividends is the basic reason why the parent company tax NOLs exist. The parent company tax NOLs should be allocated to the subsidiaries because they do not receive a tax deduction for the dividends they pay to the parent.

The primary source of parent company NOLs is interest on parent company debt. That debt funds the parent's investment in its subsidiaries. Therefore, the interest deductions generated by the debt should be allocated to the subsidiaries.

The allocations will increase ACE's net income and credit quality. The allocations will also improve ACE's cash flow to the extent that rates are not reduced and dividends are not increased.

### **Consolidated Tax Savings**

**PHI's utility operations generate large tax benefits for non-regulated affiliates.** PHI's three utilities produce significant taxable income while PHI's non-regulated affiliates produce significant tax losses. Under the Tax Allocation agreement, significant portions of the amounts paid by the utilities are used to pay the non-regulated affiliates for their tax losses.

The following table shows the income taxes paid by PHI's utilities and its other affiliates for 2003 through 2007.

Year	Paid by Utilities	Paid to Non-Regulated Affiliates	Paid to Federal Government
2003	68	(63)	5
2004	75	(74)	1
2005	178	(155)	23
2006	173	(70)	103
2007	100	(58)	42
<b>Total</b>	<b>594</b>	<b>(420)</b>	<b>174</b>

Source: Response to Discovery, OC-750 and OC-78.

PHI's utility, merchant power and non-regulated retail energy services business units all generate positive taxable income.<sup>20</sup> The non-regulated affiliate tax losses come from two basic sources:<sup>21</sup>

<sup>20</sup> Response to Discovery, OC-78 and OC-750

<sup>21</sup> Overland classified and tabulated the taxable income and losses of the members of PHI's corporate tax returns by business line for 2002 through 2007. PES and the merchant power companies generate substantial positive taxable income. The only business units generating substantial negative taxable income are the PHI Capital's leasing affiliates and the PHI parent company.

- Potomac Capital Investment Corporation's (PCI) cross-border lease transactions with tax indifferent entities, and
- Parent company interest deductions.

PCI's lease investments create value by transferring tax deductions from non-taxable entities to PHI. When a private corporation owns plant and equipment, the property can be depreciated for tax purposes and the interest on the debt financing the property can be deducted. When a non-taxable entity owns plant and equipment, those deductions are "wasted" because the entity is not taxable in the first instance. This creates an incentive to transfer the tax deductions to a taxable corporation.<sup>22</sup>

Between 1994 and 2002, PCI entered into eight cross-border energy lease transactions with "tax indifferent" entities involving public utility plant assets.<sup>23</sup> The following table shows the leases.

<b>Year</b>	<b>Country</b>	<b>Asset</b>	<b>Lease Expiration</b>	<b>Book Value (Millions)</b>
1994	Netherlands	Power Generation	2017	96
1995	Australia	Power Generation	2109	187
1999	Netherlands	Gas System	2025	248
1999	Netherlands	Gas System	2025	152
2001	Austria	Power Generation	2035	253
2002	Austria	Power Generation	2030 - 36	166
2002	Austria	Power Generation	2033-42	218
2002	Austria	Power Generation	2039	83
<b>Total</b>				<b>1,403</b>

Source: PHI Analyst Presentation, EEI Finance Committee Meeting, May 21, 2008

In each investment, PHI purchased utility plant from a non-taxable entity and leased the asset back to the non-taxable entity.<sup>24</sup> The asset purchase was funded by a combination of non-recourse debt and an equity contribution from PCI.<sup>25</sup> The PCI equity contribution was funded through debt issued by PCI.

The lease rental payments received by PCI are taxable income. PCI depreciates the plant for tax purposes and deducts the interest paid on the debt issued to fund the acquisition of the plant. The leases generate current tax benefits to the extent that the depreciation and interest deductions exceed the rental payments.<sup>26</sup> Prior to 2008, the leases historically generated

<sup>22</sup> Congressional Research Service, Tax Implications of SILOs, QTE's and Other Leasing Transactions with Tax-Exempt Entities, Updated November 30, 2004, page 2.

<sup>23</sup> PHI 2008 10-K Report, page 226 (PEPCO Holdings Financial Statements Footnote 16)

<sup>24</sup> PHI 2008 10-K, page 226. This structure is referred to as a Sale In / Lease Out (SILO) transaction.

<sup>25</sup> Response to Discovery, OC-19. Standard & Poor's Ratings Direct Report, PEPCO Holdings, Inc., August 10, 2006, page 10.

<sup>26</sup> The tax benefit equals the marginal tax rate (35%) times the excess of the deductions over the rental income. PHI 2008 10-K, page 226.

approximately \$74 million in annual tax benefits.<sup>27</sup> During the years 2001 to 2008, PHI derived approximately \$461 million in federal tax benefits from the eight leases.

The tax benefits represent timing differences that reverse over the life of the leases.<sup>28</sup> The value of the tax benefits arises from the reduction in the net present value of the taxes paid by PHI.<sup>29</sup> From an economic perspective, the deferral of taxes is equivalent to their reduction due to the time value of money.<sup>30</sup> Accelerating deductions and delaying the recognition of the rental income maximizes the total benefit of the transaction.

The value of the tax benefits depends on PHI having enough positive taxable income from its other operations to fully utilize the tax deductions generated by the leases. PHI's utility operations are the primary source of positive taxable income for PHI.

**The IRS has challenged the tax benefits produced by PCI's lease investments.** In 2005, the IRS identified sale and leaseback transactions with tax indifferent parties as tax avoidance transactions and announced its intention to disallow tax benefits associated with those transactions.<sup>31</sup>

The IRS Staff recommended the disallowance of the depreciation and interest deductions in excess of rental income for the leases in its most recent audit of PHI.<sup>32</sup> PHI is protesting the audit adjustments.

The IRS position on similar leases has been upheld in several court cases involving other taxpayers. PHI reassessed the sustainability of its tax positions as of June 2008 and revised its assumptions concerning the timing of tax benefits produced by the investments. Based on that reassessment, PHI recorded an after-tax charge to net income of \$93 million in June 2008.<sup>33</sup>

PHI reduced the tax benefits claimed on its 2007 tax return to reflect its revised assumptions concerning the timing of the tax benefits.<sup>34</sup> Under PHI's revised assumptions, the leases will continue to produce annual tax benefits of approximately \$56 million.

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<sup>27</sup> PHI 2008 10-K, page 226.

<sup>28</sup> PHI 2008 10-K, page 228.

<sup>29</sup> The total value of the transaction is the reduction in the present value of the taxable entities tax payments. A portion of that value is typically distributed to the non-taxable entity through an implicit "accommodation fee" to provide the non-taxable entity with an incentive to participate in the transaction. Congressional Research Service, Tax Implications of SILOs, QTE's and Other Leasing Transactions with Tax-Exempt Entities, Updated November 30, 2004, page 2.

<sup>30</sup> Congressional Research Service, Tax Implications of SILOs, QTE's and Other Leasing Transactions with Tax-Exempt Entities, Updated November 30, 2004, page 3.

<sup>31</sup> PHI 2008 10-K, page 227 (PEPCO Holdings financial statements footnote 16).

<sup>32</sup> The IRS Staff issued its final Revenue Agent's Report for audit years 2001 and 2002 in June 2006. The report recommended disallowance of depreciation and interest deductions for six of the eight leases to the extent that those deductions exceeded rental income for the year. In addition the IRS sought to recharacterize the leases as loan transactions which would subject PHI to original issue discount income. 2008 PHI 10-K page 227.

<sup>33</sup> PHI 2008 10-K Report, page 227.

<sup>34</sup> The 2007 Tax Return was filed in September 2008. PHI 2008 10-K, page 228.



The leased assets are similar to PHI's core business operations and produce an adequate pre-tax return. PHI believes its position is appropriate, given the facts relevant to the investments. PHI believes it will take several years to resolve the issue.<sup>35</sup> An October 2009 federal court decision ruled in favor of a taxpayer with facts and circumstances similar to PHI.<sup>36</sup>

Under the IRS Staff position, PHI would have been obligated to pay approximately \$520 million in additional federal and state taxes and \$83 million in interest as of December 31, 2008.<sup>37</sup> The additional taxes would be offset by reduced payments in future years.<sup>38</sup>

**The BPU has a long-standing policy of allocating a fair share of consolidated tax savings to ratepayers.** Filing a consolidated income tax return produces a consolidated tax liability that is lower than the total that would have been paid if each member had filed a separate return. The savings occur because some of the taxes that would have been paid by members with positive taxable income on a separate return basis can be offset with the losses of members with negative taxable income.<sup>39</sup> These savings are referred to as consolidated tax savings.

The BPU has a long standing policy of allocating a fair share of the consolidated tax savings to ratepayers.<sup>40</sup> The sharing is appropriate when positive taxable income from the regulated utility allows the holding company to realize consolidated tax savings. Ratepayers pay the rates that produce the utility income. Therefore, the ratepayers should share in the consolidated tax savings.<sup>41</sup>

The sharing is accomplished by deducting the utility's share of the cumulative consolidated tax savings from rate base. The rate base deduction "properly compensates ratepayers for the time value of money that is essentially lent cost-free to the holding company in the form of tax advantages."<sup>42</sup>

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<sup>35</sup> PHI Analyst Presentation. EEI Finance Committee Meeting, May 21, 2008, page 52.

<sup>36</sup> Consolidated Edison Company, United States Court of Federal Claims, No. 06-305T, Decision filed October 21, 2009. PHI comments on Overland Draft Audit Report.

<sup>37</sup> PHI 2008 10-K, page 229. In addition the IRS could require PHI to pay a penalty of up to 20 percent of the additional taxes due.

<sup>38</sup> The deductions disallowed in 2008 and prior years would ultimately be recognized over the life of the transactions. The issue is the timing of tax deductions, not the total amount ultimately deductible. PHI 2008 10-K, page 229.

<sup>39</sup> On a separate return basis, corporations that have a negative taxable income do not receive a check from the IRS for negative taxes due. However, they can utilize the IRS's net operating loss carry-back provisions to receive a refund of taxes paid in prior years. The carry-back period is generally limited to 2 years. Corporations that did not pay any taxes in the prior two years do not realize any current cash benefit for their NOLs because there is nothing to refund. Net Operating losses can also be carried forward for 20 years. Carry-forwards reduce the taxes owed by the corporation in future years, to the extent that current year taxable income is positive in those years.

<sup>40</sup> The BPU established its current policy in ACE's 1992 rate case. BPU Decision in Docket No. ER90091090J (Atlantic City Electric), dated October 20, 1992. See also, BPU Decision in Docket No. ER020100724 (Rockland Electric Company), dated April 20, 2004, page 62 and BPU Decision in Docket No. ER91121820J (Jersey Central Power & Light Company), dated April 20, 2004, page 6. The BPU's consolidated tax savings policy has been repeatedly upheld by the New Jersey courts.

<sup>41</sup> BPU Decision in Docket No. ER91121820J (Jersey Central Power & Light Company), dated April 20, 2004, page 7.

<sup>42</sup> BPU Decision in Docket No. ER020100724 (Rockland Electric Company), dated April 20, 2004, page 63

The rate base adjustment excludes years prior to 1990.<sup>43</sup> Earlier years were excluded because investors might have reasonably expected that the BPU would not make consolidated tax savings adjustments prior to 1990 because of certain IRS private letter rulings.<sup>44</sup>

The BPU Staff proposed a consolidated tax savings rate base adjustment in ACE's 2004 rate case. The settlement in that case did not include a consolidated tax savings adjustment, but required ACE to include information concerning consolidated tax savings in the initial filing for its next base rate case.<sup>45</sup>

**The BPU has an established methodology for calculating consolidated tax savings.** The BPU methodology for calculating consolidated tax savings is described below.

- Determine the cumulative taxable income for each member of the consolidated return for the period 1990 to date.
- Identify the members with a negative cumulative taxable income over that period (the cumulative loss companies).
- Calculate the total annual taxable income for the cumulative loss companies for each year. Apply the corporate tax rate to the annual totals to determine the consolidated tax savings for each year. Reduce the 1990 amount by fifty percent to reflect a partial year.
- Calculate the cumulative consolidated tax savings by adding together the consolidated tax savings for each year.
- Allocate the cumulative consolidated tax savings to the other members of the consolidated return based on their cumulative taxable income.<sup>46</sup>

The BPU methodology was adopted in a 2004 Rockland Electric Company Decision.<sup>47</sup> The methodology is detailed on Exhibit 4 to that decision. The BPU approved methodology was recently applied, by stipulation, in an October 2008 New Jersey Natural Gas Company Decision.<sup>48</sup>

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<sup>43</sup> The rate base adjustment reflects one-half of 1990 taxable income and all taxable income for 1991 and subsequent years.

<sup>44</sup> BPU Decision in Docket No. ER90091090J (Atlantic City Electric), dated October 20, 1992 and BPU Decision in Docket No. ER020100724 (Rockland Electric Company), dated April 20, 2004, page 64

<sup>45</sup> The Settlement requires ACE to submit sufficient data to allow the parties to calculate a consolidated tax savings adjustment. Response to Discovery, OC-79. BPU Decision in Docket No. ER03020110, dated May 26, 2005, page 6.

<sup>46</sup> The other members of the consolidated return are the members with a positive cumulative taxable income.

<sup>47</sup> BPU Decision in Docket No. ER020100724 (Rockland Electric Company), dated April 20, 2004, page 64.

<sup>48</sup> BPU Decision in Docket No. GR07110889 (New Jersey Natural Gas Company), dated October 3, 2008, page 3 and attached Stipulation of Settlement, page 4.

**The methodology ACE used to recalculate consolidated tax savings in its 2004 rate case is flawed.**

ACE opposed Staff's consolidated tax savings adjustment in the 2004 rate case. ACE recalculated Staff's adjustment in its reply brief to illustrate its criticisms of Staff's proposal. ACE's recalculation determined consolidated tax savings by comparing ACE's taxable income to the total taxable income of all of the other members of the PHI consolidated tax return, including Delmarva and PEPCO.<sup>49</sup>

Delmarva and PEPCO usually have substantial positive income. The "not ACE" members generally had positive taxable income after ACE's merger with Delmarva.<sup>50</sup> Based on that observation, ACE concluded that there were no consolidated tax savings to deduct from rate base.

ACE's approach allows PHI to maintain that each of its three regulated utilities does not produce consolidated tax savings, even when PHI's utility business line clearly produces substantial savings.

The following tables use a hypothetical example to illustrate the flaw in ACE's approach. The hypothetical assumes a holding company with three utilities and one non-regulated subsidiary. The first table shows a logical allocation of consolidated tax savings.<sup>51</sup>

<b>Table 6-5 Hypothetical Example Consolidated Tax Savings Allocation Dollars In Millions</b>	
<b>Description</b>	<b>Amount</b>
Utility A Tax Liability	100
Utility B Tax Liability	200
Utility C Tax Liability	100
Total Utility Tax Liability	400
Non-Regulated Affiliate Tax Liability	(100)
Consolidated Tax Liability	300
Consolidated Tax Savings	100
Utility A Consolidated Savings (25%)	25
Utility B Consolidated Savings (50%)	50
Utility C Consolidated Savings (25%)	25
Note: Utility consolidated tax savings are allocated to individual utilities based on their taxable income.	

ACE's methodology of looking at each utility in isolation produces the following results.

<sup>49</sup> Response to Discovery, OC-978 and OC-762, Reply Brief of Atlantic City Electric Company, BPU Docket No ER03020110, dated August 23, 2004, page 29.

<sup>50</sup> The "not ACE" group had negative taxable income in 1990 through the February 28, 1998 Conectiv merger. The "not ACE" group had positive taxable income in the remainder of 1998 and all of 1999, 2000, 2001. The "not ACE" group had negative taxable income for the portion of 2002 following the July 31, 2002 PHI merger.

<sup>51</sup> The hypothetical example has been simplified by restricting the data to a single year for purposes of illustration.

Description	Utility A	Utility B	Utility C
Utility A Tax Liability	100		
Utility B Tax Liability		200	
Utility C Tax Liability			100
Other Member Tax Liabilities	200	100	200
Consolidated Tax Liability	300	300	300
Consolidated Tax Savings for each Utility Under Review	0	0	0
Note: The other member tax liability reflects the \$(100) million non-regulated liability plus the tax liabilities of the other two utilities.			

ACE's methodology allows each of the three utilities to claim they do not produce any consolidated tax savings, despite the fact that PHI's utility business line produces consolidated tax savings of \$100 million. ACE's methodology does not reflect the true economic substance of PHI's tax structure and produces unreasonable results.

**ACE should prepare annual calculations of its cumulative consolidated tax savings using the BPU approved methodology.** ACE does not calculate its cumulative consolidated tax savings on a regular recurring basis. Consolidated tax savings are a significant rate base deduction. ACE should calculate its consolidated tax savings annually to increase its understanding of its regulated revenue requirements. The calculations should reflect the BPU's approved methodology. ACE should consider the results of the BPU approved methodology in its regulatory planning, regardless of whether ACE agrees or disagrees with the methodology. The calculations should be prepared on a calendar year-end basis when final tax return amounts become available.

The 2004 rate case settlement requires ACE to provide the parties with the information needed to calculate consolidated tax savings in its next rate case initial filing. Preparing annual calculations would facilitate the production of that information.

PHI's annual federal income tax allocation workpapers provide the consolidated income tax liability, parent company NOL, and each member's acronym, taxable income, parent company NOL allocation, NOL carrybacks, NOL carryforwards, tax credits, alternative minimum tax liability and total tax liability. The workpapers provide the basic information needed to calculate consolidated tax savings.<sup>52</sup> The consolidated tax allocation worksheets for each year back to 1990 should be included in the support for the annual updates.<sup>53</sup>

<sup>52</sup> The workpapers for 2002 through 2007 are contained in response to Discovery, OC-78 and OC-750. The final tax return allocation workpapers typically consist of three pages with a column for each member of the consolidated tax return.

<sup>53</sup> The PHI merger occurred in 2002. ACE should provide comparable data for the years prior to the merger and the actual PHI data for subsequent years. The data should reflect final annual tax return amounts for each year. If the final tax return has not yet been filed for the year, current estimate data should be provided. The support should also include a key to the members acronyms with the full name of each member. The key should also indicate each members primary business line.

## Chapter 7. PHI Organizational Structure

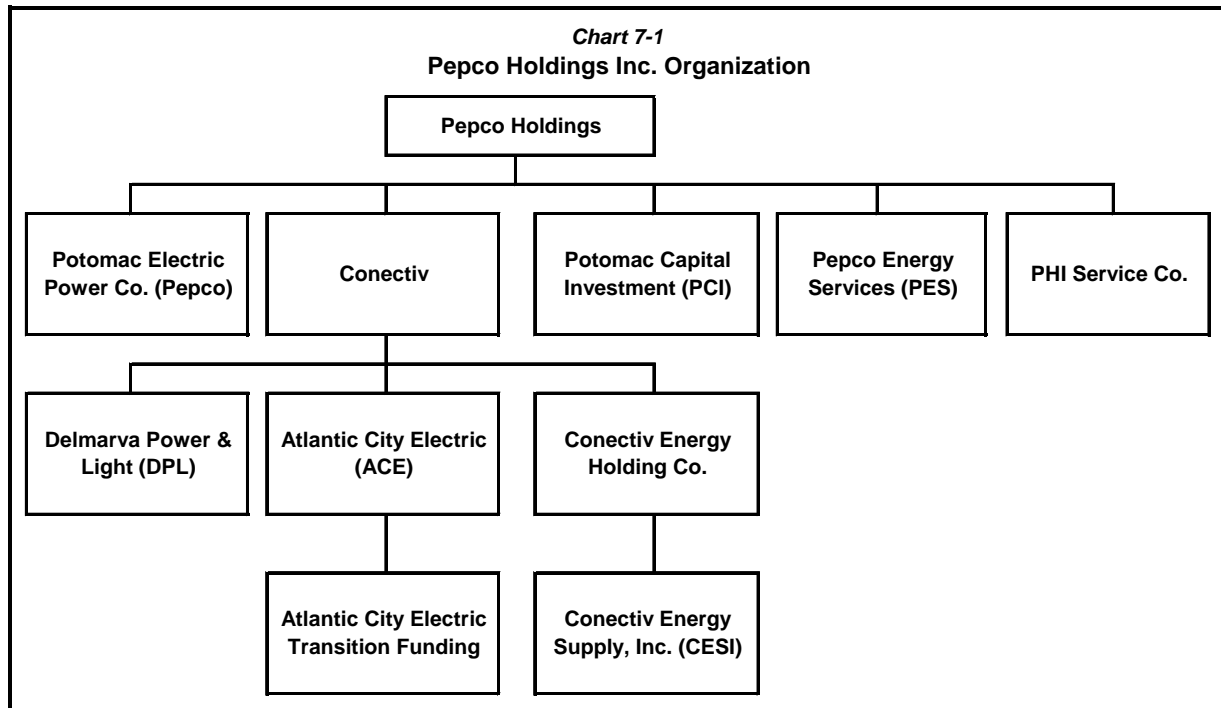
This chapter provides an overview of PHI's organization. It compares and contrasts the legal and management (functional) organizations, explains the interrelationships between the ACE and PHI Service Company (PHISCO) legal entities within the management structure, and describes the functional organizations within the management structure and their key responsibilities.

### PHI's Legal Organization Structure

PHI's legal entity (affiliate) organization structure is summarized below and discussed in Chapter 2, Overview of Affiliate Relationships and Transactions. This chapter discusses PHI's management organization, and explains how the legal and management organization structures relate to one-another.

PHI's businesses are organized into various legal entities. The entities can be classified into segments, or lines of business. PHI's segments and their primary legal entities:

- The Power Delivery segment includes the distribution utilities, ACE, Pepco and DPL.
- The Competitive Energy segment includes the power generation and marketing entities, including Conectiv Energy and Pepco Energy Services and their subsidiary companies.
- The PHI Investments segment's primary legal entities include Potomac Capital, which purchases and leases back utility assets in Europe and Australia, and Atlantic Southern Properties, which owns the Mays Landing operations building occupied by ACE.



## **Overview of PHI's Management Organization Structure**

PHI's management organization is structured to serve the three business segments listed above, with a heavy emphasis on the Power Delivery segment. The Power Delivery segment accounts for approximately 80 percent of PHI employees, including employees of the regulated utilities and employees of PHI Service Company (PHISCO) dedicated to utility operations. Competitive Energy (power generation and marketing) accounts for approximately 10 percent of employee resources. It consists of employees under the Conectiv Energy and Pepco Energy Services holding company umbrellas and employees in the competitive energy organizations within PHISCO. The PHI Investments segment does not have its own management organization; rather, its functions are managed by a small number of PHISCO employees. At the end of 2007, according to the statistics used in the PHISCO's "People" (employee) allocator, six PHISCO employees were assigned to manage Potomac Capital Investment Corporation, the Investment segment's primary subsidiary. The remaining 10 percent of PHI's employees work in PHISCO functions that benefit PHI as a whole. These include functions such corporate legal, human resources, audit and treasury.

PHI's management organization corresponds loosely with its legal entity structure. PHI's top executives, several of whom serve PHI as a whole, are employees of PHISCO. Most high-level executives and many middle managers, whether or not they are dedicated to a particular segment, are also employees of PHISCO. About a third of all PHI employees worked for PHISCO during the audit period. Many had responsibilities dedicated primarily or entirely to either the Power Delivery or Competitive Energy segments. Within Power Delivery Segment, some had responsibilities that extended to all three utilities and some (in the customer service function) were shared only by ACE and DPL. The table below summarizes PHI's employee counts by segment and, within the Competitive Energy segment, by company group (Conectiv vs. Pepco Energy Services). At the company level, employee totals are by legal entity. For example, many of the employees listed for PHISCO work in functional organizations associated with Power Delivery or Competitive Energy.

	<b>Dec-05</b>	<b>Dec-06</b>	<b>Dec-07</b>	<b>Jul-08</b>
<u>Utilities</u>				
DPL	891	910	914	923
ACE	633	590	508	528
Pepco	1,521	1,412	1,361	1,373
<b>Power Delivery Segment</b>	<b>3,045</b>	<b>2,912</b>	<b>2,783</b>	<b>2,824</b>
<u>Conectiv Energy</u>				
Conectiv Delmarva (CESI)	156	164	157	158
Conectiv Atlantic (CESI)	58	54	56	59
PHI Operating Svc Co.	27	26	27	26
Delaware Operating Svc Co.	110	-	-	-
Millennium Account Services (1)	78	85	76	87
Petron (1) (2)	20	18	17	17
<b>Conectiv Energy Total</b>	<b>449</b>	<b>347</b>	<b>333</b>	<b>347</b>
<u>Pepco Energy Services (1)</u>				
Pepco Energy Services, Inc.	N/A	191	223	235
W.A. Chester	N/A	107	128	160
Severn Construction	N/A	72	83	64
Conectiv Thermal	N/A	33	33	32
Pepco Government Services	N/A	24	43	49
<b>Pepco Energy Services Total</b>	<b>N/A</b>	<b>427</b>	<b>510</b>	<b>540</b>
<u>Competitive Energy Segment</u>				
PHI Service Company	1,730	1,742	1,807	1,894
<b>Total Employees</b>	<b>N/A</b>	<b>5,442</b>	<b>5,431</b>	<b>5,453</b>
Sources: Response to Discovery, OC-377 and OC-85				
1. Pepco Energy Services', Millennium Account Services' (MAS') and Petron's employees are not considered part of the PHI management organization, do not participate in PHI's compensation and benefits plans, and are not included in PHI employee statistics reported externally (e.g. to the SEC). PHI owns 100 percent of the entities listed, except for MAS, in which it has a 50 percent ownership.				
2. Petron's employee counts are estimated.				
N/A - Not available (data for PES employees was not provided in response to Discovery, OC-377)				

As of December 31, 2008, ACE had 145 non-union and 378 union employees.<sup>1</sup>

<sup>1</sup> Response to Discovery, OC-1117 (restricted), Tab 5, page 4.

## Organizational Division Between the PHISCO and ACE Legal Entities

The Power Delivery segment operates as a unified functional organization. During the audit period all three utilities reporting through the management structure to a Joseph Rigby, PHI's Chief Operating Officer.<sup>2</sup> There is no bright line between the employees in the utilities and the service company or, for that matter, between the employees in the energy generating subsidiaries and the service company. Progressing down into the management organization charts for Power Delivery, PHISCO positions give way to employees paid directly by the utilities (ACE, DPL or Pepco) or by Conectiv Energy or Pepco Energy Services. Generally, employees with responsibilities confined to the regional operations of a utility work for that utility. ACE has only one region (Atlantic). In most cases, employees with responsibilities that extend across utility lines work for PHISCO. ACE's employment, by cost center, is summarized below.

<b>Cost Ctr</b>	<b>Description</b>	<b>Dec-05</b>	<b>Dec-06</b>	<b>Dec-07</b>	<b>Jul-08</b>
109	ACE Facility Services	8	8	8	8
114	ACE Vehicle Resources	19	18	17	18
121	ACE Security Services	2			
191	Stores Atlantic	14	15	14	16
343	ACE Construction	286	275	274	280
347	Atlantic City Electric Key Accounts	2	2	2	2
348	Distribution Engineering-ACE	42	46	58	63
367	ACE Maintenance	67	65	65	65
370	ACE Meter Technology	9	7	7	10
372	System Operations - ACE Region	20	19	19	20
373	Field Training-Atlantic	5	5	5	4
392	ACE Drafting	2	2	3	4
399	Government Affairs-ACE	10	10	10	12
517	B.L. England Operations	73	62		
518	B.L. England Maintenance	35	19		
519	B.L. England Technical Support	3	2		
520	B.L. England Mgmt and Administration	12	10		
816	ACE Safety		1	1	2
901	ACE Dispatch	12	12	13	13
997	ACE Courtesy Centers	12	12	12	11
	<b>ACE TOTAL</b>	<b>633</b>	<b>590</b>	<b>508</b>	<b>528</b>

Source: Response to Discovery, OC-377. ACE completed the sale of the B.L. England plant in February, 2007. See <http://www.eia.doe.gov/cneaf/electricity/epm/tablees4.html>

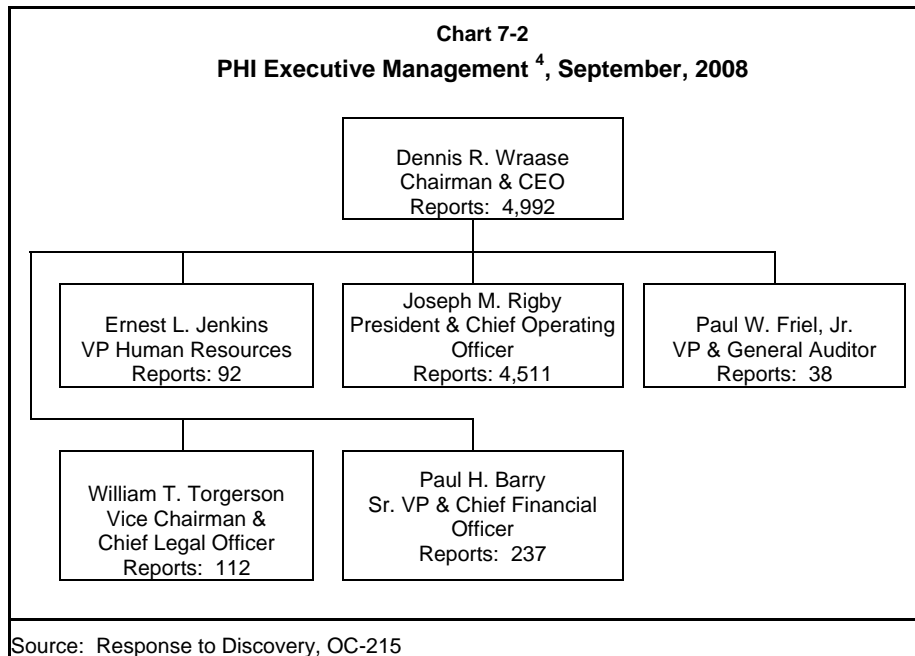
The three utilities are generally operated as a single business. However, after business combinations that have now extended over a period of at least seven years, many of the systems and procedures employed by the utility subsidiaries remain disparate and are not necessarily integrated, standardized or centralized.

<sup>2</sup> In February, 2009, Joseph Rigby became Chief Executive Officer of PHI, replacing Dennis Wrasse, who was retiring in May. David Velazquez, President and CEO of Conectiv Energy, became Executive Vice President of PHI, taking over the Power Delivery Line of Business and replacing Rigby.



## PHI's Holding Company Executive Management

PHI's executive management, as of September 2008, is summarized in the chart below.<sup>3</sup> The Vice President, Human Resources organization includes executive and employee compensation and benefits, performance processes, staffing and diversity functions. The Chief Financial Officer's organization includes the accounting (controller), treasury, financial planning, compliance and risk management functions. The Chief Legal Officer is responsible for the legal and government affairs functions. The Chief Operating Officer is responsible for everything else, including all utility and competitive energy operations and administration.



From a legal entity standpoint, all of the executives shown in the chart above are employees of PHISCO. In addition, with the exception of the organizations reporting to the Chief Operating Officer, the employees reporting to these executives are also part of PHISCO. In the case of the COO, some of the employees are part of PHISCO, while those not residing in PHISCO are employees of competitive energy subsidiaries (in the Conectiv or PES group) or one of the utilities. As discussed above, lower level employees with regional or local responsibilities are employees of individual utilities or the power generating companies, while higher-level

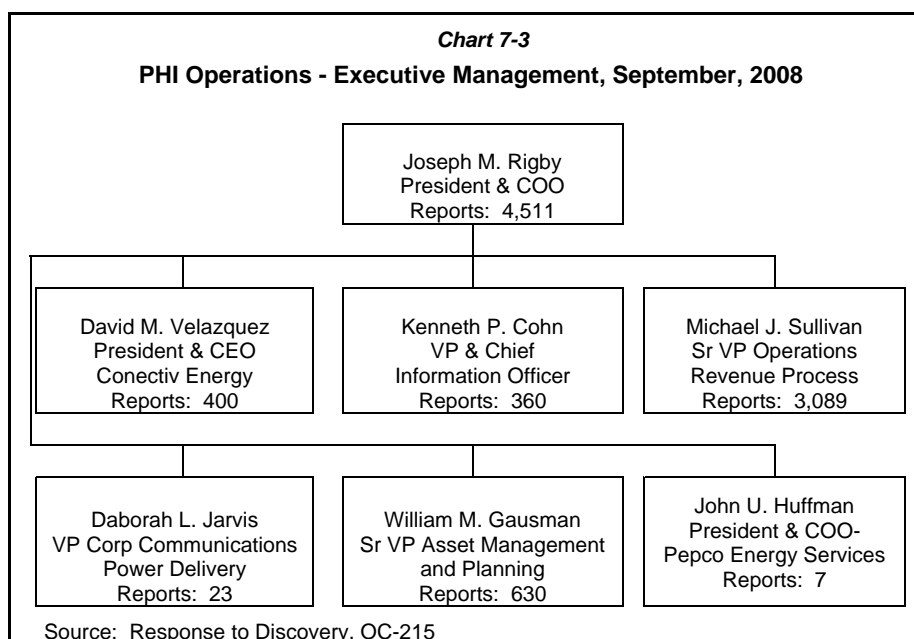
<sup>3</sup> Response to Discovery, OC-215. For several reasons, the totals in the chart do not match the totals in employee tables above. First, the organization chart data provided in OC-215 is based on positions, not employees, and some of the positions are open. In addition, the employee tables include employees of PES, Inc. and its subsidiaries who do not participate in PHI's compensation and benefit programs and are therefore not considered to be part of the PHI organization (and thus are excluded from the PHI org charts). Finally, the organization data summarized in the chart above is based on positions as of September, 2008. The 2008 employee data in the tables above is as of July 1, 2008.

<sup>4</sup> Based on response to Discovery, OC-1120, it was noted that William Torgerson and Dennis Wraase have retired from PHI. Additionally, it was noted that Joseph Rigby was named Chairman, CEO and President; and David Velazquez was named PHI Executive Vice President. Also, Paul Barry has left PHI, and Anthony Kamerick was named Senior VP and CFO.

employees with responsibility for multiple utilities or activities serving more than one generating plant are employees of PHISCO. The discussion below contains information on the break between the PHISCO and utility legal entities within the PHI Operations functional structure.

**PHI Operations Management**

During the audit period the Chief Operating Officer, Joseph Rigby, was responsible for all of PHI’s Power Delivery and Competitive Energy segment operations. More than 90 percent of PHI’s employees work in organizations reporting to the COO. The primary operations organizations, top executives and number of reporting positions, as of September, 2008, are summarized in the chart below.

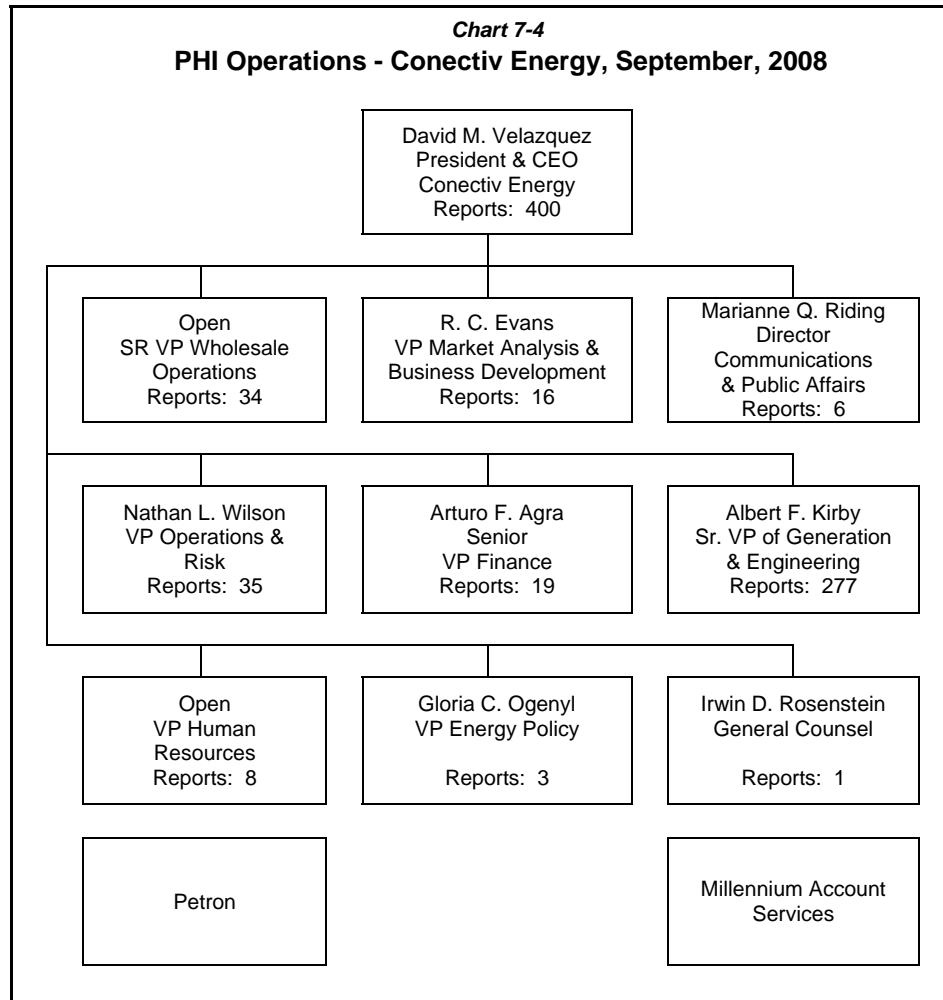


**Conectiv Energy Holding Company and its Subsidiary Conectiv Energy (CE)**

CE is a competitive wholesale energy company that manages more than 6,000 MW of generation throughout the mid-Atlantic. As shown in the chart below, in September, 2008, 400 positions reported to CE’s President and CEO, David Velazquez.<sup>5</sup> As of June, 2009, CE’s website indicated it has approximately 430 employees at its headquarters in Newark, Delaware and at various generating stations.<sup>6</sup> In addition to the generation stations, CE also manages additional capacity through service contracts.

<sup>5</sup> In February, 2009, David Velazquez was promoted to Executive Vice President of PHI, assuming responsibility for the Power Delivery segment and replacing Joseph Rigby, who was promoted to Chief Executive Officer. Gary Morsches replaced David Velazquez as CEO of Conectiv Energy.

<sup>6</sup> <http://www.conectiv.com/page/fact-sheet>



CE's legal subsidiary, Conectiv Energy Supply, Inc. (CESI), a direct subsidiary of Conectiv Energy Holding Company, owns nine merchant power plants in the transmission zone supplying power to ACE. As discussed in Chapter 4 - Power Supply and Transmission Affiliate Issues, Overland found the merchant power function was adequately separated from ACE's distribution function and that the Basic Generation Supply (BGS) process significantly reduced the risk of self-dealing by ACE in its power procurement function.

CESI's power generation facilities consist of a number of mid-merit plants capable of using a variety of different fuels. The plants employ combustion turbine/combined cycle technology that permits the use of waste heat to produce additional power with no added fuel.

In addition to generation, CE also maintains a large merchant energy business. By participating in wholesale trading of electric power, CE tries to reduce its risk by managing the spread between its cost of fuel for its power plants and the revenue received from the sale of this power. CE also tries to increase the company's earnings by managing the spread between

retail sales commitments and the cost to service those commitments, and hedging favorable prices whenever possible.<sup>7</sup>

CE's management organization is aligned with PHI's Competitive Energy line of business. As of September, 2008, CE was headed by David Velazquez, President and CEO. CE's functional organization aligns with Conectiv Energy Holding Company in the legal organization. Functional organizations within CE include<sup>8</sup>:

- Wholesale Operations – This includes merchant power asset management, power pricing and trading and gas supply and trading (34 positions).
- Finance – Includes the Chief Financial Officer and Controller functions, as well as business, financial and strategic planning (19 positions).
- Generation and Engineering – Includes operations, maintenance and engineering employees at merchant power locations, including Hay Road, Edge Moor and Bethlehem (277 positions).
- Communications and Public Affairs - (6 positions).
- Merchant Operations and Risk Management – Includes a small IT function (infrastructure and business applications development groups), operations oversight, risk management and credit-worthiness, power operations and scheduling and gas operations (35 positions).
- Human Resources (8 positions)
- Market Analysis and Business Development – Includes power marketing, portfolio modeling and structured transactions (16 positions)

In addition to the functions shown on the management organization chart, CE oversees two other businesses that operate independently from PHI:

- Millennium Account Services (meter reading), and
- Petron (petroleum products marketing).

### **Millennium Account Services (MAS)**

CE's Chief Financial Officer, Arturo Agra, is responsible for the oversight of Millennium Account Services (MAS), an affiliate owned 50% by Conectiv Solutions that performs meter reading on behalf of ACE.<sup>9</sup> MAS has approximately 90 meter reading and related administrative positions. Its employees do not participate in PHI's employee compensation or benefit program and are excluded from the 400 positions summarized in the CE organization chart above. MAS'

<sup>7</sup> Conectiv Energy corporate website (conectiv.com), 'Our Business' section.

<sup>8</sup> The positions in CE's organization chart do not match to the 2008 Conectiv Energy totals in Table 7-1 for the following reasons: 1) the chart contains positions, the table includes employees, 2) the organization chart excludes positions for Millennium Account Services and Petron (not part of the PHI organization), and, 3) the organization chart includes employees whose legal entity status is PHI Service Company (PHISCO). Table 7-1 shows employees by legal entity, so in the table they are included with PHISCO rather than CE.

<sup>9</sup> South Jersey Industries (SJI), which is not an affiliate of PHI or Conectiv, owns the other 50 percent of MAS. SJI and Conectiv Solutions jointly manage MAS.

operations and its relationship with ACE is discussed in Chapter 5, Millennium Account Services, and Conectiv Energy's power generation operations are discussed in Chapter 14, Power Supply Management.

### **Petron**

Petron is a division of Conectiv Energy Supply (CES), which is a subsidiary of Conectiv Energy Holding Co. Petron sells fuel oil and other petroleum products on a wholesale basis, and to large retail customers.<sup>10</sup> Petron sells forward, fixed-price contracts to deliver product to its customers. It hedges these sales with futures contracts.<sup>11</sup> Petron is located in Pennsylvania and maintains a staff of approximately 20 employees. Like MAS, Petron's employees do not participate in PHI's employee compensation and benefit programs, and are excluded from the 400 PHI positions shown in the Conectiv Energy organization chart above.

### **Information Technology (IT)**

PHI's corporate IT organization is headed by Kenneth Cohn, Chief Information Officer. Most of PHI's IT resources are dedicated to the Power Delivery business segment. In 2008 the organization consisted of the following groups:

- Customer Care & Systems – Maintenance and support of the Pepco CIS and ACE / DPL C3 customer applications, related IBM hardware, customer billing and telephone systems (100 positions).
- IT Applications (other than customer) – Maintenance and support of corporate and utility applications, including finance, accounting and human resources (SAP), asset management, outage management and others (90 positions).
- Infrastructure – Support for workstations and laptops, including software installation and network integration; corporate email system support (70 positions).
- IT Services – Help desk, IT security and install, change, add, change and repair services (40 positions).
- Power Delivery Business Systems – System development and enhancement and vendor relations for utility operations systems such as outage management, mobile dispatch and workforce management (35 positions).

IT employees work for PHISCO on the legal organization chart. A more detailed discussion of the IT organization's groups and functions is included in Chapter 24 - Support Services.

### **Corporate Communications**

PHI's corporate communications function is headed by Daborah Jarvis, VP Communications. It is dedicated mainly to the Power Delivery segment. It consists of the following groups:

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<sup>10</sup> Response to Discovery, OC-1191

<sup>11</sup> Response to Discovery, OC-1209. In 2007, Petron had revenues of approximately [BEGIN CONFIDENTIAL] [END] and a cost of products sold of approximately [BEGIN CONFIDENTIAL] [END CONFIDENTIAL].

- Corporate Communications Director and Media Relations (8 positions)
- Strategic Communications (2 positions)
- Brand Advertising and Public Information (4 positions)
- Management and Employee Communications (7 positions)

### **Power Delivery Asset Management and Planning**

The Asset Management organization is headed by William Gausman, Senior VP, Asset Management and Planning. As of September 2008, it included the following groups and employees:

- Transmission Interconnection, Policy and Compliance (23 positions)
- Business Process Transformation (19 positions)
- Business Performance Analysis (17 positions)
- Budgeting (19 positions)
- Asset Management (550 positions)

Asset Management is the largest group, composed of 550 employees. It is headed by Michael Maxwell, VP Asset Management, and consists of the following sub-groups.

- Transmission and Substation Engineering (96 positions)
- Environmental Services (6 positions)
- Asset Reliability (60 positions)
- System Protection and Telecom (42 positions)
- System Planning (36 positions)
- Distribution Engineering (307 positions)

Approximately 350 of the employees in Asset Management work in positions dedicated to one of the utilities. Most of the employees in the Distribution Engineering group are dedicated to Pepco, DPL or ACE.

### **Pepco Energy Services (PES)**

PES is headed by John Huffman, President and CEO. It is aligned with PES, Inc., a holding company owned by PHI. PES is involved in the following businesses:

- Competitive retail electricity sales
- Competitive gas supply
- Energy management services, which include performance contracting, integrated power and thermal projects, renewable energy projects, and operations and maintenance contract services

PES is exposed to significant risks in participating in the buying and selling of electricity. One risk PES faces is a change to the price of (and demand for) energy. For example, if energy demand increases unexpectedly and PES does not have sufficient contracted supply, PES

would have to purchase from the market, even if the market price was significantly greater than the retail sales price. PES manages this risk by striving to maintain a balance between wholesale supply contracts and expected retail load obligations. Additionally, the PES' Risk Management group monitors PES' forward positions and its value at risk measure on a daily basis.

Another threat faced by PES is counterparty risk of its wholesale suppliers. Counterparty risk may arise when a supplier fails to deliver the contracted energy and PES has to purchase the replacement energy on the open market. PES mitigates counterparty risk through a variety of measures. PES uses many different suppliers to obtain wholesale supply, thus avoiding over-reliance on one counterparty. PES also uses industry standard contracts which require the counterparties to provide credit support for their obligations (e.g. cash collateral)<sup>12</sup>. PES has recently mitigated its exposure to collateral requirements by transferring 32% of its power supply to an investment bank for which collateral posting is not required.<sup>13</sup>

A discussion of PES' businesses and its affiliate relationship with Power Delivery and ACE is included in Chapter 2, Overview of Affiliate Relationships and Transactions. PES has the following organizational characteristics:

- Legally, PES consists of a number of companies owned by the holding company PES, Inc. PES, Inc. owns other holding companies, including Conectiv Thermal Systems, Inc., and Pepco Building Services, Inc., which, in turn, own companies such as W.A. Chester, LLC, Thermal Energy Limited Partnership I and Severn Construction Services, LLC, that conduct PES's operations. These entities are described in Chapter 2, Overview of Affiliate Relationships and Transactions.
- From a management perspective, PES consists of a small group of PHISCO employees (shown in the organization chart below) who oversee the PES businesses and hold key officer positions within PES. Within the businesses owned by PES is a larger group of employees who are not considered to be a direct part of the PHI management structure (and are therefore excluded from PHI organization charts). As summarized in the employee tables above, PES' businesses had approximately 425 employees at the end of 2006, and 540 employees at the end of 2008.<sup>14</sup> Unlike PHI's utility and power generation subsidiaries, employees in the PES businesses do not participate in PHI compensation and benefit programs. They are also not included in employee statistics reported to the SEC (in Form 10K, for example).

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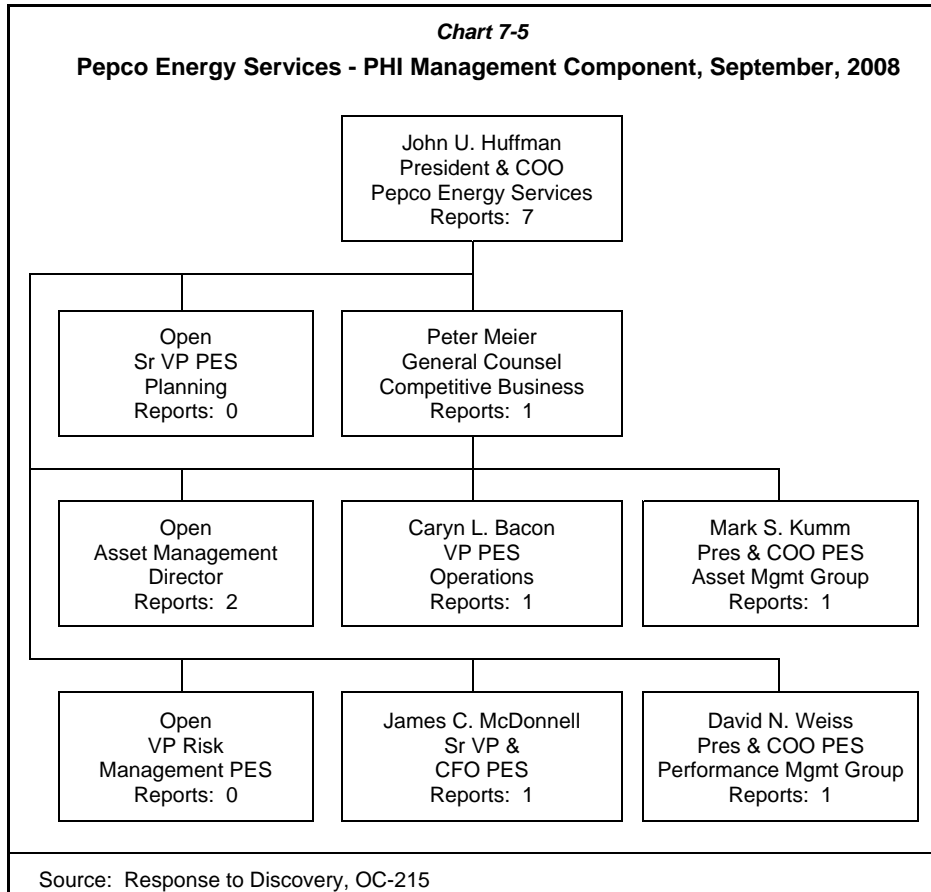
<sup>12</sup> Response to Discovery, OC-1210

<sup>13</sup> Response to Discovery, OC-1117 (restricted); Tab 7, page 3.

<sup>14</sup> Response to Discovery, OC-377

- From a marketing perspective, the various PES businesses are promoted as a single entity, PES. PES' website emphasizes the various types of services offered by different companies as PES services. PES companies, such as W.A. Chester and Severn Construction, are listed on the website as PES locations.

PHI employees who oversee the PES businesses are shown in the chart below.



As noted above, PES' management includes employees of several legal entities, including PHISCO, PES and companies owned by PES. PES' complete executive management (including employees of both PHISCO and PES) is summarized in the table below.



<b>Table 7-4</b>		
<b>Pepco Energy Services, Inc.</b>		
<b>PES, Inc. Officer Positions and Employee's Legal Entity Affiliation</b>		
<b>January, 2008</b>		
<b>Name</b>	<b>PES, Inc. Officer Title</b>	<b>Employee Of</b>
Dennis R. Wraase	CEO	PHISCO
John U. Huffman	President and COO	PHISCO
Mark S. Kumm	President and COO, Retail Electric Supply	PHISCO
David Weiss	President and COO, Energy Services	PHISCO
Robert W. Barron	President and COO, Retail Gas Supply	PES, Inc.
James C. McDonnell	SVP and CFO	PHISCO
Peter E. Meier	SVP, General Counsel and Secretary	PHISCO
Caryn Bacon	SVP, Retail Electric Supply	PHISCO
Robert W. Hollis	SVP, Operations, Energy Services	PES, Inc.
Eduardo Borroni	VP, Engineering, Performance Mgt	PES, Inc.
Patrick Sweeney	VP, Sales, Energy Services Group	PES, Inc.
Kimberly Price	VP, Marketing	PES, Inc.
Pamela Maines	VP and General Manager – New York	PES, Inc.
John Fratangelo	VP, Construction, Energy Services	PES, Inc.
Scott Snyder	VP, Texas Operations	PES, Inc.
Peter McPhun	VP and Controller	PES, Inc.
Robert Meloni	VP, Tax	PES, Inc.
James Newton	VP, Commercial Ops, Retail Electric Supply	PES, Inc.
Carla Haggler	VP, Natural Gas Opns, Retail Gas Supply	PES, Inc.
Monjed Barakat	VP, Engineering, Energy Services Group	PES, Inc.
Stephen Fabiani	VP and General Manager – New England	PES, Inc.
Lloyd Cavey	VP, Energy Services Group	PES, Inc.
Terry Simms	VP, Energy Services Group	PES, Inc.
Robert Dewechter	VP, Asset Management Conectiv Thermal	PES, Inc.
Margaret Barry	Assistant Secretary (NEW IN 2008)	PES, Inc.
Adam Chmara	Deputy General Counsel & Asst. Secretary	PES, Inc.
Source: Response to Discovery, OC-160, Notes, Review of PES, Inc. Board of Directors meeting minutes (restricted).		

During the audit period, the primary PES' companies conducting ongoing business activities were the Conectiv Thermal Group companies (Thermal Energy Limited Partnership I, Atlantic Jersey Thermal Systems, Inc. and ATS Operating Services, Inc.), the PES Building Services, Inc. companies (W.A. Chester, LLC and Severn Construction Services, LLC), Pepco Enterprises, Inc. and Pepco Government Services, LLC. The following table summarizes PES employees, by cost center, from the end of 2006 to the middle of 2008.

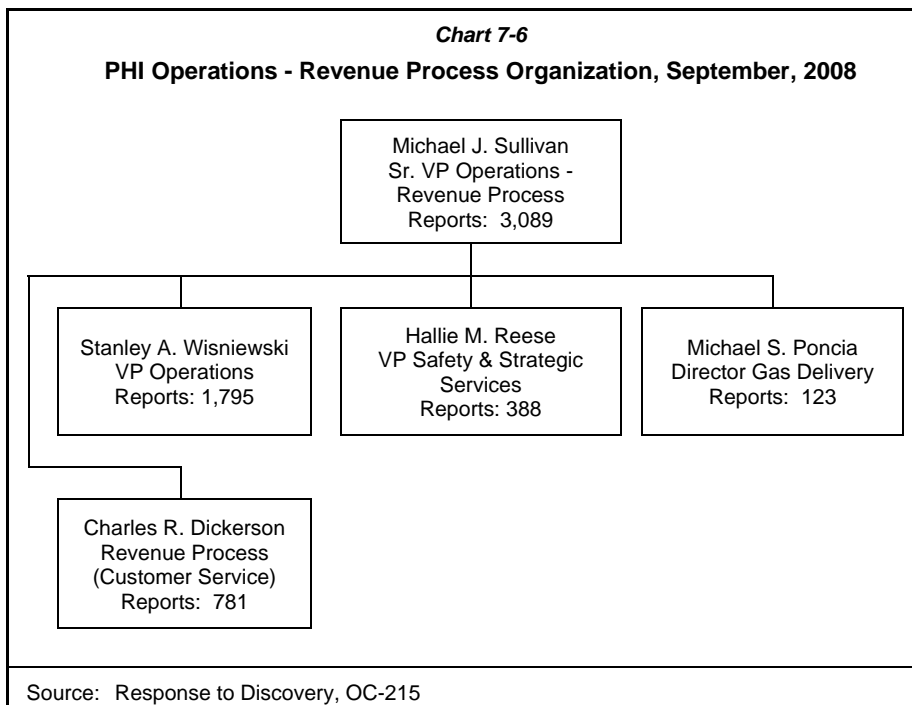
**Table 7-5**  
**Employees of Companies Owned by PES, Inc**

Title	Employees by Cost Center		
	12/31/06	12/31/07	7/31/08
Conectiv Thermal	33	33	32
Performance Management Arlington Office	67	86	96
PES Inc. - Pepco Gas Arlington Office	16	18	16
Pepco Asset Management Group Arlington Office	61	71	73
PES Inc. - Arlington Office	43	48	50
Pepco Government Services	24	43	49
Severn Cable LLC, Md	72	83	64
WA Chester	107	128	160
<b>Total</b>	<b>423</b>	<b>510</b>	<b>540</b>

Source: Response to Discovery, OC-377

**Utility Operations**

Headed by Michael Sullivan, SVP Operations, Utility Operations is PHI's largest organization. With more than half of PHI's total employee complement, it includes virtually all of the Power Delivery segment's operational functions other than engineering and planning. The chart below summarizes the Revenue Process organization as of September, 2008.



Major organizational groups within Revenue Process include:

- Electric Operations, Maintenance and Construction
- Safety and Strategic Services
- Gas Delivery
- Utility Customer Service

**Electric Operations, Maintenance and Construction (1,795 positions)** – Headed by Stanley Wisniewski, VP, the electric operations organization had 1,795 employees in September, 2008 responsible for operations, maintenance, repair and system control. Approximately two-thirds of the employees who work directly for ACE work within this organization in construction, maintenance and repair or system operations. It consisted of the following subgroups:

- Construction and Vegetation Management (27 positions) – This organization is maintained within PHISCO. It consists primarily of construction representatives and foresters.
- Construction, Maintenance and Repair Operations (1,576 positions) – This organization is the utility backbone, responsible for building and maintaining power delivery distribution systems, including electric lines, substations and meters. Organizational groups corresponding to each utility are maintained and managed within the utilities. Major groups, their functions and positions as of September, 2008 include:
  - ACE Electric Construction and O&M (346 positions) – Referred to on the organization chart as “ACE Construction”, ACE’s distribution operations function includes groups responsible for district construction and repair operations and electric distribution system maintenance.
  - DP&L Electric Construction and O&M (535 positions) – This is similar to ACE’s organization, with separate groups dedicated to the New Castle and Bay regions.
  - Pepco Electric Construction and O&M (695 positions) – Pepco’s operations organization includes two regional organizations devoted to overhead construction and maintenance, an organization for underground construction and maintenance, a group responsible for substation and transformer maintenance and restoration and a group responsible for meter protection. It also has a group of 27 positions, primarily administrative assistants, responsible for operations financial administration. ACE and DP&L operations organizations, in contrast, each have one business analyst position.

- Emergency Management (2 positions) – A manager and an operations analyst are responsible for managing utility restoration activities.
- System Operations (187 positions) - The System Operations organization maintains the flow of power from PJM power generators to utility customers. It consists of the following groups:
  - Control Rooms (143 positions) - There are four control room organizations: one each for ACE and Pepco and two for DPL (New Castle and Bay each maintained separate control rooms in 2008). These organizations are split approximately equally between a) system operators who operate, analyze and monitor power flowing from PJM through transmission facilities into utility distribution systems; and b) dispatchers who manage the process of sending first responders in response to customer outages, equipment problems and other trouble incidents.<sup>15</sup> ACE's control room organization had 33 employees as of September, 2008. It serves as a backup for DPL's control room and DPL's New Castle control room backs up ACE's control room.
  - Energy Management System / Control System Technology (28 positions) – This group maintains and trouble shoots problems with the systems used in the regional operations centers, primarily with the energy management system. It is shared by the three utilities and maintained in PHISCO.
  - Operations Engineering Planning and Analysis (14 positions) – Two separate sub-groups are responsible for providing oversight and support of NERC and PJM compliance and NERC readiness standards and engineering and technical support to system operators, including reviewing operations and procedures, and performing system analysis and scheduled outage studies. These groups are shared by the three utilities and maintained in PHISCO.

**Safety and Strategic Services (388 positions)** – Headed by Hallie Reese, VP, this organization is responsible for the supply chain, transportation, facilities, safety, security and operational training functions. In general, the management and administration of these functions are housed within PHISCO, while the functions themselves are regionally-based and conducted within the utilities. Functional groups include:

- Training and Technology (28 positions) – Includes field instruction, performance standard design and performance measurement, maintained within PHISCO.
- Vehicle Resource Management (87 positions) – Includes mechanics and related supervision and transportation administration (procurement, maintenance scheduling,

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<sup>15</sup> Response to Discovery, OC-210.

retirement, etc.) A few managers and resource management specialists are employees of PHISCO; remaining employees including parts room and regional administrative positions and mechanics and their supervisors are employees of the utilities. As of September, 2008, ACE's transportation group had 18 positions.

- **Supply Chain (139 positions)** – Includes procurement analysis and vendor selection (“strategic sourcing”) and regional inventory and waste management (stores). Most of the procurement positions are housed at PHISCO. ACE's utility stores organization had 16 positions as of September, 2008.
- **Facilities, Security and Real Estate Management (112 positions)** – This organization includes regional building services, real estate, security and document services. Regional building operations, accounting for approximately 50 positions, are housed within the utilities. ACE's building service group includes 8 positions. Most positions in the other functions are maintained in PHISCO. There are 19 positions in corporate security. The real estate and right of way function includes 34 positions devoted to land surveys, zoning issues, traffic studies and monitoring property values. Within the organization reporting to the real estate and rights of way manager are 16 positions responsible for corporate mail and document services.
- **Safety (19 positions)** – This organization includes safety managers and coordinators, divided regionally into subgroups serving ACE, DP&L and Pepco.

**Gas Delivery (123 positions)** – With the exception of the Director, Gas Delivery (an employee of PHISCO), this organization is part of DP&L. It consists of the following groups:

- **Gas Construction and Maintenance / Plant and Field Operations (81 positions)** – This organization consists primarily of field supervisors, welders and mechanics who maintain and repair DP&L's gas distribution system.
- **Gas Operations and Planning (40 positions)** – Gas Operations and Planning is composed primarily of engineers who work with the gas distribution system and service installations. It also includes a staff of six gas system operators.

In addition to these groups, as of September, 2008, there was an operations support analyst, transportation analyst and gas engineer working for the Gas Delivery director.

**Revenue Process (781 positions)** – The Revenue Process organization is headed by Charles Dickerson, VP, Customer Care. The organization includes customer care, billing, credit and collection (collectively referred to as customer service), meter operations, power delivery marketing and bulk power procurement.

- Customer Operations (Call Center Administration) (300 positions) – Customer Operations consists of two primary organizational groups: one serving Pepco and one serving both DP&L and ACE. The northern organization (179 positions), in the Carney’s Point and Salisbury call centers, supports both ACE and DP&L. This is maintained within PHISCO. Northern region customer service is supported by the legacy “C3” information system. The southern (Pepco) customer organization (82 positions) is supported by the legacy “customer service” information system and maintained within Pepco. Customer Operations also includes a 27-position performance evaluation group, housed within PHISCO.
- Customer Billing Services (156 positions) – This group includes subgroups of billing and collection analysts and associates, billing maintenance, account and billing investigations and revenue accounting. Like customer operations, it is divided between groups housed in PHISCO, serving ACE and DP&L, and groups serving Pepco, who also work for Pepco.
- Customer Remittance and Collection (89 positions) – This group, responsible for collections, is also split between groups working for PHISCO that serve ACE and DP&L, and groups serving Pepco who work within Pepco.
- Meter Services (145 positions) – Meter services consists primarily of meter technicians, readers and meter shop technicians responsible for testing and maintaining meters. As discussed in Phase I of this report, ACE’s meter reading function is performed by affiliate Millennium. DP&L and Pepco meter reading functions are performed internally.
- Bulk Power Procurement / Management (38 positions) – This organization, headed by a General Manager, Bulk Power Procurement, includes the following functions, all of which are maintained within PHISCO.<sup>16</sup>
  - Load Settlements (15 positions) – This function computes consumption, line losses and other factors necessary to determine power usage by third-party retail choice customers so that they can be billed. In ACE’s territory this is generally limited to a few larger commercial and industrial customers who are served by suppliers other than ACE.
  - Wholesale Billing and Administration (8 positions) – This group handles the billings from suppliers for power supplied into utility systems. In ACE’s territory, this group works with wholesale suppliers and the PJM bill.
  - Energy Arrangements (7 positions) – This function is responsible for procurement of power from suppliers, including certain processes associated with New Jersey BGS. Although power supplied to ACE comes through the BGS process, DP&L and Pepco procure power from suppliers other than PHI.

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<sup>16</sup> Interview, Peter Shaub, July, 2008

- Supplier Relationships (4 positions) – This function consists of maintaining relationships with power suppliers, including third party retail suppliers.

In addition to these functions, the Bulk Power organization also includes a bulk power “consultant” (an employee) whose job includes managing non-utility generation contracts, and a quality and performance manager who is responsible for tracking the efficiency of the bulk power organization.

- Power Delivery Marketing (29 positions) – This organization performs utility customer relations. It consists primarily of customer relations analysts and account coordinators who maintain relationships with key utility customers and customer groups.

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## **Chapter 8. Executive Management and Corporate Governance**

This Chapter addresses the activities of the Board of Directors and senior management in the oversight of PHI and ACE operations. The Board and senior management compensation is also addressed along with Sarbanes Oxley compliance. Finally, we describe the procedures employed to manage significant litigation.<sup>1</sup>

### **Findings and Recommendations**

1. The PHI Board of Directors is comprised of an excellent mix of expertise and experience relevant to oversight of corporate planning, reporting and operations
2. Board independence is strong, and is supported by an experienced lead independent director.
3. If not otherwise previously distributed from the time of their issue, Overland recommends that investor analyst and rating agency reports be released to directors as part of the next package provided by the CEO in advance of Board meetings.
4. The Board selection process assures the independence of its members by being controlled by the independent directors, with limited involvement by management.
5. The Board may wish to consider revising the minimum level of PHI stock ownership by Board members to be more in line with industry peer policies.
6. The attitude of the Board and Senior Management is to place a top priority on the interests of the PHI utility subsidiaries.
7. The Company does not provide for formal job descriptions applicable to senior management. We recommend that this practice be implemented, among other things, to assure documentation of the scope of each officer's responsibilities.
8. Given the increased level of regulatory activity, senior management should consider more frequent interaction with legislators and regulators regarding its strategic and business planning objectives as they relate to a particular state.
9. The Corporate Governance Guidelines currently provide for up to three members of management to serve on the PHI Board. Overland believes that this provision should be modified to limit the number of management directors to not more than two.
10. PHI should utilize the annual Board Retreat as an opportunity for one or two outside speakers to address economic and financial issues likely to materially impact PHI. PHI may

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<sup>1</sup> Employee position titles used in this report were as of late 2008 / early 2009 unless otherwise noted.

also consider having speakers on occasion at the dinners held the evening prior to normal, scheduled meetings.

11. When the majority of Board responses to a particular question on the Board Self-Evaluation Questionnaire falls below “1”, options for remedial action should be identified and implemented. A formal process should be put in place to track identification of issues or concerns and actions taken.
12. While Directors have typically visited the control center in connection with their initial orientation, there have been few opportunities to visit facilities throughout the PHI service area. PHI should consider occasionally holding meetings in locations other than Edison Place.<sup>2</sup>
13. While the Board is provided opportunities for continuing education, director training should be coordinated on a more formalized basis, with defined expectations of minimum participation levels.
14. The lack of consistent commitment of funding for service quality and reliability projects has led to subpar performance metrics. Customer satisfaction, service quality and reliability performance should be a high priority that translates into tangible results in the near-term.
15. Should PHI corporate credit ratings decline from present levels, the BPU should open a proceeding to consider the implementation of ring-fencing measures to protect ACE from potential adverse effects of its unregulated affiliates.
16. Executive compensation is overseen by the Compensation / Human Resources Committee (Comp HR Committee), a body comprised completely of independent members of the PHI Board of Directors.
17. The Comp HR Committee has retained third party consultants to advise it on executive compensation matters. In the past, Buck Consultants was used, but they have been replaced by Pearl Meyer & Partners (Pearl Meyer).
18. The significant components of recurring executive compensation consist of salary, short-term cash incentives, long-term stock awards, and pension benefits.
19. The amount of individual PHI executive compensation is largely driven by the executive level each management employee is assigned. Executive levels are determined by market reviews conducted by outside consultants.
20. Short-term cash incentives are based largely on performance against financial goals. If target award goals are exceeded, executives can earn additional incentive compensation up

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<sup>2</sup> Overland notes that the PHI Board met in Wilmington in 2009 and will meet in New Jersey in 2010.

to 150% of the award opportunity. If minimum earnings goals are not achieved, no short-term incentive pay-outs are made. Pay-outs for executives who were measured against corporate or Power Delivery results were \$0 in 2006. In the two subsequent years, the vast majority of executives were paid in excess of 100% of target award levels.

21. Compensation paid to certain executives under PHI's short-term Executive Incentive Compensation Plan do not currently qualify for federal income tax deductibility under certain circumstances because of the way the plan is structured and administered.
22. Current long-term incentive compensation takes the form of performance-based (two-thirds) and time-based (one-third) stock awards. Stock awards are based on three-year overlapping intervals (e.g. 2006-2008, 2007-2009, etc.) with performance-based awards entirely dependent upon financial performance, and time-based awards vesting only after completion of three years of service (cliff vesting). In the one three-year period that has been completed since PHI adopted the current compensation structure, executives earned from 60% to 85% of their target award levels under the performance-based component of this plan.
23. Changes in the value of pension benefits are a significant component of compensation for the most senior level executives. In particular, the PHI Chairman & CEO negotiated a supplemental retirement benefit in consideration of the relinquishment of other benefits during the time period reviewed.
24. The structure of PHI's executive compensation is designed so that those with the most responsibility have more at-risk and have compensation that is more heavily weighted towards long-term remuneration.
25. Executives are protected under change in control plans and employment agreements.
26. Pearl Meyer found PHI's executive compensation to be competitive with the market.
27. We recommend the Chief Financial Officer provide written certification each year to the New Jersey BPU that ACE has not been allocated or directly charged any costs associated with the Executive Incentive Compensation Plan which were incurred because the plan did not qualify for the performance-based exemption associated with executive compensation as currently codified in Section 162(m) of the Internal Revenue Code. At the request of the New Jersey BPU, PHI and its affiliates will make available all documentation to independently verify such certification.
28. We recommend the Comp HR Committee reevaluate the weightings it assigns to goals associated with both short-term and long-term executive compensation. In doing so, the Committee should re-design current incentives so that they motivate executives to attain goals associated with customer satisfaction, safety, and reliability while at the same time appropriately penalizing them for poor performance in these same areas. In addition, the

Comp HR Committee should consider both the additional costs of developing and tracking numerous performance goals and the potential benefits (e.g. increased motivation) that assigning insignificant weightings to goals will have on executives.

29. PHI has devoted a significant amount of resources to comply with the requirements of SOX in terms of manpower, outside services, and systems. Both management and the Board of Directors made SOX compliance a high priority during 2007 and 2008.
30. We noted no instances of any material SOX non-compliance in our review.
31. The responsibility for compliance with other SEC requirements and NYSE rules has been delegated to several different groups within PHI. Of the requirements that came to our attention, we noted no exceptions that went unremediated.
32. As prescribed by SOX, we believe that PwC meets the definition of “independent” external auditor of PHI.
33. We recommend the Company consider setting a dollar cap on the delegation authority provided to the Chairman of the Audit Committee for eligible products and services offered by the external auditor between regularly scheduled Audit Committee meetings.

## **Board of Directors**

### **Overview of the PHI and ACE Board of Directors**

Overland interviewed all members of the PHI Board in connection with this audit review. Each interview covered a broad range of subjects, and on average, lasted about two hours. The interviews were conducted to gain an understanding of the expertise of the members, as well as to elicit their views on major issues facing PHI.

The PHI Board of Directors is comprised of an excellent mix of expertise and experience relevant to oversight of corporate planning, reporting and operations. The Board is sensitive to its need to continually consider appropriate resources in light of changing business conditions, as well as the ongoing impact of succession planning.

Board independence is strong, and is supported by an experienced lead independent director. While not considered to be of critical import, the Board has limited participation on other major public company boards. Further, its members have limited public company CEO experience. However, these factors are more than offset by positive attributes within the group, supported by generally strong governance practices. Refer to Attachment 8-1 for biographical and committee information on the Board members.

The expertise of the Board is well matched against the various areas of expertise required by PHI Board functions. There is also a knowledge base applicable to the PHI lines of business. PHI and its Board have performed well in cultivating a strong and independent Board.

Institutional “Shareholder Service “ISS”, provides shareholders advisory services, and has been in existence since 1985. In 2002, ISS developed a Corporate Governance Quotient “CGQ” a measure of corporate governance structures and practices relative to industry peers, as well as the overall market (measured by the S&P 500). The rating system was designed to assist institutional investors in evaluating the quality of corporate boards and the impact of their governance policies and procedures on corporate performance.

The CGQ is currently based on 63 ratings factors considered within eight core topics:

- Board structure and composition
- Audit issues
- Charter & bylaw provisions
- Laws of the state of incorporation
- Executive and director compensation
- Progressive practices
- D&O stock ownership
- Director education

The following are the PHI CGQ results since 2005:<sup>3</sup>

**[BEGIN CONFIDENTIAL]**

Date	Index Ranking	Industry Ranking

**[END CONFIDENTIAL]**

The Boards of Directors for Pepco Energy Services, PHI Service Company, and Conectiv were each comprised of Dennis Wraase (serving as Chairman), Joseph Rigby and William Torgerson. ACE has only one director – Dennis Wraase.<sup>4</sup> None of these subsidiary boards have standing committees.<sup>5</sup>

**Board and Committee Meetings**

The following table reflects the number of meetings held for the period 2005 to 2008.

<sup>3</sup> Ranked from 1 to 100; a larger number represents better corporate governance.

<sup>4</sup> Response to Discovery, OC-140 (restricted).

<sup>5</sup> Response to Discovery, OC-142.

Description	2008	2007	2006	2005
Number of Meetings Held by The Board	8	8	7	8
<b>Number of Committee Meetings Held:</b>				
Audit Committee	7	8	8	9
Compensation/HR Committee	5	6	5	6
Corporate Governance / Nominating Committee	4	8	5	7
Finance Committee	7	8	6	8
Executive Committee	3	2	1	1
Source: Response to Discovery, OC-273 (restricted) & OC-1164 (restricted)				

The frequency and duration of meetings was found reasonable and appropriate for the subject matter requiring the Board's attention. The Board itself has adjusted the meetings held as particular issues have required more of their time. Members generally spend from a minimum of 10 hours to 15 hours and up to 40-50 hours per month on PHI matters, excluding the annual retreat.

Overland reviewed the materials provided to Board members, and generally found them to be appropriate and adequate for the purposes intended. However, Overland recommends that investor analyst and rating agency reports be released to directors as part of the package provided by the CEO in advance of Board meetings. Any material issues raised in these reports should be highlighted in the CEO summary statement to the board members, and if appropriate, be included in the Board meeting agenda for explanation and discussion.

Analyst and rating agency reports are an important independent assessment of the strategic plans and operations of the Company and its management team. The board should be fully aware of these indications of PHI responsiveness to market response and relative stakeholder performance.

### **Selection Process for the Board of Directors**

Until their retirement, Dennis Wraase and William Torgerson both participated on the PHI Board as management directors. At this time, Joe Rigby is the only management director. Given the depth of experience within the PHI Board, Overland believes that there is no compelling reason to expand the participation of management on the Board at this time. The limitation of management representation on the Board only further enhances its independence.

PHI has a mandatory retirement at 70 for Board members. While this may be perceived as an arbitrary benchmark, it is consistent with industry practice. It also assures a rotation of the members, also desirable over time.

The Board selection process assures the independence of its members by being controlled by the independent directors, with limited involvement by management. The Board members

identify potential candidates, and may employ an outside search firm to assist in the process. The process is headed by the lead outside director and the Chair of the Corporate Governance / Nominating Committee. The CEO is also involved in the review and interview of finalist selections.

### Board Compensation

The following table reflects the compensation for the PHI Board members for the period 2005 to 2009.

<b>Compensated Activities</b>	<b>2005</b>	<b>2006</b>	<b>2007</b>	<b>2008</b>	<b>2009</b>
Annual Retainer	\$45,000	\$45,000	\$45,000	\$85,000	\$85,000
Meeting Attendance	2,000	2,000	2,000	2,000	2,000
Chairmanship of Audit Committee	7,500	7,500	7,500	7,500	7,500
Chairmanship of any non-Audit Committee	5,000	5,000	5,000	5,000	5,000
Lead Independent Director	2,500	2,500	2,500	15,000	15,000
Source: Pepco Proxy Statement filings with the SEC from 2005-2009.					

The Corporate Governance/Nominating Committee directed the Company to retain Towers Perrin to provide advice regarding current trends in director compensation, to evaluate PHI compensation levels in relation to corporate peers; and to review the components of compensation. Towers Perrin issued its report in October 2007, which considered a 23-company utility peer group, and identified recent pay trends in Fortune 500 companies.<sup>6</sup> Based on the Tower Perrin analysis, and the recommendations of the Corporate Governance/Nominating Committee, the Board approved certain modifications to director compensation effective January 1, 2008.<sup>7</sup>

Each non-management director is required to own at least 7,500 shares of PHI common stock or common stock equivalents. Table 8-4 shows the PHI stock ownership among the members of the Board. Many utilities expect their directors to hold more stock than does PHI. Assuming a 5x multiple of director retainer fees<sup>8</sup>, this would currently translate to more than 30,000 shares. The Board may wish to consider revising the level of PHI stock ownership to be more in line with industry peer policies.

<sup>6</sup> Towers Perrin had conducted a similar review in November 2004. (Response to Discovery OC-143 and OC-248, restricted)

<sup>7</sup> Response to Discovery, OC - 143.

<sup>8</sup> Response to Discovery, OC-1119 (restricted).

Director	31-Dec-05		31-Dec-06		31-Dec-07		18-Mar-09	16-Mar-09
	Common Stock	Phantom Stock	Common Stock	Phantom Stock	Common Stock	Phantom Stock	Common Stock	Phantom Stock
Jack B. Dunn, IV	10,495	0	10,495	0	10,495	0	10,495	0
Terence C. Golden	52,132 <sup>(1)</sup>	17,941	52,132 <sup>(1)</sup>	18,726	44,132 <sup>(1)</sup>	19,419	44,132 <sup>(1)</sup>	20,383
Frank O. Heintz	0	0	1,500	0	3,500	0	9,795	0
Barbara J. Krumsiek	0	0	0	0	1,000	1,879	1,000	8,503
George F. MacCormack	11,282	4,235	11,282	4,420	11,282	4,584	11,282	4,811
Richard B. McGlynn	5,762	2,129	5,765	2,222	5,770	2,305	5,776	0
Lawrence C. Nussdorf	5,000	3,053	5,000	3,186	5,000	3,304	10,000	3,468
Frank K. Ross	5,507	0	6,472	0	7,369	0	9,849	0
Pauline A. Schneider	3,560	423	3,671	442	6,915	458	7,202	2,817
Lester P. Silverman	0	0	1,000	1,931	1,000	5,460	7,000 <sup>(2)</sup>	12,640
William T. Torgerson	28,705	0	39,318	0	51,233	0	80,823	0
Dennis R. Wraase	65,207	0	93,233	0	155,475	0	268,520	0

(1) Includes 11,600 shares owned by Mr. Golden's spouse.  
(2) Includes 1,000 shares owned by Mr. Silverman's spouse.

Sources: Response to Discovery, OC-174; 2009 Proxy Statement Schedule 14A filed with the SEC

While most Fortune 500 companies provide equity awards to board members, PHI does not. Within the PHI peer group, director compensation is comprised of approximately 50% cash and 50% equity awards. In its next review of director compensation, PHI should revisit not only overall compensation levels, but whether it may be desirable to adopt a plan that also includes stock remuneration in the package.

Under the Non-Management Director Compensation Plan, each member may elect to receive their compensation in any combination of: cash; shares of common stock; or as a credit to the PHI Executive and Director Deferred Compensation Plan. Directors are reimbursed for any travel or out-of-pocket expenses incurred in connection with their duties.

### **Board & Senior Management Consideration of Stakeholder Interests**

Based on our interviews with the members of the Board, supported by the stated objectives and policies implemented by management, it is clear that PHI understands and considers the appropriate balance of stockholder, customer and other major stakeholder interests. PHI is highly committed to its primary focus on utility services, without unreasonable or particularly aggressive expectations of returns anticipated by the programs being implemented at this time.<sup>9</sup> The attitude of the Board and Senior Management is to place a top priority on the interests of the PHI utility subsidiaries.

<sup>9</sup> Other utilities advancing programs equivalent to the PHI "Blueprint" initiative expect to earn above regulated utility returns on such investments.



## **Review of Committee Structure**

PHI has five committees of the Board of Directors. These committees are the Audit Committee, Corporate Governance / Nominating Committee, Finance Committee, Compensation / Human Resources Committee, and the Executive Committee.

Each of the board committee's charter mandates that the Committee shall consist of "no fewer than three and no more than seven" members. As of May 16, 2008 all board committees consisted of five members (with one member serving as the chairperson). While the committees are similar in structure, they vary greatly in their overall purpose.

**Audit Committee** – the purpose of this Committee is to assist the Board in its oversight of PHI's financial statements and financial reporting process (including internal and external audits). This Committee also assists the Company with its compliance with legal and regulatory requirements.

**Compensation / Human Resources Committee** – the purpose of this Committee is to evaluate the CEO's performance on an annual basis and assist in determining the CEO's compensation. Additionally, this Committee shall be directly responsible for the review and approval of the compensation of all other executive officers of the Company, as well as making recommendations to the Board on various employee compensation and benefit plan matters.

**Corporate Governance / Nominating Committee** – the purpose of this Committee is to identify individuals qualified to become Board members, and to select, or recommend that the Board select, the director nominees for the next annual meeting of shareholders. This Committee also develops and recommends a set of corporate governance guidelines to the Board.

**Executive Committee** – the purpose of this Committee is to act for the Board when the Board is not in session. Additionally, this Committee may call a special meeting of the Board.

**Finance Committee** – the purpose of this Committee is to oversee the financial goals, policies, and procedures of the Company. The focus of this Committee is on both the long and short-term strategies of the Company.

To help achieve the objectives set forth above, the Committees have certain authorities granted to them by the Board:

**Audit Committee** – The Committee shall have authority to retain or terminate the Company's independent auditor, and pre-approve audit fees and terms. The Committee shall, at least annually, review the independent auditor's report regarding the firm's internal quality-control procedures and the auditor's work throughout the year to evaluate the auditor's performance. The Committee shall prepare an Audit Committee report to be included in the annual proxy statement as required by the Securities and Exchange Commission.

Compensation / Human Resources Committee – The Committee shall have sole authority to retain and terminate any compensation consulting firm or other advisers it may desire to use to assist it in discharging its duties. The Committee shall have authority to oversee the evaluation of, and to approve, the Salary Administration Program for management employees. The Committee shall have authority to fix the salaries of the five most highly compensated officers of the Company, the heads of the major subsidiaries, and any other individual that the Board has determined to be an executive officer (except for the CEO). The committee shall have authority to oversee the administration of the Long-Term Incentive Plan.

Corporate Governance / Nominating Committee – The Committee shall have sole authority to retain and terminate any firm used to identify director candidates.

Executive Committee - The Committee has all powers and authority of the board of directors in the management of the business of the Company, except as noted in the Delaware General Corporation Law.

Finance Committee – The Committee has full power to retain outside advisers or consultants to assist the Committee in carrying out its duties.

Given the varying objectives of the different committees, differing skill-sets would be needed to excel on each committee. However, the Audit Committee is the only committee that had particular restrictions noted in its charter. Specifically, the Audit Committee shall be entirely composed of members who are financially literate or will become financially literate within a reasonable amount of time upon appointment (as interpreted by the Board). In addition, at least one member must have accounting or financial management expertise.

While the five committees of the board have the powers and responsibilities listed above, the Board of Directors, as a whole, **[BEGIN CONFIDENTIAL]**

**[END**

**CONFIDENTIAL].<sup>10</sup>**

### **Rotation Process**

Based on member comments to us, and a review of their comments in the annual Self-Evaluation Questionnaires, the Board indicated **[BEGIN CONFIDENTIAL]**

**[END CONFIDENTIAL].<sup>11</sup>**

### **Board Training**

New board members receive an orientation conducted by members of senior management, including the CEO of PHI. The orientation covers an overview of the various business segments of the Company, as well as peer group and industry data necessary to evaluate relative PHI performance. Other subject matters included in the orientation are as follows:

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<sup>10</sup> Response to Discovery, OC-1131 (restricted).

<sup>11</sup> Response to Discovery, OC-271 (restricted).

- Corporate governance and the FERC Code of Conduct;
- Strategic planning and regulation;
- Financial community – Wall Street and rating agencies;
- Performance analysis & risk management;
- Financial statement overview; and
- Internal Audit function.

Each new member receives a “New Director Orientation” Handbook, which provides detailed information about each of the major subject areas covered in the management presentation.<sup>12</sup> The current version of the handbook includes an overview of ratemaking fundamentals, which we believe is appropriate and timely in light of current economic conditions and the presence of factors that will lead to increased activity with regulators over rate and other customer matters.

Board members are provided opportunities to gain a further understanding of industry issues through attendance of various forums identified and communicated by PHI to the Board. The following conferences or presentations were attended by PHI Board members in recent years.<sup>13</sup>

- “Beyond the Boardroom: Understanding the Energy Industry” seminar. Edison Electric Institute (EEI) and the American Gas Association; Washington, D.C. September 2005.
- “Audit Committee Training: A Utility Perspective for Directors” seminar. EEI; Washington, D.C. June 2006.
- Morgan Stanley presentation to PHI Board – a general industry overview. May 2007.
- “Key Electricity Issues Impacting Consumers”. EEI representative presentation to the Board. June 2007.
- “The Private Equity Industry” presentation by Kohlberg Kravis Roberts representative. June 2007.
- “Electric Vehicle Technology – Benefits, Cost and Other Associated Information”. Presentation to the Board by AC Propulsion and EPRI representatives. July 2007.
- “FERC Standards of Conduct”. PHI General Counsel training for BOD.
- Morgan Stanley presentation to PHI Board – recent market events and challenges facing the utility industry. September 2008.
- “Tomorrow’s Electric Industry—Challenges and Opportunities” EEI Executive VP presentation to the PHI Board. April 2009.

Aside from the above, individual members have also attended the following meetings or seminars in connection with their role on the PHI Board.<sup>14</sup>

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<sup>12</sup> Response to Discovery, OC-162 and OC-1117(restricted documents).

<sup>13</sup> Response to Discovery, OC-162 (restricted).

<sup>14</sup> Response to Discovery, OC-178 and OC-162 (restricted).

- National Association of Corporate Directors Chapter Meeting; Madison, New Jersey. September 2005.
- Seminar for Audit Committee Members. Deloitte & Touche. New York City. December 2005.
- Director's College held at Stanford Law School. June 2009.

The primary source of information regarding industry events and current trends impacting utility operations is through reports or presentations by management. In addition, the various committees of the Board may request training or briefing on subject matters determined necessary to supplement knowledge requirements as issues evolve.

### **Annual Retreat**

Overland reviewed materials related to the 2007 and 2008 Board Retreats. The Board was surveyed about the scope and quality of the 2007 retreat. Members generally found appropriate: the content of the presentations made, the time of the presentations, and management personnel attending the retreat. However, several members indicated a desire for a more efficient use of the total time allocated to the retreat.<sup>15</sup>

The Annual Retreat is held over a one to two plus day period; generally in September. An outside speaker from Morgan Stanley provided comments at the 2008 retreat at the dinner preceding the business meeting. There were no outside (non-management) speakers at the 2007 retreat.

The 2008 "Retreat" was actually a one-day meeting held at Edison Place, PHI's corporate headquarters.

Overland believes that the retreat setting and agenda, (which focuses on strategic planning and implementation) is an ideal opportunity to include one or two outside speakers who may provide an industry assessment of financial, political or regulatory matters of specific interest to PHI.

### **Strategic Planning**

In recent years, the Board has reviewed and approved significant policies designed to align the Company with the political, financial and economic environment in which it currently finds itself. We believe that the PHI strategic planning process has generally been efficient and effective in putting the Company on a solid course of action regarding its regulated operations.

Based on our review of board oversight of strategic planning over the last several years, it is apparent that there is a process for ongoing review of PHI's major business segments, and how their operations fit within ongoing corporate objectives. The Board supports the current composition of regulated and unregulated business activities, which they believe are complementary.

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<sup>15</sup> Response to Discovery, OC-252. (Restricted).

**Concerns Identified by Directors**  
**[BEGIN CONFIDENTIAL]**

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<sup>16</sup> Response to Discovery, OC-269 (Restricted).

[END

**CONFIDENTIAL].**

### **ACE Board of Directors**

In early 2008, the ACE Board of Directors was comprised of only one individual – Mr. Dennis Wraase served in this position while he was the Chairman and CEO of PHI.<sup>18</sup> The DPL Board was comprised of three individuals: Dennis Wraase; Joseph Rigby; and William Torgerson. The Pepco Board was comprised of the following individuals:<sup>19</sup>

Dennis Wraase  
Paul Barry  
William Gausman  
Joseph Rigby  
Michael Sullivan  
William Torgerson  
Stanley Wisniewski

The “regional” presidents are not included on the utility boards and are not considered officers of the corporation. David M. Velazquez is currently the President and Chief Executive Officer of ACE, DPL and Pepco. Vincent Malone (and Ken Parker before him) is a Vice President of ACE. That being said, the ACE website identifies Mr. Malone as “President, Atlantic City Electric Region”. The apparent reason for the election of only one director to the ACE Board is related to a potential requirement that 40% of ACE directors would have to meet a “Board of directors New Jersey Qualification”. This qualification would require residency, employment or other significant ties to New Jersey. This requirement, as currently contemplated, would not apply to corporations having a board comprised of only one director. This matter is currently under review at the BPU.<sup>20</sup>

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<sup>17</sup> Response to Discovery, OC-1162 (restricted).

<sup>18</sup> Response to Discovery, OC-462.

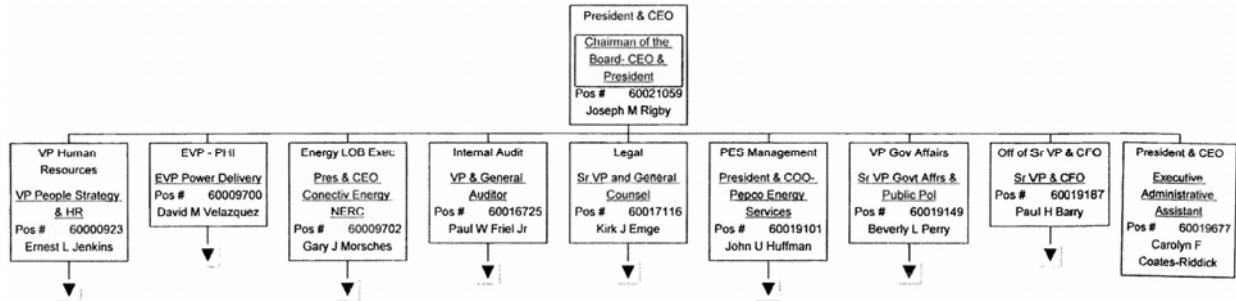
<sup>19</sup> Response to Discovery, OC-561, dated November 25, 2008.

<sup>20</sup> Response to Discovery, OC-677.

## Senior Management Organization

### Organization Structure

The Senior Management organization as of May 2009 was comprised as follows:



**Backgrounds and expertise of Senior Management Group.** Attachment 8-2 provides the academic and experience summaries of key members of senior management. Over the past three years, there have been a number of major changes in the senior management at PHI. During the course of our audit, the two senior executives of the Company, Mr. Dennis Wraase and Mr. William Torgerson both retired effective June, 2009. Over the course of the audit, Overland interviewed all members of the ELT and many members of the senior management group, representing most of the key personnel responsible for the areas of operations that were within the scope of our review.

Over the review period, three members of senior management were subject to employment agreements – Dennis Wraase, William Torgerson, and Joseph Rigby. There are no stated criteria for the determination of management employees who may be subject to an employment agreement. “Such decisions are made by the PHI board of Directors based on business needs.”<sup>21</sup>

Overland reviewed the information provided in discovery regarding the backgrounds and experience of the senior management group, and conducted interviews with the members of this group to assess their relative capabilities and effectiveness both within their specific areas of responsibility and as a management team.

We found that the current management group has the requisite experience and expertise for the responsibilities assigned to it. In recent years, a number of deficiencies were identified within the accounting function. However, the Company has largely responded to these needs with changes in personnel necessary to meet the expertise required by this corporate function.

The Company does not provide for formal job descriptions applicable to its senior managers.<sup>22</sup>

<sup>21</sup> Response to Discovery, OC-272.

<sup>22</sup> Response to Discovery, OC-145.

### **Executive Leadership Team**

PHI, and its subsidiaries, are governed by senior management through a group of executives referred to within the Company as the “Executive Leadership Team”.

This group meets on a bi-monthly basis to review matters associated with corporate strategy and policy, as well as to review corporate performance. Members of senior management also participate in recurring meetings to review various aspects of corporate operations and financial results. Attachment 8-3 provides a summary of meetings attended by senior management.

During the Audit Period, the ELT was principally comprised of Mr. Dennis Wraase, CEO; Mr. Joseph Rigby, COO; Mr. William Torgerson, Chief Legal Officer; Mr. Paul Barry, CFO; Ms. Beverly Perry, SVP Government Affairs; Mr. Kirk Emge, General Counsel; plus the Presidents of CE and PES. Other members of senior management may also attend these meetings, depending on the issues or subject matter under review.

### **Corporate Risk Management Committee (“CRMC”)**

Another key element of senior executive oversight of operations is review and management of significant corporate risks. The CRMC is required by its Charter to identify significant risks and to coordinate solutions to assure that risks are properly managed by the appropriate business unit or corporate services organization level.

The CRMC is headed by the Chief Risk Officer, who reports directly to the CEO on risk management matters. Other members of the committee include: General Counsel; Controller; Heads of Internal Audit, Human Resources, IT and Regulatory; and Line of Business Presidents and Risk Directors. This group oversees the operation of the CRMC Working Group, which is comprised of representatives from risk management, legal, internal audit, treasury, regulatory, business transformation, accounting, human resources, and finance.

Risk analysis is [BEGIN CONFIDENTIAL]

[END

CONFIDENTIAL].<sup>23</sup>

The CRMC provides a quarterly report to the PHI Board Audit Committee.

### **Executive Compensation**

Our review of executive compensation is not only intended to quantify its major components but to identify the bases for the underlying determinations of these components and to assess the reasonableness of overall executive compensation in light of compensation levels at comparable companies.

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<sup>23</sup> Response to Discovery, OC-1117 (restricted); Tab 10, page 1.



By and large, the top executives at ACE are also PHI executives.<sup>24</sup> While executive compensation costs are allocated to ACE based on factors described in detail in Phase I of this audit, the underlying compensation arrangements of these executives are developed and managed as a total package. As a result, our discussion will revolve around the compensation arrangements made at the PHI level for all executives.

All independent members of the Board of Directors participate in the determination and approval of the compensation level for the CEO of PHI. The responsibility for review and approval of compensation for other executive officers, the heads of business units, all PHI vice presidents, and any employee whose compensation exceeded \$220,000 in 2007 and \$240,000 in 2008 lies with the 5-member Comp HR Committee of the Board of Directors, a body that is comprised entirely of a sub-set of independent directors.<sup>25</sup> Excluding the CEO, this group of executives numbered 54 in 2007 and 55 in 2008 across all PHI businesses.<sup>26</sup>

In addition to reviewing and approving individual compensation levels for executives, the Comp HR Committee is also tasked with establishing performance guidelines and setting target award levels under the annual Executive Incentive Compensation Plan, establishing the structure of compensation and amounts of awards under the Long-Term Incentive Plan, and making recommendations to the Board concerning PHI's retirement and other plans. To assist it in these matters, the Comp HR Committee has retained an independent compensation consultant, Pearl Meyer, to advise it.<sup>27</sup> The current structure of many of the various incentive plans was originally established by Pearl Meyer's predecessor, Buck Consultants.<sup>28</sup>

As reported by PHI for its most senior executives, the components of executive compensation fall into the following categories:

- Salary
- Bonus
- Non-Equity Incentive Plan Compensation (cash incentives under the Executive Incentive Compensation Plan)
- Stock Awards (equity incentives under the Long-Term Incentive Plan)
- Change in Pension Value and Non-Qualified Deferred Compensation Earnings
- Other

We requested compensation data for any person holding a title of Senior Vice President or higher at PHI and PHI Service Company as well as the five most senior officers of ACE for each

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<sup>24</sup> Response to Discovery, OC-1006.

<sup>25</sup> Responses to Discovery, OC-163 and OC-164 (Committee Purpose and Committee Composition and Operation of the Comp / HR Committee), OC-792, and the PHI Proxy Statement dated March 27, 2008 (p. 11).

<sup>26</sup> Response to Discovery OC-841.

<sup>27</sup> PHI Proxy Statement dated March 27, 2008 (p. 11).

<sup>28</sup> Interviews with Comp HR Committee members.

of the three most recent calendar years – 2006 to 2008.<sup>29</sup> A summary of the data is provided in the following table:

Description	2006	2007	2008
Total Compensation	\$18,879,413	\$25,532,465	\$23,700,858
No. of Executives	14	16	11
Mean Total Compensation	\$1,348,530	\$1,595,779	\$2,154,623
Median Total Compensation	\$653,568	\$692,652	\$1,174,749
Sources: Derived from responses to Discovery, OC-689 (restricted) and OC-1015 (restricted).			

Using this same data, executive compensation is distributed among the various components as follows:

Description	2006	2007	2008	2006 – 2008
Salary	24.3%	21.5%	21.1%	22.1%
Bonus	0.4%	1.3%	0.2%	0.7%
Non-Equity Incentive Plan Compensation	0.9%	16.3%	13.9%	11.2%
Stock Awards	19.8%	12.2%	22.4%	17.9%
Change in Pension Value and Non-Qualified Deferred Compensation Earnings	23.6%	24.4%	37.4%	28.7%
Severance or Termination-Related Comp	26.6%	20.0%	0.0%	14.9%
Other	4.4%	4.3%	5.0%	4.5%
<b>Total</b>	<b>100.0%</b>	<b>100.0%</b>	<b>100.0%</b>	<b>100.0%</b>
Sources: Derived from responses to Discovery, OC-689 (restricted), OC-1015 (restricted), and various company proxy statements.				
Note: PHI provided data with respect to all executives with the title of Senior Vice President or higher for PHI and PHI Service Company and the five most senior officers of ACE. The composition of this group changed from year to year. The total number of executives whose compensation was incorporated in this table was 14, 16, and 11 for 2006, 2007, and 2008, respectively.				

The focus of our review of executive compensation was limited to those components which were both significant and of a recurring nature. Therefore, we did not analyze the costs associated with “bonuses” or “other” because they involved relatively immaterial amounts. Executive retirements or terminations that triggered once-in-a-lifetime pay-outs were also not analyzed.

The amounts associated with many of the executive compensation components are driven by the level assigned to each executive. In the case of PHI, these levels range from A through H, with Level A consisting solely of the most senior executive and Level H consisting of the most junior executives. Executive levels were determined by market reviews of executive positions performed by Pearl Meyer and Buck Consultants. As of December 31, 2008, the PHI executive levels were as follows:<sup>30</sup>

<sup>29</sup> This is a sub-set of the executive group monitored by the Comp HR Committee.

<sup>30</sup> Response to Discovery OC-786. It should be noted that the assignment of employee titles to each level is not static; there is some movement from year to year. The purpose of the table is to show the typical distinctions that have been made in the past.

**[BEGIN CONFIDENTIAL]**

<i>Table 8-7</i> <b>Executive Levels As of December 31, 2008</b>	
Executive Level	Titles

**[END CONFIDENTIAL]**

**Base Salary**

In October 2007, Pearl Meyer released a report on executive compensation it had performed for the Comp HR Committee in conjunction with PHI's internal People Strategy & Human Resources (PS&HR) group. Pearl Meyer took the lead on the assessment of compensation levels for Executive Levels A through D while the PS&HR group was responsible for the remaining executive levels, E through H.<sup>31</sup> Each executive position was reviewed to ensure it was slotted to the appropriate executive level. Using proxy data from 23 peer group companies and information from published compensation surveys, Pearl Meyer concluded that the midpoints of PHI's proposed executive salary levels remained competitive with the median of the market although annual and long-term incentives lagged the market. While Pearl Meyer did not recommend any changes to annual or long-term incentive targets, it did suggest that PHI continue to monitor the situation and revisit the matter in the following year.<sup>32</sup> Summarized base salary data from this study is included in the following table:

**[BEGIN CONFIDENTIAL]**

<i>Table 8-8</i> <b>Base Salary Level Structure January 1, 2008</b>		
Executive Level	Pearl Meyer Recommended Salary Range	Market Consensus 25 <sup>th</sup> - 75 <sup>th</sup> Percentiles

**[END CONFIDENTIAL]**

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<sup>31</sup> Pearl Meyer was also responsible for pricing the position of the VP of People Strategy & Human Resources (response to Discovery, OC-154, p. 1) (restricted).

<sup>32</sup> Response to Discovery, OC-154 - "2008 PHI Executive Compensation Review dated October 25, 2007" (restricted).

Approximately a year later, Pearl Meyers released benchmarking data to support its recommendations on 2009 executive salary budget and structure adjustments. Just as before, it considered peer group data and information from other published compensation surveys. Pearl Meyer reached the same conclusion as the year before – proposed executive salary levels remained competitive with the market median even though annual and long-term incentives lagged the market.<sup>33</sup>

Pearl Meyer noted that only those salaries that varied by more than 15% from competitive levels were significant for analytical purposes. Variances less than 15% were attributed to tenure, relative performance, or relative skill.<sup>34</sup> A summary of the results of Pearl Meyer’s assessment of relative salary levels at PHI from these two different time periods is documented in the following table:

PHI Salaries Compared to Market Consensus (50 <sup>th</sup> Percentile)	As of January 1, 2008 No. of PHI Executives	As of January 1, 2009 No. of PHI Executives

Given the economic conditions affecting PHI’s service territory and country as a whole, the Comp HR Committee chose not to approve the Pearl Meyer-recommended increases to executive salary structure or budget in 2009.<sup>35</sup> This decision may have been a contributing factor in the deterioration of PHI executive salaries relative to peer companies as seen in the preceding table.<sup>36</sup>

**Non-Equity Incentive Plan Compensation**

The stated purpose of PHI’s Executive Incentive Compensation Plan is to provide annual cash incentives to select PHI executives for improvement in the Company’s financial performance. The Comp HR Committee plays an important role in administering this plan as it approves the executives eligible for the plan, the target award for each participant (expressed as a percentage of annual salary), the goal allocation of each participant, the corporate and business unit performance goals, and any special discretionary adjustments.<sup>37</sup>

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<sup>33</sup> Response to Discovery, OC-789 - “PHI Benchmarking Discussion dated October 23, 2008.”  
<sup>34</sup> Response to Discovery, OC-154 - “2008 PHI Executive Compensation Review dated October 25, 2007” (restricted).  
<sup>35</sup> PHI Proxy Statement dated March 26, 2009 (p. 21).  
<sup>36</sup> PHI Proxy Statement dated March 26, 2009 (p. 21).  
<sup>37</sup> Response to Discovery, OC-253 (restricted).

As formulated by PHI, under normal circumstances, the short-term incentive compensation for each eligible executive is calculated as follows:

$$\text{Salary} \times \text{Target Award \%} \times \text{Performance Factor} = \text{Incentive Earned}$$

(where Performance Factor = Performance Goal x Award Opportunity)

**[BEGIN CONFIDENTIAL]**

**[END CONFIDENTIAL]**<sup>38</sup> The most senior level executives are assigned the greatest target award percentages, ranging from 100% for the PHI Chairman & CEO to 20% for management classified in Executive Level H. In other words, if goals are met but not exceeded, the Chairman & CEO has the opportunity to double his base salary pursuant to this plan while a junior-level executive would only be eligible to earn an additional 20% of his or her base salary under this plan.

Performance factors are a weighted calculation based on corporate-wide or business unit goals and, in some cases, individual goals. Unlike corporate and business unit goals, participants (along with their supervisors) have input into individual goals. Deviating slightly from the Executive Level groupings previously discussed, the performance goals impacting PHI or ACE executives were weighted as follows in 2007 and 2008:

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<sup>38</sup> Based on a review of the responses to Discovery, OC-154 - "2008 PHI Executive Compensation Review dated October 25, 2007" (pp. 11-12 and Appendix I: pp. 2-3) (restricted) and OC-253 - "PHI Annual Executive Compensation Plan Participants - 2008" (restricted).

<b>Goals</b>	<b>Executive Leadership</b>	<b>Business Unit Participants</b>	<b>Corporate Services Participants</b>
Corporate / Business Unit Goals:			
PHI Earnings	40.00%		
PHI Free Cash Flow	25.00%		
Utility Earnings		30.00%	24.00%
Utility Capital Spending		7.50%	6.00%
Utility O&M Spending		11.25%	9.00%
Various Non-Reg Operating Stats*			12.40%
Customer Satisfaction Survey	5.00%	3.75%	3.00%
SAIDI	5.00%	3.75%	3.00%
SAIFI	5.00%	3.75%	3.00%
Recordable Injuries	5.00%	3.75%	3.75%
Preventable Fleet Accidents	5.00%	3.75%	3.75%
Affirmative Action*	10.00%	7.50%	7.10%
Individual Goals		25.00%	25.00%
<b>Total</b>	<b>100.00%</b>	<b>100.00%</b>	<b>100.00%</b>
Source: Derived from responses to Discovery, OC-253 (restricted), OC-782, and OC-791.			
*Adjustments to rounding made.			
Note1: Examples of the positions within each classification include Executive Leadership - Chairman & CEO, Vice Chairman & General Counsel, and SVP & CFO; Business Unit Participants - VP Asset Management, VP Customer Care, and VP Regulatory Affairs; Corporate Services - VP Legal Services, VP & Treasurer, and VP & CIO.			
Note 2: Individual goals are divided among four different classifications – Safety (20%), Executive Area O&M Budget (20%), Executive Area Affirmative Action (20%), and Other Goals (40%) (see response to Discovery, OC-1030).			
SAIDI = system average interruption duration index (a measurement of the length of time of outages)			
SAIFI = system average interruption frequency index (a measurement of the number of interruptions experienced by each customer)			

Our review of certain 2007 and 2008 financial goals incorporated in the Executive Incentive Compensation Plan indicated that they were consistent with the amounts included in the annual budgets proposed by management.<sup>39</sup> Interestingly, even though the Company publicly defines Free Cash Flow for purposes of the Executive Incentive Compensation Plan as “net cash flow from operating activities and proceeds from asset dispositions minus capital expenditures and dividend payments”,<sup>40</sup> when calculating actual results, it has expanded the definition of the term to include adjustments for changes in collateral requirements, capital issuances, and unusual transactions (e.g., the Mirant settlement).<sup>41</sup> While the disclosures in PHI’s public documents may not be completely transparent on this matter, we do not believe that strict adherence to the definition would have any perceptible impact on total executive compensation since discretionary adjustments can be made if need be. This is discussed in further detail below.

<sup>39</sup> Derived from responses to Discovery, OC-261 (restricted) and OC-782. In some cases, minor differences were noted, but these were explained to be adjustments associated with the financial impact of rate cases (not originally included in the annual budgets) or subsequent approvals of additional capital expenditures (see response to Discovery, OC-1052)..

<sup>40</sup> March 26, 2009 PHI Proxy Statement, p. 33.

<sup>41</sup> Responses to Discovery, OC-1104 and supplement to OC-1105.

A final calculation of the performance factor cannot be completed until actual performance against these goals is determined. Corporate and business unit performance goals are recommended by the Chairman and approved by the Comp HR Committee. Meeting, but not exceeding, a goal results in a participant earning 100% of the “award opportunity” available for that particular goal (also referred to as the “target” goal). If performance is extraordinarily good, a participant can trigger up to an additional bonus of 50% for a particular goal (e.g., on a 20%-weighted goal, extraordinary performance can result in a 30% award opportunity [20% x 150%]). Conversely, poor performance can reduce or even completely eliminate the award opportunity of a particular goal.<sup>42</sup> And in the case of the earnings goal, if the threshold performance level is not met, no payout is made to any participant irrespective of the performance against other goals.<sup>43</sup> This occurred in 2006 when corporate and Power Delivery earnings goals were not met. Executives measured against these goals received no awards under this plan.<sup>44</sup>

As can be seen in the preceding table, the determination of short-term incentive compensation of executives is skewed nearly 2 to 1 towards financial performance over customer-oriented, safety, and diversity goals under the Executive Incentive Compensation Plan.<sup>45</sup> The by-product of this plan weighting is that it is possible for executives to nearly earn target levels of total incentive compensation by maximizing financial goals without regard to how they perform against other goals. In 2007, PHI failed to meet its minimum goals for customer satisfaction, SAIDI, SAIFI, and preventable fleet accidents, but certain executives still were rewarded with incentive pay equal to 110 percent of target levels. This is demonstrated in the 2007 plan computations for Executive Leadership summarized in the following table:

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<sup>42</sup> Award opportunities under the Executive Incentive Compensation Plan range from 50% to 150% of target awards. There are no award opportunities between 0% and 50% (see response to Discovery, OC-1060).

<sup>43</sup> Response to Discovery, OC-253: PHI 2007 and 2008 Executive Incentive Compensation Plans - Section 5. Determination of Awards (restricted). The “threshold performance level” is defined as 50% of target (Response to Discovery, OC-1025).

<sup>44</sup> Review of the Comp HR Committee meeting minutes dated February 22, 2007. Executives of the non-regulated businesses were not impacted by this because their earnings goals were linked to non-regulated earnings which exceeded the threshold limits. This explains why some executives had reported Non-Equity Incentive Plan Compensation in Table 8-12.

<sup>45</sup> According to the Executive Incentive Compensation Plans, individual performance goals “. . . must include required goals for O&M, Diversity, and Safety. Each required goal must be weighted at 20%.” (Response to Discovery, OC-253, 2007 and 2008 Executive Incentive Compensation Plans, Section 4 - Performance Goals) (restricted). Actual individual goals consist of Executive Area O&M Budget (40%), Executive Area Affirmative Action (20%), Safety (20%), and Other Executive Area Goals (40%) (see response to Discovery, OC-1030). However, in 2007, when both Corporate and the Power Delivery business unit under-performed on customer and employee goals (only garnering one-third of target award levels, 12.5% out of 35.0%), **[BEGIN CONFIDENTIAL]**

**[END CONFIDENTIAL]** (see responses to Discovery, OC-722 (restricted) and OC-782).

**[BEGIN CONFIDENTIAL]**

**[END CONFIDENTIAL]** Requests to review the

actual performance of executives in comparison to their individual goals were denied (see response to Discovery, OC-1030).

**Table 8-11**  
**Executive Incentive Compensation Plan**  
**Executive Leadership**  
**Summary of Computation**  
**2007**

Description	Weighting	Award %	Weighted %
PHI Earnings	40.0%	150.0%	60.0%
PHI Free Cash Flow	25.0%	150.0%	37.5%
Customer Satisfaction Survey	5.0%	0.0%	0.0%
SAIDI	5.0%	0.0%	0.0%
SAIFI	5.0%	0.0%	0.0%
Recordable Injuries	5.0%	50.0%	2.5%
Preventable Fleet Accidents	5.0%	0.0%	0.0%
Affirmative Action	10.0%	100.0%	10.0%
<b>Total</b>	<b>100.0%</b>		<b>110.0%</b>

Source: Response to Discovery, OC-782.

Note: Power Delivery Results yielded a total business unit pay-out of 83.4% even though the minimum goals for Customer Satisfaction, SAIDI, SAIFI, and Preventable Fleet Accidents were not met.

Corresponding balanced scorecard results for the business units in 2007 and other years are summarized in the following table:

**Table 8-12**  
**Balanced Scorecard Results**  
**2006 - 2008**

Description	2006	2007	2008
Overall Corporate	0.0%	110.0%	90.0%
Overall Power Delivery	0.0%	83.4%	115.1%
Overall Conectiv Energy	122.0%	144.0%	141.3%
Overall PES	149.0%	122.5%	122.5%

Source: Responses to Discovery, OC-722 and OC-1014 (restricted).

As previously noted, a portion of short-term incentive pay for certain executives is dependent on individual goals. A review of individual performance goals for the last two years in the Corporate Services and Power Delivery organizations shows that 32 of 36 executives in 2007 and 32 of 38 executives in 2008 earned 100 percent or greater of their individual award opportunities.<sup>46</sup>

The Comp HR Committee has the authority to adjust incentive compensation paid to any sub-group of executives under this plan if unusual circumstances warrant such action. This discretionary adjustment can increase or decrease calculated incentive pay by up to 30 percent. In 2007 and 2008, the Comp HR Committee did not make such an adjustment. In addition, if the Comp HR Committee chooses to do so, it can recognize significant achievement of any one executive under this plan by awarding up to 180 percent of his or her target award, irrespective of the standard goal performance computations. **[BEGIN CONFIDENTIAL]**

<sup>46</sup> Response to Discovery, OC-784. **[BEGIN CONFIDENTIAL]**

**[END CONFIDENTIAL]** (see responses to Discovery, OC-1013 (restricted) and OC-258).



**[END CONFIDENTIAL]<sup>47</sup>**

Internal Revenue Code Section 162(m) prohibits a public company from deducting for federal income tax purposes compensation in excess of \$1 million to the principal executive officer, principal financial officer, and three remaining top-paid executive officers with the following caveat. If compensation qualifies as “performance-based”, it is allowed by the IRS to be deducted. Performance-based compensation has a number of attributes, including goals which are set by a completely independent committee, disclosure of material terms to and approval by shareholders, and certification by the independent committee that goals have been met prior to payment.

**[BEGIN CONFIDENTIAL]**

**[END CONFIDENTIAL]<sup>48</sup> [BEGIN CONFIDENTIAL]**

**[END CONFIDENTIAL]<sup>49</sup> [BEGIN CONFIDENTIAL]  
[END CONFIDENTIAL]<sup>50</sup>**

Even though its Executive Incentive Compensation Plan did not qualify for the performance-based compensation exception in any of the past three years, PHI asserts that it has not incurred any additional costs due to foregone income tax deductions for either 2006 or 2007 nor has ACE.<sup>51</sup> 2008 income taxes have not been finalized.<sup>52</sup> PHI was asked to identify all pros and cons of asking for shareholder approval of the plan, and it did not cite one drawback to pursuing such course of action.<sup>53</sup> Furthermore, it is not clear whether the Company intends to pass these additional costs on to New Jersey ratepayers if and when they are incurred.<sup>54</sup>

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<sup>47</sup> Responses to Discovery, OC-253: PHI 2007 and 2008 Executive Incentive Compensation Plans - Section 5. Determination of Awards (restricted), OC-783, and OC-722.

<sup>48</sup> Response to Discovery, OC-1046 (PHI Executive Program Review by Buck Consultants dated July 20, 2005, pp. 2, 6, 7, and Appendix B) (restricted).

<sup>49</sup> Response to Discovery, OC-1010 (PHI Executive Program Review by Pearl Meyer dated June 29, 2007, p. 13) (restricted).

<sup>50</sup> Response to Discovery, OC-1082 (supplemental).

<sup>51</sup> Payments under this plan are made in the year subsequent to being earned. Therefore, incentive payments for the 2006 plan year are paid in 2007, and incentive payments for the 2007 plan year are paid in 2008. Since no incentive payments under the Executive Incentive Compensation Plan were earned in 2006 by the most senior executives, it is reasonable that no additional costs were paid in 2007 because the plan not qualifying for a performance-based exemption (see response to Discovery, OC-1129).

<sup>52</sup> Response to Discovery, OC-1082 (supplemental). In 2006, none of the covered executives was paid any incentive compensation under the plan because of earnings that fell short of goals. However, in 2007, several of the executives were paid over \$1 million in salary and short-term incentive compensation (see PHI Proxy Statement dated March 27, 2008, p. 30).

<sup>53</sup> Response to Discovery, OC-1082 (supplemental).

<sup>54</sup> Response to Discovery, OC-1082 (supplemental), OC-1128, OC-1161.

Given the information made available to us, we see no reason that ACE and its ratepayers should bear any risk of additional costs (such as foregone income tax deductions) associated with a plan that has not been amended to conform with IRS requirements. PHI management and the Board of Directors may have reasons for their inaction that they have chosen not to disclose, but without justification, the ramifications of their decisions should then be borne by the parent and its shareholders.

Recommendation: We recommend that the Chief Financial Officer provide written certification each year to the New Jersey BPU that ACE has not been allocated or directly charged any costs associated with the Executive Incentive Compensation Plan which were incurred because the plan did not qualify for the performance-based exemption associated with executive compensation as currently codified in Section 162(m) of the Internal Revenue Code. At the request of the New Jersey BPU, PHI and its affiliates will make available all documentation to independently verify such certification.

### **Stock Awards**

Long-term incentive compensation for executives has undergone some important changes over the past decade. In 2003, PHI discontinued the use of stock options to compensate executives due, in large part, to the complexity surrounding these awards and the negative publicity this type of compensation had received in the financial media.<sup>55</sup> For two years (2004 and 2005), executive long-term incentive compensation consisted solely of restricted stock awards to executives based on relative shareholder return which vested over a three-year performance period. During this time, PHI shareholder return was compared to a peer index of electric and gas utilities. Then, beginning in 2006, the design of PHI long-term incentive compensation was modified again.<sup>56</sup> The implementation of the plan was changed to incorporate the following:

- One-third of long-term incentive compensation would be based on the expiration of time over a three-year period (the Restricted Stock Program)
- The remaining two-thirds of long-term incentive compensation would be based on achieving performance objectives over this three-year period (the Performance Stock Program)

These changes were the culmination of a review sponsored by the Company and conducted by Buck Consultants. Buck Consultants found that a large percentage of peer companies had multiple long-term incentive plan instruments. To specifically encourage executive retention, the Committee approved the Restricted Stock Program. Awards under this program are not generally awarded unless an executive remains with the Company for the entire three-year vesting period (cliff vesting).<sup>57</sup>

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<sup>55</sup> Interviews with Comp HR Committee members and Paul Friel, Vice President and Chief Auditor (January 15, 2009).

<sup>56</sup> PHI March 31, 2005 Proxy Statement, pp. 24-25 and PHI March 29, 2007 Proxy Statement, pp. 20-21.

<sup>57</sup> PHI March 29, 2007 Proxy Statement, p. 20 and PHI March 27, 2008 Proxy Statement, pp. 23-24.

Tasked with developing performance objectives for the Performance Stock Program, senior management and a sub-committee identified and recommended two measures that they believed were closely tied to the achievement of the Company's financial plan and the enhancement of shareholder value – earnings per share and free cash flow per share, where free cash flow is defined as follows:<sup>58</sup>

Net Income Available for Common Stock Dividends  
+ Depreciation and Amortization  
+ / - Changes to Working Capital  
Capital Expenditures

During the three-year performance measurement period beginning in 2006, earnings were weighted 75 percent and free cash flow was weighted 25 percent for all participating executives.<sup>59</sup> This was the weighting recommended by Buck Consultants in December, 2005.<sup>60</sup>

Both of these programs are administered within the context of a flexible plan document. In the case of performance criteria, the Comp HR Committee is currently using only two of the twenty-five different criteria listed in the plan. **[BEGIN CONFIDENTIAL]**

**[END CONFIDENTIAL]**<sup>61</sup>

The specific targets chosen for each of these objectives take into consideration results achieved in the year preceding the first year of the three-year period and are designed to encourage year-over-year improvement during the performance period. Target levels are set in such a way that attainment of these levels would place the Company in the 75<sup>th</sup> percentile of its peer group.<sup>62</sup> According to the Company, a company that delivers long-term shareholder return of at least 8.8% would be ranked in the top quartile of the peer group. To accomplish this return, PHI assumes an earnings growth rate of 4.5% and a dividend yield of 4.3%.<sup>63</sup>

Performance that deviates from the target results in adjustments to compensation as noted in the following table:

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<sup>58</sup> PHI March 29, 2007 Proxy Statement, p. 20 and PHI March 27, 2008 Proxy Statement, p. 37. In the case of business unit performance, earnings was substituted for earnings per share. In both cases, extraordinary items and "other gains and losses relating to matter that are not reflective of the Company's ongoing businesses" are excluded.

<sup>59</sup> Response to Discovery, OC-1086.

<sup>60</sup> Response to Discovery, OC-1046 (PHI LTI Review Discussion Document prepared by Buck Consultants dated December 6, 2005, p. 11) (restricted).

<sup>61</sup> Response to Discovery, OC-1045 (PHI Long-Term Incentive Plan revised as of October 2008, pp. 5-6).

<sup>62</sup> PHI March 27, 2008 Proxy Statement, p. 24.

<sup>63</sup> Response to Discovery, OC-1055.

Percentage Performance Relative to Target	Amount of Award (as a % of Target Award)
below 90%	0%
90%	50%
100%	100%
115%	200%

Sources: Various PHI Proxy Statements.

Note: Interpolation of award amounts will be performed for performance between the listed thresholds.

The sensitivities in the preceding table are unique to the Long-Term Incentive Plan. Deviations which trigger the minimum and maximum pay-outs as a percentage of salary are set at different levels for the short-term Executive Incentive Compensation Plan. Performance relative to target is calculated as the average of the three individual years in a given 3-year cycle (e.g., annual performance of 105%, 85%, and 120% of target results in a 103.33% award factor).<sup>64</sup>

Because of higher volatility in historical results, non-regulated business target thresholds reflect a greater dispersion than targets established for corporate and the Power Delivery business unit (80% substituted for 90% on the low end and 120% substituted for 115% on the high end). Reliability, safety, diversity, and customer satisfaction are not considered when measuring performance for the Long-Term Incentive Plan as it is currently administered.

Similar to the short-term Executive Incentive Compensation Plan, the overall compensation levels for each participant of the Long-Term Incentive Plan are a function of Executive Level. Not to be confused with the target levels associated with performance objectives mentioned previously, **[BEGIN CONFIDENTIAL]**

**[END CONFIDENTIAL]**<sup>65</sup> To demonstrate how compensation under this plan is calculated, an example is provided in Attachment 8-4.

The Comp HR Committee may use its discretion to take the following actions with respect to the Long-Term Incentive Plan:<sup>66</sup>

- Revise performance targets during the course of a three-year performance period if a significant event occurs that would have a substantial impact on a performance objective,
- Waive the forfeiture provision of the Restricted Stock Program for an executive who does not complete three years of service, and
- Issue supplemental awards to executives.

<sup>64</sup> Response to Discovery, OC-1054.

<sup>65</sup> Response to Discovery, OC-798. Salary levels are determined at the beginning of a plan cycle (see response to Discovery, OC-1056 (restricted)).

<sup>66</sup> PHI March 27, 2008 Proxy Statement, p. 37.

Since the beginning of 2005, the Comp HR Committee has not chosen to make exceptions for either of the first two items listed above. However, in order to retain two executives classified in Level E, the Committee did grant supplemental awards totaling 9,015 shares under the Restricted Stock Program in 2007. 5,409 shares had a vesting period of two years, and 3,606 shares had a vesting period of three years.<sup>67</sup>

The long-term incentive compensation attributable to the 3-year period from 2005 to 2007 was based solely on relative shareholder return. **[BEGIN CONFIDENTIAL]**

**[END CONFIDENTIAL]**<sup>68</sup> When the administration of the plan was modified to weight performance two-thirds and tenure one-third in the 2006-2008 time frame, the performance-only results were as follows:

Executive Grouping	Award Factor
Proxy Level	85.4%
Corporate Services	61.0%
Power Delivery	62.3%
Source: Response to Discovery, OC-1056 (restricted).	

### **Change in Pension Value and Non-Qualified Deferred Compensation Earnings**

This component of executive compensation represents the aggregate increase in the actuarial present value of executives' accumulated benefits under all deferred benefit and actuarial pension plans from the beginning of the year to the end of the year as well as some immaterial amounts of above-average market earnings on non-tax-qualified deferred compensation plans.

The most senior executives of the Company are participants in numerous pension plans, including:<sup>69</sup>

- the Pepco Holdings Retirement Plan (a defined benefit pension plan which covers substantially all employees of the utilities and certain other subsidiaries),
- the Executive Retirement Plan (a non-tax-qualified supplemental retirement plan open to certain executives chosen by the CEO or the Board of Directors),
- the Conectiv Supplemental Executive Retirement Plan, and
- the Wraase supplemental retirement benefit (provided in consideration of the relinquishment of certain other benefits).

<sup>67</sup> Responses to Discovery, OC-795, OC-796, and OC-797.

<sup>68</sup> Response to Discovery, OC-1056 (restricted).

<sup>69</sup> March 26, 2009 Proxy Statement, pp. 37-42.

This particular compensation component is skewed heavily toward just a few of the most senior executives. **[BEGIN CONFIDENTIAL]**

**[END CONFIDENTIAL]**<sup>70</sup>

The former is designed to make executives whole for pension benefits or compensation used in calculating those benefits that would otherwise not be permitted under the tax-qualified Pepco Holding Retirement Plan due to Internal Revenue Service restrictions or the terms of the plan. Additionally, a participant in the Executive Retirement Plan is entitled to one or more of the following enhancements:<sup>71</sup>

- inclusion of deferred compensation in calculating retirement benefits,
- inclusion of annual cash incentive compensation in calculating retirement benefits to the extent not permitted, and
- crediting of additional years of service.

**[BEGIN CONFIDENTIAL]**

**[END**

**CONFIDENTIAL]**<sup>72</sup>

In 2007, the Company and Dennis Wraase entered into an employment agreement to replace one that had been signed in 2002. The Comp HR Committee believed this was warranted because the protections being afforded Mr. Wraase at the time were no longer necessary given his age and impending retirement. In return for giving up his rights to severance in an amount equal to three years of salary and bonuses, a lump sum supplemental retirement benefit pursuant to certain conditions, and excise tax gross-ups, Mr. Wraase was provided supplemental retirement benefits with an actuarial present value of \$4.2 million as of December 31, 2007.<sup>73</sup>

Executive compensation attributed to changes in pension value and nonqualified deferred compensation earnings nearly doubled from 2006 to 2008 for the group of executives summarized in Table 8-6, even while the total number of these executives decreased. A large portion of this increase is most likely attributable to Mr. Wraase's supplemental retirement benefits negotiated in 2007 combined with incentives earned by the executive group in 2007 and 2008 that were excluded from the computation at the end of 2006.<sup>74</sup>

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<sup>70</sup> Response to Discovery, OC-1015 (restricted).

<sup>71</sup> March 26, 2009 Proxy Statement, pp. 24, 37-42.

<sup>72</sup> Response to Discovery, OC-1010 (Pearl Meyer PHI Executive Program Review dated June 29, 2007, p. 18) (restricted).

<sup>73</sup> March 27, 2008 Proxy Statement, p. 28.

<sup>74</sup> Response to Discovery, OC-1061.

### Incentive Design

In addition to creating a competitive compensation package to attract and retain key management personnel, PHI's executive compensation is also designed to achieve certain other objectives. For one, the Comp HR Committee believes that as an executive's responsibility increases, the percentage of the executive's pay at risk should also increase.<sup>75</sup> At target levels of pay, the fixed vs. at-risk compensation for executives for the last three years is summarized in the following table:

Executive Level	2006 – 2008	
	Fixed	At-Risk
A	25%	75%
B	38%	62%
C	41%	59%
D	45%	55%
E	50%	50%
F	56%	44%
G	63%	37%
H	67%	33%

Source: Response to Discovery, OC-799.  
Note: In 2007, there were no executives assigned to Level C.

To encourage greater focus on developing and implementing long-term strategic goals, the Comp HR Committee also intended for executive compensation to be more heavily weighted towards long-term incentive compensation as responsibilities increase.<sup>76</sup> This is demonstrated in the following table:

Executive Level	2006 – 2008	
	Short-Term	Long-Term
A	33%	67%
B	38%	62%
C	41%	59%
D	42%	58%
E	50%	50%
F	50%	50%
G	50%	50%
H	40%	60%

Source: Response to Discovery, OC-800.  
Note 1: In 2007, there were no executives assigned to Level C.  
Note 2: Occasionally, there were executives within a given level that had different targets. However, that was the exception rather than the rule.

To keep executives focused on their responsibilities at the Company if PHI were to ever undergo a change in control, members of the executive group qualify for severance benefits if

<sup>75</sup> March 27, 2008 PHI Proxy Statement, p. 27.

<sup>76</sup> March 27, 2008 PHI Proxy Statement, p. 27.

they are terminated without cause or leave for “good reason” pursuant to a Change in Control Severance Plan. Under this plan, executives are entitled to a multiple of salary ranging from 1.5 to 3.0 times salary depending on the position held. In addition, a few of the most senior executives have individual employment agreements that provide them with similar if not enhanced benefits.<sup>77</sup> The Comp HR Committee’s consultant, Pearl Meyer, reviewed the change-in-control provisions against peer company practices, and noted that they were generally in line with market practices.<sup>78</sup> **[BEGIN CONFIDENTIAL]**

**[END CONFIDENTIAL]**<sup>79</sup>

The vision of PHI is “. . . to be the premier energy delivery and services company in the mid-Atlantic region through employees focused on customer service, reliability, and profitability.”<sup>80</sup> Of these three objectives, only profitability impacts executive compensation to a significant degree. Performance stock awards under the current Long-Term Incentive Plan are not affected at all by customer service or reliability performance measures. Short-term incentive compensation under the Executive Incentive Compensation Plan is weighted in such a way that below average performance with respect to customer service, safety, and/or reliability can be rendered inconsequential as was most recently the case in 2007.

The Comp HR Committee’s own outside consultant noted in mid-2007 that **[BEGIN CONFIDENTIAL]**

**[END CONFIDENTIAL]**<sup>81</sup> The consultant also expressed concern that **[BEGIN CONFIDENTIAL]**

**[END CONFIDENTIAL]**<sup>82</sup>  
As noted in Tables 8-10 and 8-11, many of the goals associated with short-term incentive compensation are well below a 20-percent weighting, and a disproportionate number of these goals are associated with safety, reliability, and customer satisfaction.

While executive compensation is largely unaffected by customer service and reliability issues, management describes reliability as the “biggest performance gap facing utility operations.”<sup>83</sup> As summarized in a Reliability Summit presentation in the Atlantic Region on September 25, 2008.<sup>84</sup>

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<sup>77</sup> March 27, 2008 PHI Proxy Statement, p. 27.

<sup>78</sup> Response to Discovery, OC-789 (Pearl Meyer PHI 2008 Change-in-Control Review/Update dated July 24, 2008, p. 2).

<sup>79</sup> Response to Discovery, OC-1010 (Pearl Meyer PHI Executive Program Review dated June 29, 2007, p. 5) (restricted).

<sup>80</sup> PHI website - Company Overview: Business Strategy.

<sup>81</sup> Response to Discovery, OC-1010 (Pearl Meyer PHI Executive Program Review dated June 29, 2007, p. 4) (restricted).

<sup>82</sup> Response to Discovery, OC-1010 (Pearl Meyer PHI Executive Program Review dated June 29, 2007, p. 16) (restricted)

<sup>83</sup> Response to Discovery, OC-964 (2009 System Load & Reliability Summary to the PHI Board of Directors dated February 26, 2009, p. 6)..

<sup>84</sup> Response to Discovery, OC-964 (ACE Reliability Summit Presentation dated September 25, 2008, p. 5).



PHI's reliability performance is not heading in the right direction.

- 2008 SAIDI and SAIFI performance through August is worse than 2007 performance, and projected not to meet corporate targets at year-end.
- Customer complaints are increasing; regulators and legislators exerting pressure to improve performance.
- Benchmarking survey results show PHI companies' rankings slipping relative to other participants.

In an Operations briefing summarizing the findings of the corporate-wide series of reliability summits, the Vice Presidents of Asset Management and Operations noted that the vegetation management program is not funded in a manner to achieve significant reliability improvements, and the focus on cost control and constantly changing financial pressures trump performance.<sup>85</sup>

When there is little incentive to achieve a goal or little disincentive in failing, it should come as no surprise that the focus of management may be elsewhere. Especially as it relates to goals that are not generally achieved in tandem, if a company considers both goals to be critical, it is important that one not be significantly over-weighted to the other's detriment. The key is to have a healthy balance between the goals to which the Company aspires and the incentives it offers to attain them.

Coupled with the redundancy that can be found in some of the financial goals of both the short- and long-term executive incentive plans, a change in executive compensation design should be considered.

We recommend the Comp HR Committee reevaluate the weightings it assigns to goals associated with both short-term and long-term executive compensation. In doing so, the Committee should re-design current incentives so that they motivate executives to attain goals associated with customer satisfaction, safety, and reliability while at the same time appropriately penalizing them for poor performance in these same areas. In addition, the Comp HR Committee should consider both the additional costs of developing and tracking numerous performance goals and the potential benefits (e.g. increased motivation) that assigning insignificant weightings to goals will have on executives.

### **PHI Executive Compensation in Relation to Other Companies**

Using data disclosed in documents filed with the SEC, we obtained detailed compensation data for all named executive officers of publicly-traded New Jersey electric companies and companies identified by PHI as its peers for executive compensation purposes. In this context,

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<sup>85</sup> Response to Discovery, OC-964 (2008 PHI Reliability Summit Summary dated October 27, 2008, p. 7).

named executive officers include the principal executive officer, the principal financial officer, and the three next most highly compensated individuals for the most recent fiscal year.<sup>86</sup>

This data was compared to the compensation information filed by PHI. In its most recently-filed proxy statement, PHI reported detailed 2008 compensation for the following individuals:<sup>87</sup>

- Dennis Wraase, Chairman (and CEO through February 28, 2009)
- Joseph Rigby, President (and CEO beginning March 1, 2009)<sup>88</sup>
- Paul Barry, Senior Vice President and Chief Financial Officer
- William Torgerson, Vice Chairman and Chief Legal Officer
- David Velazquez, Executive Vice President

The results of this comparison are summarized in the following table:

Description	2006	2007	2008
<b>Principal Executive Officer:</b>			
PHI	\$4,921,550	\$8,533,939	\$10,013,360
New Jersey Electric Utilities - Mean	8,882,062	10,551,480	8,922,750
New Jersey Electric Utilities - Median	9,172,301	10,551,480	7,318,517
PHI-Selected Peer Group - Mean	5,990,721	6,659,043	6,080,645
PHI-Selected Peer Group - Median	5,115,439	6,335,123	5,877,162
<b>Principal Financial Officer:</b>			
PHI	816,645	(A)	1,336,617
New Jersey Electric Utilities - Mean	2,046,515	2,344,696	2,283,008
New Jersey Electric Utilities - Median	2,285,923	2,261,813	2,231,282
PHI-Selected Peer Group - Mean	1,739,674	1,877,004	1,999,052
PHI-Selected Peer Group - Median	1,541,639	1,656,009	1,745,406
<b>Chief Legal Officer (C):</b>			
PHI - Vice Chair & Chief Legal Officer	1,817,089	2,430,001	3,509,504
New Jersey Utilities - Mean (B)	1,814,077	2,116,658	2,160,463
New Jersey Utilities - Median (B)	1,814,077	2,116,658	1,770,852
PHI-Selected Peer Group - Mean	1,586,151	1,586,507	1,716,215
PHI-Selected Peer Group - Median	1,604,177	1,502,517	1,498,453
Source: Derived from available proxy statements and Form 10-K's filed in 2008 and 2009. Note 1: New Jersey electric utilities include Consolidated Edison, FirstEnergy, and Public Service Enterprise Group. Note 2: Other executive position comparisons were not summarized given the wide variety of positions disclosed by PHI and other companies. (A) Data excluded since the current CFO was not hired until September 2007, and SEC-reported data does not quantify compensation paid to his predecessor. (B) In 2006 and 2007, only one New Jersey electric utility provided compensation data for a legal executive. (C) Unlike PHI, none of the comparison companies disclosed compensation data for an executive with both the Vice Chairman and Chief Legal Officer title.			

As it pertains to the data summarized in the preceding table:

- Executives were grouped together based on similar but not exact titles. For instance, the Principal Executive Officer may be the Chairman & Chief Executive Officer as was

<sup>86</sup> SEC Release No. 33-8732A, pp. 116-117.

<sup>87</sup> March 26, 2009 PHI Proxy Statement, p. 28. The core of this groups has also been PHI's named executive officers in prior years.

<sup>88</sup> Mr. Rigby was Chief Operating Officer of PHI through February 28, 2009 (see March 26, 2009 PHI Proxy Statement, p. ii).

the case for PHI, or he / she may be the Chairman, President & Chief Executive Officer or the President & Chief Executive Officer.

- One of the New Jersey electric utilities, Consolidated Edison, was also included in the peer group used to assess the competitiveness of PHI's executive compensation.
- While the core members of the peer group have remained the same during the three-year period displayed, there have been some changes due to corporate mergers and acquisitions.<sup>89</sup>
- Pearl Meyer, the current Comp HR Committee consultant, has noted that the peer group may need to be reevaluated on a prospective basis because some companies are too big or too small based on measures such as revenues, assets, and market capitalization. This group includes Consolidated Edison which is viewed as too large.<sup>90</sup>
- If an executive did not hold a particular position for the entire year, his or her compensation for that year was not included in the preceding summary table.
- Reported compensation was not adjusted for one-time or non-recurring payments. The compensation of some executives who terminated shortly after year-end will be skewed upward as a result.

Executive compensation for the most senior members of management can be highly variable due to significant percentages of at-risk pay (see Table 8-15) and potential for out-sized discretionary awards. Comparisons with other companies can also be impacted by tenure differences (all other things being equal, a 20-year CEO is likely to be paid more than a 5-year CEO), scope of responsibilities, and geographical differences. For these reasons, we can draw no definitive conclusions from the limited, publicly-available data presented in Table 8-17 with respect to the level of compensation paid to PHI executives. However, we do note that the Comp HR Committee has retained experts to monitor this and other data on a periodic basis, and these experts believe that executive compensation at PHI is reasonable. According to Pearl Meyer,<sup>91</sup>

. . . [PHI] salaries are generally competitive with median practices while annual and long-term incentives fall short of median practices.

In general, [PHI] has a strong record of retaining its senior executive staff with some exceptions. This suggests that total pay philosophy is effective.

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<sup>89</sup> Response to Discovery, OC-1010 (Pearl Meyer 2008 Trends Update report for PHI dated July 24, 2008, p. 7) (restricted).

<sup>90</sup> Response to Discovery, OC-1010 (Pearl Meyer Executive Program Review for PHI dated June 29, 2007, p. 28 and Pearl Meyer 2008 Trends Update report dated July 24, 2008, p. 7) (restricted).

<sup>91</sup> Response to Discovery, OC-1010 (Pearl Meyer 2008 Trends Update report dated July 24, 2008, p. 16) (restricted).

**Senior Management Ability to Focus on Customer Interests.**

**Management Incentives to Improve Service Quality and Reliability**

In 2005, PHI developed a business plan focused on the Company’s vision of becoming the “premier energy delivery services and competitive energy company in the mid-Atlantic region”. In accomplishing this goal, specific areas of focus were identified, including customer satisfaction and reliability. Each executive scorecard has performance metrics directly aligned to achieving the goals for utility operations. Proposed performance metrics are reviewed with the Utility Operations executive leadership team, and are approved by the COO. The following data provide a history of PHI service quality and reliability results.<sup>92</sup>

<i>Table 8-18</i>						
<b>PHI Annual MSI Customer Satisfaction Scores</b>						
				<b>Proposed 2008</b>		
	<b>2005</b>	<b>2006</b>	<b>2007</b>	<b>Threshold</b>	<b>Target</b>	<b>Stretch</b>
PHI	79	70	68	68	70	72
Pepco	80	70	68	69	70	73
DPL	78	64	60	58	60	62
ACE	79	76	77	78	79	80

<i>Table 8-19</i>						
<b>Reliability Scores</b>						
				<b>Proposed 2008</b>		
	<b>2005</b>	<b>2006</b>	<b>2007</b>	<b>Threshold</b>	<b>Target</b>	<b>Stretch</b>
SAIDI	180	226	211	209	183	156
SAIFI	1.44	1.51	1.44	1.53	1.46	1.39

The customer service measures identified above are given a Tier 1 AIP weight of 5% each, or a total of 15%. The 2008 threshold levels set for SAIDI and SAIFI are based on a five-year historical average. The Customer satisfaction targets are based on “reasonable expectations per brand and aggregated for PHI”.<sup>93</sup> The actual 2008 customer satisfaction results met or exceeded the stretch targets, with the exception of ACE. The ACE result was 74, below the 2008 threshold.<sup>94</sup>

In its 2007 Strategic Planning materials, management provided the board with its assessment of operational performance measured against utility peers, as follows.<sup>95</sup>

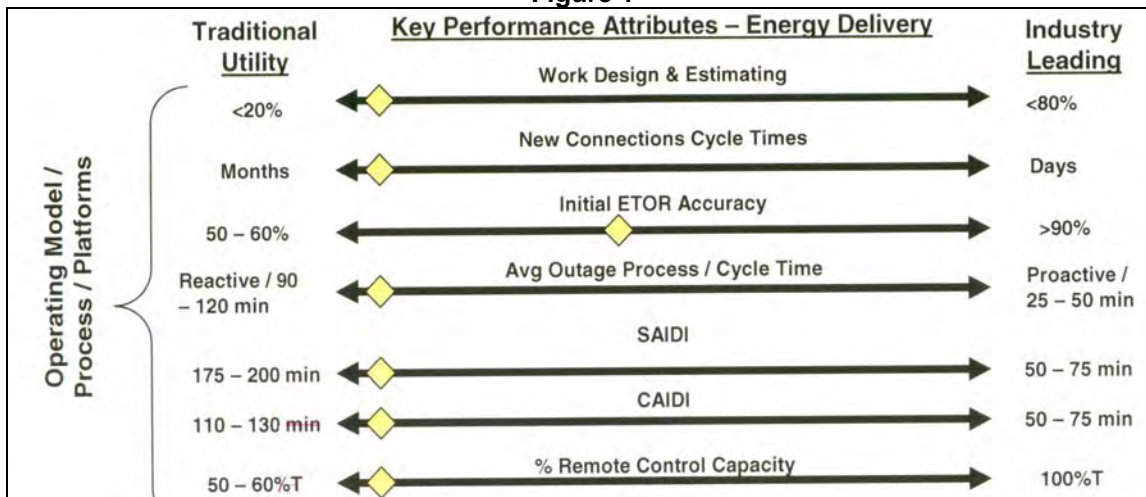
<sup>92</sup> Response to Discovery, OC-70.

<sup>93</sup> Response to Discovery, OC-70.

<sup>94</sup> Response to Discovery, OC-1134.

<sup>95</sup> Response to Discovery, OC-274; 2007 Utility Operations Strategic Review (restricted).

**Figure 1**



These results indicate a below average utility operating performance.

A year later, at the 2008 Board Retreat, the management presentation of utility operations recognized continuing issues in the area of reliability performance necessary to meet customer expectations. Increased funding for O&M and capital has been provided to address operating performance problems.<sup>96</sup> As identified in Chapter Fifteen, the lack of consistent commitment of funding for service quality and reliability projects has led to subpar performance metrics.<sup>97</sup>

PHI current Strategic Planning goals include the following:

Strategic Aspirations include achieving 1<sup>st</sup> quartile ranking in utility Customer Service, improved reliability performance at the utilities. These aspirations are monitored, tracked, as measures of SAIFI, SAIDI, and MSI Survey of utilities. Each utility also manages its reliability measures of Percentage of customers restored within 2 hours of estimated time to restore, and total outage orders. Each utility also manages its customer satisfaction measures of transactional customer satisfaction, calls answered within 30 seconds, first call resolution, and estimated meter reads.<sup>98</sup>

**Benchmark Criteria for Incentive Compensation**

The Balanced Scorecard System (BSC) was implemented at ACE in the mid 1990's.<sup>99</sup>

PHI has not hired any outside consultants to assist it with the identification of Balanced Scorecard goals at least since January 1, 2005. The development of goals reflected in the BSC process are developed internally.<sup>100</sup> These goals are generally developed based on

<sup>96</sup> Response to Discovery, OC-274 (restricted); 2008 Utility Operations Strategic Review.

<sup>97</sup> [BEGIN CONFIDENTIAL]

[CONFIDENTIAL] Response to Discovery, OC-558 (restricted). [BEGIN CONFIDENTIAL]  
[END CONFIDENTIAL]

[END

<sup>98</sup> Response to Discovery, OC-180.

<sup>99</sup> Response to Discovery, OC-569.

<sup>100</sup> Response to Discovery OC-148.

improvements over historical performance. Peer group and benchmarking data are not generally used or relied upon. However, customer satisfaction goals do reflect annual MSI survey data.<sup>101</sup>

### **Compliance with Sarbanes-Oxley Act**

The Sarbanes-Oxley Act of 2002 (SOX) was enacted in response to corporate malfeasance by companies such as Enron, WorldCom, and Tyco International in which investors lost billions of dollars. President George W. Bush characterized the requirements under the new law as “. . . the most far reaching reforms of American business practices since the time of Franklin Delano Roosevelt.”

While the thrust of the federal securities legislation passed in the 1930s concerned the disclosure of information to investors by public companies and the fair treatment of investors by the securities industry, SOX further expanded government’s oversight over entities such as public company boards of directors, management, and public accounting firms. Designed to improve corporate responsibility, to enhance transparency of information, and to eliminate certain conflicts of interest, SOX includes the following titles, or subjects:

- Public Company Accounting Oversight Board
- Auditor Independence
- Corporate Responsibility
- Enhanced Financial Disclosures
- Analyst Conflicts of Interest
- Commission Resources and Authority
- Studies and Reports
- Corporate and Criminal Fraud Accountability
- White Collar Crime Penalty Enhancements
- Corporate Tax Returns
- Corporate Fraud and Accountability

Since many of the SOX requirements do not directly affect ACE or its up-stream parents,<sup>102</sup> they will not be addressed in our report. Instead, the focus of our review will be on the key SOX requirements with which public company management and boards of directors must comply. In addition, other relevant New York Stock Exchange (NYSE) rules or SEC requirements are also addressed.

**Company Commitment to SOX Compliance** - PHI and its subsidiaries have directed a significant amount of attention to SOX compliance since the issuance of SOX in 2002. This is evidenced by the following:

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<sup>101</sup> Response to Discovery OC-149.

<sup>102</sup> As a sub-registrant and non-accelerated filer, ACE did not become subject to SOX Section 404 (management assessment of internal controls) until year-end 2007 (see response to Discovery, OC-650). This fact, combined with the centralized handling of the function by PHI management, dictates that much of the discussion surrounding SOX compliance will be at the PHI consolidated level.

- Creation of a fully-dedicated SOX Compliance Unit reporting directly to the CFO whose department's primary responsibilities include the coordination of consistent, company-wide activities to comply with SOX and management oversight of key processes and internal controls (3 employees);<sup>103</sup>
- Assignment of 9 additional SOX Coordinators embedded throughout the utilities, shared services, and non-regulated business units whose duties include, but are not limited to, monitoring and directing compliance efforts within their areas, training front-line employees on internal controls, and testing and documenting internal control compliance;<sup>104</sup>
- Delegation of between 4,000 and 6,000 budgeted hours of internal audit effort to supplement the compliance testing of the external auditors<sup>105</sup> and the SOX Compliance Unit in 2007 and 2008;<sup>106</sup>
- Incurrence of \$740,000 and \$2,470,000 in 2006 and 2007, respectively, to retain outside consultants to assist the Company in complying with SOX;<sup>107</sup>
- Reinforcing SOX objectives by offering third-party training opportunities to employees;<sup>108</sup>
- Purchase of specialized software (Certus) to monitor on-going compliance with SOX requirements;<sup>109</sup>
- Requiring that all management employees and contractors must score 80 percent or higher on an annual SOX quiz as part of the Company's annual certification process beginning in 2008;<sup>110</sup> and
- Presentation of on-going SOX compliance progress to the Audit Committee of the Board of Directors at every regularly scheduled meeting.<sup>111</sup>

While the previous steps taken by PHI give an indication of the importance placed on SOX compliance by PHI and its subsidiaries, they do not measure the effectiveness of these efforts.

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<sup>103</sup> Responses to OC-165 (Compliance Unit Charter, pp. 1-2) and OC-309.

<sup>104</sup> Responses to OC-165 (Compliance Unit Charter, pp. 4-5) and OC-169.

<sup>105</sup> SOX refers to the external auditor as the "registered public accounting firm . . . that performs for any issuer any audit . . ." (Section 201(g)). For simplicity, Overland will refer to this firm as the "external auditor."

<sup>106</sup> Response to Discovery, OC-299 (2007 and 2008 Internal Audit Plans).

<sup>107</sup> Response to Discovery, OC-155.

<sup>108</sup> Responses to Discovery, OC-291 and OC-306.

<sup>109</sup> Interview with Anton Zeithammel, Manager, Sarbanes-Oxley Compliance Process (December 8, 2008).

<sup>110</sup> Responses to Discovery, OC-163 and OC-164 (Corporate Business Policies: Annual Certification Process) and OC-169. There are two different SOX quizzes – one is entitled "Sarbanes-Oxley: Overview" which is completed by the ELT and executives below the ELT and the other is entitled "Sarbanes-Oxley: COSO-Based Internal Controls" which is completed by all other management employees (see response to Discovery, OC-300).

<sup>111</sup> Observed during review of Audit Committee minutes from January 1, 2007 to April 23, 2008.

In the following section, we have identified some of the more important requirements of SOX and the Company's compliance with them.

**SOX Requirements** - Of particular importance to public companies are the following SOX requirements:

A. Certification of 10-Q and 10-K reports by the "principal executive officer" and "principal financial officer" (Section 302).

According to SOX, each quarterly and annual financial report filed with the SEC (Forms 10-Q and 10-K) must include a certification by the principal executive and financial officers.

Included with every 10-Q and 10-K issued since January 1, 2005 for both PHI and ACE is a certification signed by the applicable CEO and CFO. To paraphrase, both of the officers for each company certify that all material facts have been disclosed, that the financial statements are fairly presented in all material respects, that they are responsible for establishing and maintaining internal controls related to financial reporting and related disclosures, that they have evaluated the effectiveness of these internal controls, that they have disclosed any changes to these internal controls, and that they have kept the external auditors and audit committee of the board of directors apprised of any significant problems with internal controls over financial reporting. We noted no reported exceptions to these certifications in our review.

According to the Company, these officer certifications are supported by sub-certifications signed by business unit and financial leaders as well as others who play an important role in the preparation of external financial statements.<sup>112</sup>

Attachment 8-5 is the certification language included with the September 30, 2007 Form 10-Q for ACE which is representative of language incorporated at other times during the audit period.

B. Management assessment of internal controls (Section 404).

SOX calls for management to state its responsibility for and assessment of the Company's internal controls over financial reporting. In addition, the external auditors must attest to this assessment as part of its audit of the Company's financial information.

As part of its annual Form 10-K filing, PHI management ". . . concluded that its internal control over financial reporting was effective . . ." as of year-end in 2006, 2007, and 2008.<sup>113</sup> As a non-accelerated filer and sub-registrant, ACE management did not need to

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<sup>112</sup> Response to Discovery, OC-165.

<sup>113</sup> 2006 PHI Form 10-K (p. 139), 2007 PHI Form 10-K (p. 142), and 2008 PHI Form 10-K (p. 146).



formally document its assessment of internal controls until December 31, 2007,<sup>114</sup> which it did without noting any exceptions (e.g., material weaknesses).

PricewaterhouseCoopers LLP (PwC) issued unqualified opinions on PHI's internal control assessment as of December 31, 2006; December 31, 2007; and December 31, 2008. Although ACE management had to incorporate its assessment of its internal controls in the December 31, 2007 Form 10-K, PwC was not required to and did not opine on this assessment.<sup>115</sup>

A discussion of the deficiencies in internal controls identified by the Company and the external auditors can be found in our review of internal controls. The significance of these deficiencies did not rise to a level that required disclosure by either the Company or the external auditor.

C. Auditor independence (Title II).

To mitigate some of the conflicts of interests that external auditors faced when providing services to audit clients, SOX put in place certain restrictions on the interactions between company management and external auditors. They include the following:

1. Reporting of the external auditor to the Audit Committee of the Board of Directors (Section 204);

SOX requires a direct line of communication by the external auditors to the Audit Committee of the Board of Directors on certain matters.

In the case of PHI, the decision to retain, terminate, compensate, and manage the external auditors lies directly with the Audit Committee.<sup>116</sup> The PHI Audit Committee Charter specifically requires that the Audit Committee review with the external auditor the company's internal controls, the external auditor's views of company personnel, the cooperation or lack thereof afforded the external auditor during the audit, unusual transactions, recommendations, "passed" audit adjustments, communications between the external auditor's local and national offices concerning the Company's accounting, and management or internal control letters.<sup>117</sup> Based on our review of the minutes, the Audit Committee met

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<sup>114</sup> Response to Discovery, OC-650.

<sup>115</sup> Response to Discovery, OC-287 (First Quarter 2007 Sarbanes-Oxley Compliance Update presented at the April 25, 2007 Audit Committee meeting, p. 14).

<sup>116</sup> ACE does not have its own audit committee. According to the Company, ACE matters are addressed by PHI's Audit Committee (see responses to Discovery, OC-163 and OC-164).

<sup>117</sup> Responses to Discovery, OC-163 and OC-164 (PHI Audit Committee Charter: Committee Duties and Responsibilities Nos. 1, 2, 7, and 14). Section 204 also requires "timely report[ing]" of external auditor required communications as well as the communication of the external auditor's preferred accounting treatment when alternative treatments are available. These are not explicitly included in the PHI Audit Committee Charter as they are considered external auditor responsibilities (see response to Discovery, OC-876).

with representatives of the external auditors at every regularly scheduled committee meeting in 2007 and early 2008.

2. The prohibition of certain services performed by the external auditor (Section 201);

SOX prohibits PwC, PHI's and ACE's external auditor, from performing a wide range of ancillary non-audit services including, but not limited to, bookkeeping, financial information systems design and implementation, appraisal or valuation services, internal audit outsourcing, and human resources.

The Company reported that the only other service provided by PwC to PHI and its affiliates during the 2005 to 2007 timeframe was training – a service not specifically prohibited by SOX.<sup>118</sup>

3. Pre-approval of services provided by the external auditor by the Audit Committee (Section 202);

SOX requires that all audit and non-audit services provided by the external auditor must be pre-approved by the audit committee of the Company. However, it does make an exception for de minimis non-audit services under certain circumstances. In those limited cases, an audit committee can delegate its pre-approval authority to one or more members.

PHI and ACE state that neither obtained services from PwC, the companies' external auditor, that were not pre-approved by the PHI Audit Committee.<sup>119</sup> Our review of the Audit Committee minutes indicates that on two different occasions (July 25, 2007 meeting and October 24, 2007), the Chairman of the Audit Committee pre-approved PwC services on behalf of the committee as permitted under the PHI "Policy on the Approval of Services Provided by the Independent Auditor."<sup>120</sup> The amounts involved were \$14,000 and \$150,000, respectively.<sup>121</sup>

Section VIII (Delegation) of the Company's pre-approval policy states the following:

The Audit Committee hereby delegates to the Chairman of the Audit Committee the authority to approve, upon receipt of the documentation [previously defined], on a case-by-case basis any non-audit services of the types referred to in Sections IV, V and VI above (i.e. an audit-related, tax or other service) at any time other than at a meeting of the Audit Committee. The Chairman shall

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<sup>118</sup> Response to Discovery, OC-155.

<sup>119</sup> Response to Discovery, OC-156.

<sup>120</sup> Responses to Discovery, OC-163 and 164.

<sup>121</sup> Review of Audit Committee minutes and response to Discovery, OC-877.

report any services so provided to the Audit Committee at its next regularly scheduled meeting.

As the policy is currently written, the Chairman of the Audit Committee has no restrictions on the amount of fees he can commit the Company to pay for eligible products or services purchased from the external auditors between regularly scheduled Audit Committee meetings. While there is no evidence in our review of the Audit Committee minutes that this authority was abused in any way, it makes good business sense to set an upper limit or cap on the amount of products or services that one person can approve. This not only protects the Company's financial interests but also the director from potential second-guessing. At least one PHI board member indicated that such a cap was in place at his/her company.

We recommend the Company consider setting a dollar cap on the delegation authority provided to the Chairman of the Audit Committee for eligible products and services offered by the external auditor between regularly scheduled Audit Committee meetings.<sup>122</sup>

4. Mandatory audit partner rotation (Section 203).<sup>123</sup>

SOX requires that the lead audit partner of the external auditor rotate off the engagement every five years.

In 2008, PwC's lead engagement partner rotated off the PHI and ACE audits.<sup>124</sup> This partner had assumed his responsibilities after the 2003 Form 10-K was filed in early 2004.<sup>125</sup>

5. Disclosures by the external auditor.

In addition to the SOX requirements concerning external auditor independence that were incorporated in the SOX Compliance discussion, SOX also authorizes the Public Company Accounting Oversight Board (PCAOB) to establish independence standards and rules as it sees fit (Section 103). Rule 3600T of the

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<sup>122</sup> The dollar cap could be expressed as either a specific dollar amount or a percentage of the total fees paid to the external auditor. Products and services exceeding the cap would need to be approved by the entire Audit Committee at a regular or special meeting.

<sup>123</sup> On a related note, SOX called for a study to be performed by the United States General Accounting Office (GAO) on the subject of mandatory audit firm rotation (Section 207) as a possible method to improve external auditor independence. In November 2003, the GAO released the results of its study, which concluded that the SEC and the PCAOB monitor the effectiveness of the other SOX requirements first before mandating that audit firms be rotated. By charter, the PHI Audit Committee is to consider the regular rotation of the external audit firm. In our interviews of Audit Committee members, none of the directors asked thought that it made sense for PHI to change auditing firms, primarily because there is a limited pool of alternative qualified firms from which to select.

<sup>124</sup> Interview with Paul Friel, Vice President and Chief Auditor (November 17, 2008). Mr. Friel's title is also at times listed as Vice President and General Auditor or Chief Audit Executive (CAE).

<sup>125</sup> Response to Discovery, OC-878.

PCAOB adopts the Independence Standards Board Standard No. 1 on an interim basis.<sup>126</sup> This standard requires that at least on an annual basis the auditor shall:

- a. Disclose to the audit committee of the company . . . , in writing, all relationships between the auditor and its related entities and the company and its related entities that in the auditor’s professional judgment may reasonably be thought to bear on independence;
- b. Confirm in the letter that, in its professional judgment, it is independent of the Company within the meaning of the [Securities] Acts;

c. And discuss the auditor’s independence with the audit committee. Our review of the PHI Audit Committee minutes for 2007 and early 2008 indicates that a letter was provided to the committee by PwC in both February 2007 and February 2008 that attests to the auditor’s independence, and the matter was a topic of discussion at the meetings.<sup>127</sup>

D. “Whistleblower” communications (Section 301).

SOX requires the audit committee to establish procedures concerning the reporting of complaints to the Company related to accounting, internal accounting controls, and auditing matters. With respect to employees, they are to be provided an avenue to report their concerns confidentially and anonymously.

PHI’s Audit Committee Charter specifically lists as one of the committee’s duties and responsibilities the establishment of procedures over a complaint process mirroring the requirements of SOX.<sup>128</sup> The details of these procedures are spelled out in the Company’s Corporate Governance Guidelines concerning communications with directors. Interested parties are encouraged to contact any director directly with the option of doing so either confidentially or anonymously. The address provided for these communications is “in care of” the Corporate Secretary. Employees can also send their complaints to the Vice President and General Auditor (who reports directly to the Audit Committee) in writing or to the Ethics Officer hotline.<sup>129</sup>

Based on our discussions with the Vice President and General Auditor, Ethics Officer, and board members, there have been relatively few complaints submitted over the past

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<sup>126</sup> The Independence Standards Board was created by the SEC and the American Institute of Certified Public Accountants (AICPA) to develop and maintain independence standards for auditors of SEC registrants.

<sup>127</sup> Response to Discovery, OC-286 (restricted).

<sup>128</sup> Responses to Discovery, OC-163 and OC-164 (Audit Committee Duties and Responsibilities No. 19).

<sup>129</sup> Responses to Discovery, OC-163 and OC-164 (Corporate Governance Guidelines, Section N “Communications with Directors”).

couple of years. There is a general consensus among these individuals that the process is functioning as intended.<sup>130</sup>

E. Code of ethics (Section 406).

SOX requires that a company disclose its code of ethics for senior financial officers. If the code is changed or waived, immediate disclosure must be made.

According to PHI's Corporate Governance Guidelines, "the Company has an array of Business Policies which, in their totality, constitute its code of business conduct and ethics. These policies are applicable according to their specific terms to all Directors, Officers and employees of the company."<sup>131</sup> Additionally, waivers of these requirements for any director or executive officer must be approved by the Board of Directors and disclosed promptly to shareholders through the filing of a Form 8-K.

We noted that both the PHI Corporate Governance Guidelines and the Corporate Business Policies were readily accessible on the Company's website. No waivers to the code of ethics have been granted to any director, executive officer, or senior financial officer since January 1, 2005.<sup>132</sup>

F. Audit committee financial expert (Section 407).

SOX requires a company to disclose that it has at least one financial expert on its audit committee, and if not, an explanation for such omission. Evidence of being a "financial expert" includes experience with GAAP financial statements (both preparation and auditing), with use of estimates in setting accruals and/or reserves, with internal accounting controls, and with the responsibilities of audit committees.

Per review of the Audit Committee minutes for the period from January 1, 2007 to May 5, 2008; each director completes an annual Directors' and Officers' Questionnaire, a portion of which relates to financial acumen. Based on the responses to this questionnaire, in both 2007 and 2008, all but one of the Audit Committee members was designated a "financial expert."<sup>133</sup> We concur with these determinations.

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<sup>130</sup> Interviews with Paul Friel, Vice President and Chief Auditor (November 17, 2008), William Torgerson, Ethics Officer (December 9, 2008), and various board members.

<sup>131</sup> Responses to Discovery, OC-163 and OC-164 (Corporate Governance Guidelines, Section M "Code of Business Conduct and Ethics").

<sup>132</sup> Response to Discovery, OC-879.

<sup>133</sup> March 29, 2007 (p. 11) and March 27, 2008 (p. 11) PHI Proxy Statements.

## Other Relevant NYSE Rules and SEC Requirements

### A. General

Depending on the nature of the requirement, SEC compliance is handled by either the Financial Reporting Department within the Controller's Group or the Corporate Secretary's Office. The recurring financial reports (Forms 10-K and 10-Q) are prepared by the Financial Reporting Department. This department stays abreast of current SEC regulations in a number of ways, including a dedicated accounting technical research department, periodic training, subscriptions to research software, and PwC disclosure checklists. Form 8-K disclosures are a subject of weekly meetings of key accounting personnel. With respect to the preparation of proxy statements and disclosures related to the sales of securities, the Office of the Corporate Secretary takes the lead on these matters.<sup>134</sup>

According to company management, they are not aware of any material matters of non-compliance with SEC requirements by PHI or ACE in 2007 or 2008.<sup>135</sup> The same holds true for NYSE rule compliance.<sup>136</sup>

### B. Board member independence

NYSE rules mandate that a majority of directors and all audit committee, corporate governance/nominating committee, and compensation committee members must be independent (Sections 303A.01, 303A.04, 303A.05, and 303A.07). To arrive at the conclusion that a director is independent, the NYSE provides examples of conflicts of interests that would disqualify him or her. These include ties to the Company through recent employment, non-board compensation, external auditor affiliation, or significant business dealings.<sup>137</sup>

In the latest proxy statement, the Company disclosed that one of its Board members, Ms. Pauline Schneider, has been employed by law firms that have provided outside services to PHI or its subsidiaries. Ms. Schneider asserts that she did not work on these particular matters nor direct them, and her compensation was not affected by her law firm's participation in these matters. The Board of Directors examined the Company transactions with these law firms and concluded that Ms. Schneider received no special benefits from these corporate business relationships and the fees involved were below the materiality thresholds established in the Corporate Governance Guidelines.

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<sup>134</sup> Response to Discovery, OC-676.

<sup>135</sup> Response to Discovery, OC-676. However, PHI has received SEC comment letters in the past that required changes to disclosures in financial statements filed with the SEC. Most of these changes were prospective in nature (response to Discovery, OC-313 (restricted)).

<sup>136</sup> Response to Discovery, OC-881.

<sup>137</sup> Response to Discovery, OC-282 (restricted).

Therefore, the Board concluded that Ms. Schneider was not disqualified as an independent Board member.<sup>138</sup>

Ultimately, ten of the twelve board members (all but Dennis Wraase and William Torgerson) were determined to be independent by the Board, and the basis for this determination was disclosed.<sup>139</sup> Based on our review of the minutes and the most recent proxy statements, neither Messrs. Wraase nor Torgerson were members of the Audit Committee, Compensation/Human Resources Committee, or Corporate Governance/Nominating Committee from 2007 to present. Therefore, PHI met the NYSE rules that all audit committee members be independent.

C. Internal audit function

NYSE rules require a listed company to have an internal audit function (Section 303A.07).

In 2007 and 2008, PHI had an Internal Audit Department with between seventeen and eighteen staff.<sup>140</sup> The head of the department, Paul Friel, reports dually to the Chairman of the Audit Committee and to the CEO. Based on our review of the Audit Committee minutes, Mr. Friel routinely meets in executive session with all members of the committee.

Further discussion of the Internal Audit function is documented in our review of internal controls.

## **Oversight of Significant Litigation**

The PHI General Counsel provides PHI senior management with a monthly report addressing any major developments in pending judicial or administrative proceedings. Significant developments are also reported at various meetings; principally Executive Leadership Team and Regulatory Policy Committee meetings. Such information may also be circulated through emails to senior management.

The PHI Board is informed of major litigation by communications from the Chairman. This may include information in advance board meeting materials or verbal reports to the Board. Aside from this process, the Chief Legal Officer/General Counsel may directly address the Board on major litigation matters, as warranted.<sup>141</sup>

As of year-end 2008, PHI and its subsidiaries had no litigation pending arising from corporate governance issues.<sup>142</sup>

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<sup>138</sup> Response to Discovery, OC-172.

<sup>139</sup> March 26, 2009 PHI Proxy Statement (pp. 8-10).

<sup>140</sup> Response to Discovery, OC-288 (restricted).

<sup>141</sup> Response to Discovery, OC-637.

<sup>142</sup> Response to Discovery, OC-636.

PHI has taken the position that litigation matters reported to the Board of Directors are privileged attorney-client communications.<sup>143</sup> However, significant litigation is publicly reported in disclosures contained in SEC filings. The following is a summary of significant litigation relevant to the audit period, including matters specific to ACE.

**Settlement of Mirant Bankruptcy Claims.** In 2000, Pepco sold most of its generating assets to Mirant Corporation. The transaction included the assignment of a PPA from Panda. In 2003, Mirant filed bankruptcy, upon which the Panda PPA became an issue. Ultimately, the matter was settled in 2007 by a \$414 million payment to Pepco in exchange for responsibility for the Panda PPA costs in excess of market over the remaining contract period. In September 2008, Pepco Transferred the Panda PPA and a payment to Sempra, terminating any further rights or responsibilities of Pepco under the PPA.

**Personal Injury Asbestos Litigation.** In 1993, complaints were filed in the Baltimore area against Pepco and other parties alleging negligence in not providing a safe work environment for employees. Since this time, about 400 cases have been dismissed, with approximately 180 cases still pending as of March 31, 2009. About 90 of these remaining cases were filed after December 2000, and were tendered to Mirant pursuant to the Asset Purchase and Sale Agreement. The aggregate damages sought for the remaining cases now outstanding is approximately \$360 million. The ultimate award of damages, if any, and insurance offsets is unknown.

**IRS Mixed Service Cost Issue.** In 2001, Pepco, DPL and ACE changed their method of accounting for certain costs otherwise previously capitalized for income tax purposes. This resulted in incremental tax cash flow benefits of about \$205 million (\$49 million related to ACE). In 2005, the IRS issued a revenue ruling limiting the revised accounting employed by the Company. A \$35 million settlement (\$6 million for ACE) of the 2001-2004 returns was reached in March 2009.

**ACE Sale of B.L. England Generating Facility.** In February 2007, ACE sold its B.L. England generating facility to RC Cape May Holdings, an affiliate of Rockland Capital Energy Investments. In July 2007, ACE received a claim for indemnification from RC Cape May under the purchase agreement for \$25 million arising from a contract for terminal services (a purchased asset) dispute where Citgo Asphalt Refining alleged that ACE had failed to renew its contract in a timely manner. Arbitration hearings were held in November 2008.

**Environmental Litigation.** Although penalties assessed for environmental violations are not recoverable from utility customers, clean-up costs incurred by the utilities, including ACE, are includable in rates. The following environmental matters related to ACE have been disclosed by the Company.

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<sup>143</sup> Response to Discovery, OC-288 (restricted).



- **Delilah Road Landfill Site.** In 1991, the New Jersey Department of Environmental Protection (NJDEP) identified ACE as a potentially responsible party (PRP) at the Delilah Landfill site in Egg Harbor Township. In 1993, ACE and other parties signed a consent order to remediate the site. In August 2007, the PRP group agreed to pay the USEPA \$81,400 in satisfaction of costs it had incurred associated with this site. ACE currently estimates \$550,000 to \$600,000 as its share of post-remedy operation and maintenance costs.
- **Frontier Chemical Site.** In June 2007, the New York Department of Environmental Conservation identified ACE as a PRP at the Frontier Chemical Waster Processing Company in Niagara Falls, based on 7,500 gallons of hazardous waste being sent by ACE to the site. ACE has entered a PRP agreement to address any ACE responsibility associated with the site.
- **Franklin Slag Pile Superfund Site.** In November 2008, the EPA informed ACE that it was considered a PRP with potential liability for the site. The claim arises from the sale of boiler slag from 1978 to 1983 from the B.L. England generating facility. EPA has estimated a total cost of \$6 million for the remediation of hazardous materials. ACE's position is that the sale of slag was not an arrangement for the disposal of hazardous substances, and that there is no basis for liability at this site.

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## Attachment 8-1

## PHI Board of Directors Biographical Information

Name of Director	Biographical Information	Election Year	Recent Committee Assignments	Recent Committee Chairmanships
Jack B. Dunn, IV	Age 57, since October 1995 has been Chief Executive Officer and since October 2004 has been President of FTI Consulting, Inc. He has served as a Director of FTI since 1992 and served as Chairman of the Board from December 1998 to October 2004. Mr. Dunn is a limited partner of the Baltimore Orioles and is a director of NexCen Brands, Inc.	2004	Compensation/Human Resources Committee; Corporate Governance/Nominating Committee	Compensation/Human Resources Committee
Terence C. Golden	Age 63, since 2000 has been Chairman of Bailey Capital Corporation in Washington, D.C. From 1995 until 2000, Mr. Golden was President, Chief Executive Officer and a director of Host Marriott Corporation. He serves as a director of Host Hotels and Resorts, Inc. and the Morris & Gwendolyn Cafritz Foundation. Mr. Golden also currently serves as Chairman of the Federal City Council. He was a director of Potomac Electric Power Company ("Pepco") from 1998 until it merged with Conectiv on August 1, 2002.	2002	Audit Committee; Finance Committee	Finance Committee
Frank O. Heintz	Age 64, is retired President and Chief Executive Officer of Baltimore Gas and Electric Company a position he held from 2000 through 2004. From 1982 to 1995, Mr. Heintz was Chairman of the Maryland Public Service Commission. Previously he served as agency head of the Maryland Employment Security Administration and was an elected member of the Maryland legislature.	2006	Finance Committee; Compensation/Human Resources Committee	None
Barbara J. Krumsiek	Age 55, since 1997 has been President and Chief Executive Officer and since 2006 Chair of Calvert Group, Ltd. She serves as a trustee or director for 40 Calvert-sponsored mutual funds, including serving as Chair of the Calvert Variable Series of funds.	2007	Audit Committee	None
George F. MacCormack	Age 64, is retired Group Vice President, DuPont, Wilmington, Delaware, a position he held from 1999 through 2003. He was previously Vice President and General Manager (1998), White Pigments & Mineral Products Strategic Business Unit and Vice President and General Manager (1995), Specialty Chemicals Strategic Business Unit for DuPont. He was a director of Conectiv from 2000 until it merged with Pepco on August 1, 2002.	2002	Corporate Governance/Nominating Committee; Executive Committee; Finance Committee	Corporate Governance/Nominating Committee
Richard B. McGlynn (1)	Age 69, is an attorney. From 1995-2000, he was Vice President and General Counsel of United Water Resources, Inc., Harrington Park, New Jersey and from 1992-1995, he was a partner in the law firm LeBoeuf, Lamb, Greene & MacRae. He was a director of Atlantic Energy, Inc. from 1986 to 1998. He was a director of Conectiv from 1998 until it merged with Pepco on August 1, 2002.	2002	Corporate Governance/Nominating Committee; Audit Committee; Compensation/Human Resources Committee	Corporate Governance/Nominating Committee
Lawrence C. Nussdorf	Age 61, since 1998 has been President and Chief Operating Officer of Clark Enterprises, Inc. He has also been Vice President and Treasurer of Clark Construction Group, LLC since 1977. He serves as a director of CapitalSource Inc. He has been a director of the Company since August 1, 2002, and was a director of Pepco from 2001 until it merged with Conectiv on August 1, 2002. He currently serves as Lead Independent Director.	2002	Audit Committee; Compensation/Human Resources Committee; Corporate Governance/Nominating Committee; Executive Committee	Executive Committee

Attachment 8-1

Name of Director	Biographical Information	Election Year	Recent Committee Assignments	Recent Committee Chairmanships
Frank K. Ross	Age 64, is retired managing partner for the mid-Atlantic Audit and Risk Advisory Services Practice and managing partner of the Washington, D.C. office of the accounting firm KPMG LLP, positions he held from July 1, 1996 to December 31, 2003. He is currently a Visiting Professor of Accounting at Howard University, Washington, D.C. and the Director of its Center for Accounting Education. He is a director of Cohen & Steers Mutual Funds and serves as a director of 22 of these Funds. Mr. Ross serves on The Greater Washington, D.C. Urban League, Howard University Math and Science Middle School and The Hoop Dreams Scholarship Fund boards.	2004	Audit Committee; Compensation/Human Resources Committee	Audit Committee
Pauline A. Schneider	Age 64, joined the Washington office of the law firm of Orrick, Herrington & Sutcliffe LLP in September 2006. From 1985 to September 2006, she was with the law firm of Hunton & Williams. From October 2000 to October 2002, Ms. Schneider served as Chair of the Board of MedStar Health, Inc. From 1998 to 2002, she chaired the Board of The Access Group, Inc. She continues her service on the Access Group board. She is a director of Diamond Management and Technology Consultants. She was a director of Pepco from 2001 until it merged with Conectiv on August 1, 2002.	2002	Compensation/Human Resources Committee; Corporate Governance/Nominating Committee; Executive Committee; Finance Committee	None
Lester P. Silverman	Age 61, is Director Emeritus of McKinsey & Company, Inc., having retired from the international management consulting firm in 2005. Mr. Silverman joined McKinsey in 1982 and was head of the firm's Electric Power and Natural Gas practice from 1991 to 1999. From 2000 to 2004, Mr. Silverman was the leader of McKinsey's Global Nonprofit Practice. Previous positions included Principal Deputy Assistant Secretary for Policy and Evaluation in the U.S. Department of Energy from 1980 to 1981 and Director of Policy Analysis in the U.S. Department of the Interior from 1978 to 1980. Mr. Silverman is currently an Adjunct Lecturer at Georgetown University, Washington, D.C., and a trustee of several national and Washington, D.C.-area nonprofit organizations.	2006	Corporate Governance/Nominating Committee; Finance Committee	None
William T. Torgerson (1)	Age 63, was Vice Chairman of the Company from June 1, 2003 to May 15, 2009 and has been Chief Legal Officer of the Company since March 15, 2008. From August 1, 2002 to March 14, 2008, he was General Counsel of the Company. From August 1, 2002 to June 2003, he was also Executive Vice President of the Company.	2004	Executive Committee	None
Dennis R. Wraase (1)	Age 64, was Chairman and Chief Executive Officer of the Company. Beginning in May 2004 he was been Chairman of Pepco, Atlantic City Electric Company and Delmarva Power & Light Company. He was Chief Executive Officer from August 2002 through October 2005. Mr. Wraase was President of the Company from August 2002 to March 14, 2008. From August 2002 through May 2003, Mr. Wraase was Chief Operating Officer of the Company. Mr. Wraase became CEO of the Company in June 2003. He was Chairman from May 2004 to May 2009.	2001	Executive Committee	None

Attachment 8-1

Name of Director	Biographical Information	Election Year	Recent Committee Assignments	Recent Committee Chairmanships
Joseph M. Rigby	Age 52, has been President and Chief Executive Officer of the Company since March 1, 2009, and he was chosen as Chairman of the Company on May 15, 2009. From March 2008 to March 2009, Mr. Rigby served as President and Chief Operating Officer of the Company and from September 2007 to March 2008, he served as Executive Vice President and Chief Operating Officer of the Company. He was Senior Vice President of the Company from August 2002 and Chief Financial Officer from May 2004 to September 2007. From September 2007 to March 2009, Mr. Rigby was President and Chief Executive Officer of the Company's utility subsidiaries. He has been Chairman of the Company's utility subsidiaries since March 1, 2009.	2009	Executive Committee	None
Patrick T. Harker	Age 50, since 2007 has been President of the University of Delaware, Newark, Delaware. From 2000-2007, he was Dean of the Wharton School of the University of Pennsylvania and served as a Professor of Electrical and Systems Engineering in the University of Pennsylvania's School of Engineering and Applied Science. Since 2000, he has served as a Trustee of the Goldman Sachs Trust and Goldman Sachs Variable Insurance Trust; in 2004 he became a Member of the Board of Managers of the Goldman Sachs Hedge Fund Partners Registered Fund LLC. Dr. Harker was elected to the PHI Board of Directors on May 15, 2009.	2009	Audit Committee	None
(1) Dennis Wraase, William Torgensen, and Richard McGlynn stepped down from PHI's Board in 2009. Sources: 2008 and 2009 PHI Proxy Statements Schedule 14a filed with the SEC; 'Committee Information' on PepcoHoldings.com				

**PHI and Subsidiary Officers Biographical Information**

Name of Officer	Title	Organization	Experience	Education
Dennis R. Wraase	Former Chairman and CEO	PHI	Since May 2004 he has been Chairman of Pepco, Atlantic City Electric Company and Delmarva Power & Light Company. He was Chief Executive Officer from August 2002 through October 2005. Mr. Wraase was President of the Company from August 2002 to March 14, 2008. From August 2002 through May 2003, Mr. Wraase was Chief Operating Officer of the Company. Mr. Wraase became CEO of the Company in June 2003. He has been Chairman since May 2004.	He earned a Bachelor's degree in Accounting from the University of Maryland and a Masters in Finance from George Washington University.
William T. Torgerson	Former Vice Chairman and Chief Legal Officer	PHI	He has been Vice Chairman of the Company since June 1, 2003 and has been Chief Legal Officer of the Company since March 15, 2008. From August 1, 2002 to March 14, 2008, he was General Counsel of the Company. From August 1, 2002 to June 2003, he was also Executive Vice President of the Company.	He earned an A.B. in Politics from Princeton University and he earned a law degree from the University of Maryland School of Law.
Joseph M. Rigby	Chairman and CEO	PHI	Mr. Rigby joined Atlantic City Electric in 1979 and advanced through a number of management positions in Atlantic City Electric. His responsibilities have included accounting, financial services, treasury operations, business transformation, human resources, and the Atlantic City Electric/Delmarva Power merger transition team. Following the merger that formed Conectiv, he was Vice President/General Manager of Gas Delivery, then Vice President/General Manager of Electric Delivery. He was elected President, Conectiv Power Delivery in 2002. From May 2004 to September 2007, he served as Senior Vice President and Chief Financial Officer of PHI and was responsible for all financial activity as well as investor relations.  From September 2007 to March 2008, Mr. Rigby served as Executive Vice President and Chief Operating Officer. He was responsible for the day-to-day operations of Pepco, Delmarva Power and Atlantic City Electric Company, along with Information Technology and Corporate Communications.	He earned a Bachelor's degree in Accounting from Rutgers University and a Master's degree in Business Administration from Monmouth University.
Paul H. Barry	Senior Vice President and Chief Financial Officer	PHI	Previously he was Senior Vice President and Chief Development Officer of Duke Energy where he was responsible for corporate development including mergers and acquisitions, and held several positions of increasing responsibility. He also gained experience at General Electric, CBS (formerly Westinghouse), and Amoco, and is an alumnus of GE's highly regarded Financial Management Program and Corporate Audit Staff.	He earned his BS, magna cum laude, in Finance from Northeastern University, and a MBA from Harvard Business School.
Kirk J. Emge	Senior Vice President and General Counsel	PHI	Before coming to Pepco, Mr. Emge served as General Counsel to the Public Service Commission of Maryland (1983-1986), the Commission's Chief Hearing Examiner (1978-1983) and a Commission Hearing Examiner (1974-1978). Mr. Emge joined Pepco in 1986 as Deputy General Counsel and advanced through several executive and legal capacities. He was elected Vice President - Regulatory Law in April 1994. In this position within the Legal Services Group, he was responsible for representing and coordinating the Company's activities before regulatory agencies, principally the Maryland and District of Columbia Public Service Commissions and the Federal Energy Regulatory Commission. He became Vice President - Legal Services for Pepco responsible for the management of Pepco's Legal Services group in April 1998. Mr. Emge became Vice President - Legal Services, Pepco Holdings, Inc. in August 2002 when the merger of Potomac Electric Power Company and Conectiv to form Pepco Holdings, Inc. was completed.	He earned a BA from The Johns Hopkins University and a Juris Doctorate from the University Of Maryland School Of Law.
Beverly L. Perry	Senior Vice President for Government Affairs and Public Policy	PHI	She practiced law with Frank, Bernstein, Conaway & Goldman prior to joining Potomac Electric Power Company. Other legal positions held by Ms. Perry included law clerk for Judge Marian Blank Horn of the U.S. Claims Court and attorney advisor with the U.S. Department of Interior, Office of the Solicitor.	She received her law degree from Georgetown University and her undergraduate degree from George Washington University.
Ronald K. Clark	Vice President and Controller	PHI	Prior to joining PHI in June 2005, Mr. Clark held various positions as Controller or within the Controller's organizations for MCI, Allegheny Energy and Lockheed Martin. He started his career with Ernst & Young.	Mr. Clark earned a Bachelor of Business Administration degree in Accounting from the College of William and Mary.
Kenneth P. Cohn	Vice President and CIO	PHI	Mr. Cohn joined Pepco in 1977 as Manager, On-Line Systems Department. He was promoted to Manager, Corporate Systems Division in 1982 and Manager, Computer Services Group in 1987. He was elected to his current position in 1999.  Prior to joining PHI, Mr. Cohn worked in various IT positions for Control Data Corp./Commercial Credit Corp. He also served as a systems analyst in the U.S. Army and as a systems engineer for IBM.	He holds a Bachelor's degree in Economics from Brandeis University and a Master's degree in Administration of Information Systems from George Washington University.

Name of Officer	Title	Organization	Experience	Education
Charles R. Dickerson	Vice President, Customer Care	PHI	<p>Prior to assuming his current role Mr. Dickerson served as Vice President Strategic Planning and Chief Risk Officer responsible for corporate strategic planning and enterprise risk assessment and management for PHI. Prior to that, Mr. Dickerson served as Vice President, Gas Delivery for Delmarva Power. In this capacity he was responsible for the P&amp;L of the business including all aspects of planning, engineering, construction; operations and maintenance.</p> <p>In 2003, Mr. Dickerson served as Director, Diversity &amp; HR Strategic Planning for (PHI), responsible for the development and overall coordination of PHI's diversity strategy. Inclusive to this he directed the Strategic Staffing and Supplier Diversity organizations and communicated PHI's diversity strategy and commitment to the external community.</p> <p>Mr. Dickerson joined Pepco in 1989 and served in a number of positions including Construction and Production Engineer and Production Operations Supervisor. In 1998, he was promoted to Manager Customer Operations Department and in 2000 he was promoted to Manager Customer Operations</p>	He earned a BS in Mechanical Engineering and a Master's Degree in Applied Management from the University of Maryland.
Paul W. Friel	Vice President and General Auditor	PHI	Prior to joining Potomac Electric Power Company (Pepco) in 1980 as an Audit Supervisor, Mr. Friel worked for the Maryland Department of Transportation, State Highway Administration.	He earned a BS in Accounting from the University of Baltimore, and a MBA in Finance from Loyola College.
Ernest L. Jenkins	Vice President, People Strategy & Human Resources	PHI	Mr. Jenkins joined PHI in 1998 as Manager, Organization & Employee Effectiveness & Strategic Staffing Process Owner. He was named Director, CD Human Resources & Performance Improvement in 2001. Mr. Jenkins was promoted to Vice President of People Strategy & Performance Improvement for the PHI, Power Delivery Line of Business in 2004, and Vice President of People Strategy & Human Resources in 2005.	He earned a BS in Secondary Education, with minors in psychology, sociology and health. He also earned a dual Master's degree in Human Resource Development and Management.
Anthony J. Kamerick	Vice President and Treasurer	PHI	He joined Pepco in 1970 and has held several management positions in Pepco's finance department, including both Treasurer and Comptroller. He was also Vice President and Treasurer of PCI from 1985 to 1988. As Treasurer of PHI, Mr. Kamerick oversees the Company's cash management function (including operation of the corporate money pool), pension investment administration, investor relations and shareholder services, financing, and bank relations.	He earned a BS in Accounting from the University of Maryland. He also earned a MBA in Finance from The George Washington University, and has completed the University of Michigan's Public Utility Executive Program.
Ellen Sheriff Rogers	Vice President, Deputy General Counsel, Secretary and Assistant Treasurer	PHI	In 1988, Ms. Rogers joined Potomac Capital Investment Corporation (PCI), a PHI subsidiary, as Associate General Counsel where she also served as Assistant Secretary. She became an Associate General Counsel of Pepco in 1994, Pepco's Assistant Secretary and Assistant Treasurer in 1995, and Secretary in 1997. She was named to her current position with the creation of PHI in August 2001. Prior to joining PCI, Ms. Rogers was an Associate with Shaw, Pittman, Potts & Trowbridge (now Pillsbury Winthrop Shaw Pittman LLP), a Washington, D.C. law firm where she practiced in the areas of general corporate and securities, and bankruptcy litigation and reorganization.	She is a graduate of Mount Holyoke College where she earned an A.B. degree. She received a Juris Doctorate from Northwestern University School of Law.
William M. Gausman	Senior Vice President, Asset Management and Planning	PHI	<p>He joined Pepco as a Project Engineer overseeing the construction of high voltage transmission facilities. He has served in various management positions with increasing responsibility for the operation, maintenance and construction of both the transmission and distribution systems. He served as Superintendent of Underground Lines from 1977 until 1988, and then as Manager of Electric System Operation and Construction.</p> <p>In 1998 he was promoted to General Manager Power Delivery, and in 2001 he was made General Manager, Asset Management. In August 2002, he was promoted to Vice President, Asset Management Pepco. After Pepco's merger with Conectiv Energy, he became Vice President Asset Management over the combined PHI organization.</p>	He earned a BS in Electrical Engineering Technology from Temple University.
Tsion M. Messick	Vice President, Power Delivery Transmission	PHI	Ms. Messick began her career with Atlantic City Electric in 1985 as an engineer in the System Planning Department. Since then, she has advanced through numerous leadership positions including Manager of Bulk Power, Director of Delivery Asset Management, and Director of T&D Planning and Arrangements. She is a past member of Peach Bottom/Salem and Hope Creek Nuclear Power Plant Owners Committees and was elected Chairman of the PJM Transmission Owners Committee. Ms. Messick has been involved in PJM Restructuring issues since 1993.	Graduated magna cum laude with a BS in Electrical Engineering in 1985 from Temple University. She earned a Master of Science degree in Power Engineering and Control Systems from Drexel University in 1990.
Kenneth J. Parker	(1)	(1)	(1)	(1)

Name of Officer	Title	Organization	Experience	Education
George W. Potts	Vice President, Business Transformation	PHI	Mr. Potts began his career at Delmarva Power in 1976 as an Electrical Engineer after graduating from Drexel University in Philadelphia. He held numerous positions at Delmarva Power, later to become Conectiv and then Pepco Holdings, Inc. with responsibilities in Electric System Operations, Information Systems, Telecommunications, Customer Engineering, Transmission and Distribution Construction and Maintenance, and Business Renewal.	Graduated from Drexel University.
Gary R. Stockbridge	President	Delmarva Power	Mr. Stockbridge joined Conectiv Power Delivery in 1997 to run their Retail Energy business selling electric and gas to customers in the Northeast. In 2000, Mr. Stockbridge was promoted to Vice President, Customer Care and remained in that position until 2005, when he was named President of the Delmarva Power region.  Mr. Stockbridge has more than 20 years of utility experience, having come from PECO Energy located in Philadelphia. His career has had an emphasis on enhancing customer service. His experience includes operations, marketing, and customer care in both the regulated and competitive energy fields. He was responsible for the startup of retail energy affiliates for both Conectiv and PECO Energy.	He received his undergraduate degree in engineering, and a MBA in Finance from Drexel University in Philadelphia.
J. Mack Wathen	Vice President, Regulatory Affairs	PHI	Mr. Wathen was previously Vice President, Planning, Finance and Regulation for Conectiv Power Delivery. Prior to joining Delmarva Power & Light Company in 1993, he held numerous positions with Public Service Company of New Mexico and the Public Utilities Commission of Ohio.	He earned a BS in Business Administration and Economics from Georgetown College, and a Master's degree in Management from the Robert O. Anderson Graduate School of Management at the University of New Mexico.
Arturo F. Agra	Senior Vice President, Finance and Chief Financial Officer	Conectiv Energy	Mr. Agra joined Delmarva Power in 1981. In his current role, he leads the Finance and Strategic Planning Functions for the Energy business and is responsible for the Company's equity investment in non-utility power projects. Mr. Agra is a member of the PHI Corporate Finance Committee, and Accounting Disclosure Committee.  Mr. Agra began his career at Coopers & Lybrand in the Richmond, Virginia Office. Before joining Delmarva Power, he advanced through a number of management positions in Tax, Finance, Marketing and Planning with Delmarva Power, Conectiv and PHI.	He earned a BS in Accounting from the University of Delaware, and a MBA in Finance from Saint Joseph's University.
Robert Gabbard	(1)	(1)	(1)	(1)
Albert F. Kirby, III	Senior Vice President of Generation and Engineering	Conectiv Energy	Mr. Kirby began his engineering career with Delmarva Power in June 1968. He has held a number of management positions including General Manager of Engineering, Manager of Production, and Plant Superintendent.	He earned a BS in Mechanical Engineering from the University of Delaware. He also holds a MBA from Wilmington College.
Michael J. Sullivan	Senior Vice President, Operations	PHI	Mr. Sullivan joined Potomac Electric Power Company in 1980 and advanced through a number of management positions including Manager of System Operations, General Manager of Transmission Operations & Maintenance, and Vice President of Customer Care. He became Senior Vice President of Operations for Pepco Holdings, Inc. in March 2008.	He earned a BS in Electrical Engineering Technology from Penn State University in 1980 and a MBA from Marymount University in 1987.
Debbi L Jarvis	Vice President, Corporate Communications	PHI	Ms. Jarvis has been the face and voice of Pepco, Delmarva Power and Atlantic City Electric in the companies' radio and TV commercials. Ms. Jarvis joined PHI as Manager, Media Relations at the beginning of 2004, bringing 15 years of Television and Radio news experience to PHI's Communications Department.  Before joining Pepco, Debbi co-anchored the weekend morning news at NBC4 from 1994 until December 2003. She also served as a general assignment reporter during her nine and a half years with NBC4. Ms. Jarvis also worked in Cleveland, Ohio, co-anchoring the weekday morning newscasts for the CBS affiliate.	She earned a degree in International Business from Hope College.
Michael W. Maxwell	Vice President, Asset Management	PHI	Mr. Maxwell began his Pepco career in 1987 as an engineer in the substation engineering group. Subsequent to that, he held numerous leadership positions in the substation operations field organization overseeing crews responsible for high voltage switching and tagging. In 1997, he was named manager of the overhead lines operations, maintenance, and construction organization operating in Prince George's County and the District of Columbia overseeing 100 plus company and contractor personnel. In 2001, he was named General Manager, System Operations where he was responsible for the remote operation of the electric system from Pepco's Control Center, as well as initial implementation of the company's new outage management and mobile dispatch systems.	Earned a Bachelor's degree in Electrical Engineering from Virginia Military Institute.



Name of Officer	Title	Organization	Experience	Education
Kevin McGowan	Vice President, Strategic and Financial Planning	PHI	Mr. McGowan joined the company in 1998 as Vice-President and Treasurer of Potomac Capital Investments. In 2002, he was elected Senior Vice-President and CFO of Potomac Capital Investments. During 2004, Mr. McGowan joined the Power Delivery Group as Vice President, Business Planning and Finance. He became Vice President Financial Planning and Budgeting for Pepco Holdings, Inc. in 2005 and Vice President Strategic and Financial Planning in May 2008. Prior to joining the Company, Mr. McGowan worked for Duty Free International, an international retail company, where he was Director of Treasury, Tax and Financial Analysis.	Earned a Bachelor's degree in Accounting and Business Data Systems from the University of Texas at San Antonio. He also earned a MBA in Finance from the University of Chicago.
Hallie Reese	Vice President, Safety and Strategic Services	PHI	Worked for Deloitte & Touche, LLP.	Earned a BS in Accounting with a Minor in Marketing from Rutgers University.

Note1: Information not available in discovery.

Source: Response to OC 145

## Attendance of recurring PHI meetings

Meeting	Purpose	Frequency	Other Participants	Wraase	Torgerson	Rigby	Barry	Parker
PHI Board Meeting	Discuss corporate-wide issues relating to PHI and PHI subsidiaries.	Monthly, except March June, and August	B. Perry, Sr. Vice President Government Affairs & Public Policy D. Velazquez, President & CEO Conectiv Energy J. Huffman, President & COO Pepco Energy Services K. Emge, Sr. Vice President & General Counsel (at times) P. Friel, Vice President & General Auditor (at times) E. Jenkins, Vice President People Strategy & Human Resources (at times)	x	x	x	x	
Annual Shareholders	Provide status update to shareholders	Annual	B. Perry, Sr. Vice President Government Affairs & Public Policy D. Velazquez, President & CEO Conectiv Energy J. Huffman, President & COO Pepco Energy Services	x	x	x	x	
KPI/Performance Management Meeting	Provide monthly updates on Lines of Business key KPI and financial performance	Monthly	B. Perry, Sr. Vice President Government Affairs & Public Policy D. Velazquez, President & CEO Conectiv Energy J. Huffman, President & COO Pepco Energy Services W. Gausman, Sr VP, Asset Management and Planning M Sullivan, Sr VP, Operations H Reese, VP Safety and Strategic Services C Dickerson, VP Customer Care S Wisniewski, VP Operations M Poncia, Director Gas Delivery G Potts, VP Business Transformation M Maxwell, VP Asset Management K Cohn, VP and CIO D Jarvis, VP Corporate Communications - Power Delivery K. Emge, Sr. Vice President & General Counsel T Messick, VP Power Delivery Transmission P. Friel, Vice President & General Auditor E. Jenkins, Vice President People Strategy & Human Resources	x	x	x	x	
Executive Leadership Team	Responsible for strategy, policy and overall Performance Management.	Semi-monthly	J. Barrar, Manager Strategic Initiatives B. Perry, Sr. Vice President Government Affairs & Public Policy D. Velazquez, President & CEO Conectiv Energy J. Huffman, President & COO Pepco Energy Services K. Emge, Sr. Vice President & General Counsel P. Friel, Vice President & General Auditor E. Jenkins, Vice President People Strategy & Human Resources (at times)	x	x	x	x	
Power Delivery Direct Report Staff Meeting	Updates from Sr. Vice Presidents-Power Delivery	Weekly	M. Sullivan, Sr. Vice President, Operations W. Gausman, Sr. Vice President, Asset Management and Planning			x		

## Attendance of recurring PHI meetings

Meeting	Purpose	Frequency	Other Participants	Wraase	Torgerson	Rigby	Barry	Parker
Non-Regulated Business Direct Report Staff Meeting	Updates from CES-President and PES-President	Weekly	D. Velazquez, President & CEO Conectiv Energy J. Huffman, President & COO Pepco Energy Services			x		
Core Team Meeting	Oversight of Power Delivery Operations and key core Corporate Services; development of plans to execute Power Delivery Strategy	Weekly	C. McCoy, Human Resource Business Partner Consulting Group D. Jarvis, Vice President, Corporate Communications - Power Delivery G. Potts, Vice President, Business Transformation H. Reese, Vice President, Safety and Strategic Services K. Cohn, Vice President and Chief Information Officer L. Creely, Manager, Business Performance T. Messick, VP Power Delivery Transmission M. Poncia, Director Gas Delivery C. Dickerson, VP Customer Care E. Jenkins, Vice President People Strategy & Human Resources M. Sullivan, Sr. Vice President, Operations W. Gausman, Sr. Vice President, Asset Management and Planning M. Maxwell, Vice President, Asset Management S. Wisniewski, Vice President, Operations			x		
Blueprint Executive Committee	Develop/execute regulatory and communications strategies; oversee Blueprint activities	Bi-weekly	C. Dickerson, Vice President, Customer Care D. Jarvis, Vice President, Corporate Communications - Power Delivery D. Myers, Director, Supply Chain E. Jenkins, Vice President, People Strategy and Human Resources G. Stockbridge, President, Delmarva Region G. Nelson, Director, Electric System Maintenance & Construction G. Potts, Vice President, Business Transformation G. Shoemaker, Manager, Program Management Office H. Reese, Vice President, Safety & Strategic Services K. Cohn, Vice President and Chief Information Officer K. Emge, Sr. Vice President and General Counsel L. Frankel, Director Customer Relations L. Srivastava, Manager, Special Projects J. Wathen, Vice President, Regulatory Affairs M. Sullivan, Vice President, Operations M. Poncia, Director, Gas M. Maxwell, Vice President, Asset Management P. Friel, Vice President and Generator Auditor R. Stewart, Process Manager S. Wisniewski, Vice President, Operations S. Sunderhauf, Manager, Program Design & Evaluation S. Pancholi, Process Manager T. Graham, President, Pepco Region T. Pierpoint, Process Manager T. McGregor, Process Manager W. Gausman, Vice President, Asset Management and Planning			x		x

## Attendance of recurring PHI meetings

Meeting	Purpose	Frequency	Other Participants	Wraase	Torgerson	Rigby	Barry	Parker
Senior Safety Leadership Team	Guide/oversee PHI's safety policies; monitor performance and drive continuous improvement	Monthly	M. Maxwell, Vice President, Asset Management D. Velazquez, President & CEO Conectiv Energy D. Jarvis, Vice President, Corporate Communications - Power Delivery E. Jenkins, Vice President People Strategy & Human Resources G. Potts, Vice President, Business Transformation H. Reese, Vice President, Safety & Strategic Services J. Mittler, Manager, Regional Resources J. Flack, Associate General Counsel K. Cohn, Vice President and Chief Information Officer K. McGowan, VP Strategic & Financial Planning M. Sullivan, Vice President, Operations M. Gallagher, Manager, Safety Services Power Delivery P. Friel, Vice President and Generator Auditor R. Ellis, Manager, Management and Employee Communications S. Wisniewski, Vice President, Operations S. Power, Deputy General Counsel R. Williamson, Manager Safety - PES W. Judd, Manager, Employee Communications W. Gausman, Vice President, Asset Management and Planning			x		
COO Performance Meeting	Review of Utility Operations and certain Corporate Services key KPI and financial data.	Monthly	C. McCoy, Human Resource Business Partner Consulting Group D. Jarvis, Vice President, Corporate Communications - Power Delivery G. Potts, Vice President, Business Transformation H. Reese, Vice President, Safety and Strategic Services K. Cohn, Vice President and Chief Information Officer L. Creely, Manager, Business Performance M. Sullivan, Sr. Vice President, Operations W. Gausman, Sr. Vice President, Asset Management and Planning M. Maxwell, Vice President, Asset Management S. Wisniewski, Vice President, Operations C Dickerson, VP Customer Care M Ponica, Director Gas Delivery E Jenkins, VP People Strategy and Human Resources K Lefkowitz, Director System Operations R. Ellis, Manager Management and Employee Communications C. Knapp, Manager Reliability Group T. Messick, VP Power Delivery Transmission S Fisher, Manager Distribution Engineering Group N. Underwood, Manager IT Services G Nelson, Director Electric System Maintenance and Construction L Frankel, Director Customer Relations P Schaub, Director Bulk Power Management D Myers, Director Supply Chain			x		
PHI Administrative Board	Discuss benefit plans for PHI and PHI subsidiaries	Monthly	B. Perry, Sr. Vice President, Government Affairs and Public Policy E. Jenkins, Vice President, Human Resources P. Myrick, Manager, Benefits K. Mezick, Manager, Compensation S. Power, Deputy General Counsel M. Sullivan, Manager, Compensation/Benefits	x	x	x	x	

## Attendance of recurring PHI meetings

Meeting	Purpose	Frequency	Other Participants	Wraase	Torgerson	Rigby	Barry	Parker
Regulatory Policy Committee	Develop regulatory strategies; guide/resolve significant regulatory matters	Monthly	B. Perry, Sr. Vice President, Government Affairs and Public Policy K. Emge, Sr. Vice President and General Counsel A. Kamerick, Vice President and Treasurer P. Friel, Vice President and Generator Auditor J. Wathen, Vice President, Regulatory Affairs W. Gausman, Sr. Vice President, Asset Management and Planning K. McGowan, Vice President, Strategic and Financial Planning R. Clark, Vice President and Controller M. Sullivan, Sr. Vice President, Operations M. Browning, Director Rates and Tech Services D. Royster, Deputy General Counsel W. Brarndt, Manager, Regulatory Strategy and Policy F. Greer, Manager, Regulatory Projects W. Moore, Jr., Manager, Regulatory Services G. Potts, Vice President, Business Transformation R. Bourland, Sr. Legislative Counsel T. Graham, President, Pepco Region G. Zibinski, Manager, Regulatory Planning G. Stockbridge, President, Delmarva Region T. Goodman, Assistant General Counsel M. Finrock, Chief Risk Officer		x	x	x	x
Investment Committee	Established and carries out the funding policies for the benefits plan of PHI and PHI	Quarterly	K. Almquist, Director Treasury and Investment Management A. Kamerick, Vice President and Treasurer					x
Corporate Risk Management Committee	Identify/Manage significant corporate risk.	Bi-Monthly	P Friel, VP and General Auditor J. Huffman, President and Chief Operating Officer - PES N. Wilson, Vice President Operations and Risk - CES P. Friel, Vice President and Generator Auditor M. Kumm, President and Chief Operating Officer - PES K. Emge, Sr. Vice President and General Counsel V. Udo, Manager, Business Planning and Research J. McDonnell, Sr. Vice President and Chief Financial Officer - PES L. Creely, Manager, Business Performance R. Barron, Gas Services - PES F. Foster, PES N. Underwood, Manager, IT Services M. Giovannini, Manager, Operations and Credit Risk - CES M. Finrock, Chief Risk Officer C. Dickerson, Vice President, Customer Care A. Kamerick, VP and Treasurer K. Mc Gowan, VP Strategic and Financial Planning J Wathen, VP Regulatory Affairs D. Velazquez, President and Chief Executive Officer - CES R. Clark, Vice President and Controller R. Varma, PES K. Cohn, Vice President and Chief Information Officer		x	x		x
CFO Staff Meeting	Reviews safety update, personnel issues, and area reports, and budgeting.	Weekly	A. Kamerick, Vice President and Treasurer K. McGowan, Vice President, Strategic and Financial Planning M. Finrock, Chief Risk Officer R. Clark, Vice President and Controller J. Wathen, Vice President, Regulatory Affairs J. McDonnell, Sr. Vice President and Chief Financial Officer - PES A. Agra, Sr. Vice President, Finance P. Friel, Vice President and Generator Auditor A. Zeithammel, Manager, SOX Compliance					x

Attendance of recurring PHI meetings

Meeting	Purpose	Frequency	Other Participants	Wraase	Torgerson	Rigby	Barry	Parker
PHI Finance Committee	Identify/Manage significant financial issues and SOX compliance	Monthly	A. Kamerick, Vice President and Treasurer P. Friel, Vice President and Generator Auditor K. Emge, Sr. Vice President and General Counsel E. Rogers, Vice President and Corporate Secretary J. McDonnell, Sr. Vice President and Chief Financial Officer - PES J. Wathen, Vice President, Regulatory Affairs M. Finrock, Chief Risk Officer A. Agra, Sr. Vice President, Finance J. Demarest, Director, Strategy R. Battista, Controller, PHI Finance Investments A. Azarsa, Manager, Power Delivery Finance B. Perry, Sr. Vice President, Government Affairs and Public Policy A. Zeithammel, Manager, SOX Compliance K. Almquist, Director Treasury and Investment Management D. Kinzel, Director, Investor Relations P. Nisco, Manager, Budgets and Financial Forecasting C. Cannon, Associate General Counsel S. Power, Deputy General Counsel K. Sobien, Manager, Financial Planning & Investments A. Salvetti, Manager, Corporate Tax Audits K. White, Assistant Controller G. Zibinski, Manager, Regulatory Planning K. McGowan, Vice President, Strategic and Financial Planning R. Burke, Manager, PD Accounting & Reporting G. Greaves, Treasury Coordinator J. Snyder, Manager, Treasury Management J. Luley, Manager, Corporate Insurance J. Dupree, Manager, Accounting B. Shivery, Manager, Investor Relations R. Clark, Vice President and Controller L. Mitchell, Director Tax T. Pease, Director Accounting & Reporting W. Smiley, Director Technical Research & Controls	x			x	
Form 10K/10Q Disclosure Team	Discuss company disclosures to be included in SEC forms 10Q and 10K; page turn of documents	Quarterly	K. Almquist, Director Treasury and Investment Management D. Kinzel, Director Investor Relations K. Emgee, Sr VP and General Counsel A. Kamerick, Vice President and Treasurer R. Clark, Vice President and Controller K. McGowan, Vice President, Strategic and Financial Planning P. Nisco, Manager, Budgets and Financial Forecasting R. Battista, Controller, PHI Finance Investments A. Agra, Sr. Vice President, Finance J. McDonnell, Sr. Vice President and Chief Financial Officer - PES L. Mitchell, Director Tax T. Pease, Director Accounting & Reporting W. Smiley, Director Technical Research & Controls E. Rogers, Vice President and Corporate Secretary D. Velazquez, President and Chief Executive Officer - CES J. Huffman, President and Chief Operating Officer - PES	x	x	x	x	

Attendance of recurring PHI meetings

Meeting	Purpose	Frequency	Other Participants	Wraase	Torgerson	Rigby	Barry	Parker
Form 8K Call	Discuss financial and SEC issues related to accounting and financial statements.	Weekly	E. Rogers, Vice President and Corporate Secretary K. Emge, Sr. Vice President and General Counsel A. Kamerick, Vice President and Treasurer A. Agra, Sr. Vice President, Finance K. Almquist, Director Treasury and Investment Management R. Battista, Controller, PHI Finance Investments R. Clark, Vice President and Controller R. Ellis, Manager, Management and Employee Communications M. Finrock, Chief Risk Officer D. Kinzel, Director, Investor Relations P. Friel, Vice President and Generator Auditor J. McDonnell, Sr. Vice President and Chief Financial Officer - PES K. McGowan, Vice President, Strategic and Financial Planning P. Nisco, Manager, Budgets and Financial Forecasting L. Mitchell, Director Tax B. Shivery, Manager, Investor Relations A. Salvetti, Manager, Corporate Tax Audits A. Zeithammel, Manager, SOX Compliance					x
SOX Financial Subcommittee	Directs the coordination of compliance activities in PHI and subsidiaries to ensure SOX compliance.	Quarterly	A. Zeithammel, Manager, SOX Compliance R. George, Manager, SOX Compliance Support M. Finrock, Chief Risk Officer K. Emge, Sr. Vice President and General Counsel J. Wathen, Vice President, Regulatory Affairs R. Clark, Vice President and Controller A. Kamerick, Vice President and Treasurer P. Friel, Vice President and Generator Auditor E. Rogers, Vice President and Corporate Secretary					x
Chief Executive Officer/Chief Financial Officer Certification	Review of near final draft of financial documents; CEO and CFO opportunity to discuss statements and disclosures with key business leaders	Quarterly	K. Almquist, Director Treasury and Investment Management D Kinzel, Director Investor Relations K Emgee, Sr VP and General Counsel A. Kamerick, Vice President and Treasurer R. Clark, Vice President and Controller K. McGowan, Vice President, Strategic and Financial Planning P. Nisco, Manager, Budgets and Financial Forecasting R. Battista, Controller, PHI Finance Investments A. Agra, Sr. Vice President, Finance J. McDonnell, Sr. Vice President and Chief Financial Officer - PES L. Mitchell, Director Tax T. Pease, Director Accounting & Reporting W. Smiley, Director Technical Research & Controls E. Rogers, Vice President and Corporate Secretary D. Velazquez, President and Chief Executive Officer - CES J. Huffman, President and Chief Operating Officer - PES	x	x	x	x	

## Attendance of recurring PHI meetings

Meeting	Purpose	Frequency	Other Participants	Wraase	Torgerson	Rigby	Barry	Parker
Government & Public Affairs Coordination Council	Assess/respond to proposed and existing public policies	Monthly	B. Perry, Sr. Vice President, Government Affairs and Public Policy D. Jarvis, Vice President, Corporate Communications - Power Delivery D. Royster, Deputy General Counsel G. Stockbridge, President, Delmarva Region G. Potts, Vice President, Business Transformation K. Emge, Sr. Vice President and General Counsel L. Frankel, Director Customer Relations J. Wathen, Vice President, Regulatory Affairs M. Sullivan, Vice President, Operations R. Bourland, Sr. Legislative Counsel S. Wisniewski, Vice President, Operations S. Coan, Sr. Strategic Planning Manager S. Mora, Federal Affairs Director T. Graham, President, Pepco Region W. Gausman, Vice President, Asset Management and Planning					x
Atlantic Region President's Staff Meeting	Provide and receive updates on key internal/external issues.	Monthly	C. Wimberg, Vice President, Atlantic Region B. Marshall, Vice President, Atlantic Region S. Coan, Sr. Strategic Planning Manager S. May, Sr. Media Consultant B. Revelle, Director, NJ State Relations					x
Sr. VP Government Affairs and Public Policy Staff Meeting	Review key governmental and public policy business issues across all jurisdictions.	Weekly	B. Perry, Sr. Vice President, Government Affairs and Public Policy S. Mora, Federal Affairs Director C. Wilson, Analyst N. Reid, Administrative Assistant R. Bourland, Sr. Legislative Counsel G. Stockbridge, President, Delmarva Region T. Graham, President, Pepco Region					x



Attendance of recurring PHI meetings

Meeting	Purpose	Frequency	Other Participants	Wraase	Torgerson	Rigby	Barry	Parker
PHI Communicators Call	Designed to share critical information and projects that may require media attention and other communications actions.	Weekly	A. Corbett, Customer & Community Relations Manager A. Garcia, Assistant Media Representative B. Lopez, Public Affairs Manager B. Rogers B. Shelton, Sr. Media Representative C. Wimberg, Vice President, Atlantic Region D. Jarvis, Vice President, Corporate Communications - Power Delivery D. Mann, Customer Advocate E. Wallace-Simms, Public Affairs Manager G. Cohen, Manager, Regulatory Affairs and External Issues G. Stockbridge, President, Delmarva Region G. Gacser, Manager, Emergency Management G. Moore, Vice President, Delmarva Region J. Cinelli, Public Affairs Manager J. Allen, Vice President, Delmarva Region J. Janocha, Manager, Regulatory Affairs K. Watson, Vice President, Pepco Region L. Beck, Sr. Regulatory Affairs Analyst L. Srivastava, Manager, Special Projects M. Likovich, Sr. Media Representative M. Hoy, Customer & Community Relations Manager M. Poncia, Director, Gas P. Johnson, Manager, Regulatory Affairs P. Blair, Sr. Strategic Planning Manager R. Dobkin, Principal Media Representative R. Marshall, Vice President, Atlantic Region R. Revelle, State Relations Director R. Pedersen, Regulatory Affairs NJ Manager S. May, Sr. Media Representative S. Baccino, Government Affairs Coordinator T. Yewell, State Relations Director T. Born Emergency Management Manager T. Graham, President, Pepco Region V. Town, Public Affairs Manager V. Orange, Vice President, Pepco Region V. Page, Media Representative Z. Mostofi, Public Affairs Representative					x
Prep/Final Board	Review finalized board presentation.	Monthly	E. Rogers, Vice President and Corporate Secretary K. McGowan, Vice President, Strategic and Financial Planning R. Clark, Vice President and Controller	x	x	x	x	
Chief Legal Officer Staff Meeting	Discuss company-wide issues relating to government affairs, legal affairs, office administration and corporate	Monthly	B. Perry, Sr. VP Government Affairs and Public Policy K. Emge, Sr. VP and General Counsel S. Hartwig, Manager - External Affairs Administrator E. Rogers, VP, Secretary and Assistant Treasurer		x			

Source: Derived from response to OC-147.

**In The Matter of**  
**The Audit of Affiliated Transactions Between Atlantic City Electric Company**  
**and PEPCO Holdings, Inc. and Its Affiliates**  
**and**  
**The Management Audit of Atlantic City Electric Company**  
**BPU Docket No. EA07100794**

**Document Class Code: PR**

**Request Number: OC 1054**

**This response contains information subject to a non-disclosure agreement.**

**Request:**

If not provided in response to OC-1045, please provide a numerical example of the calculation of long-term incentive compensation to executives under the current plan (including both the Performance Stock Program and the Restricted Stock Program). Assume the following:

Target as a % of Salary (consistent with response to OC-798): 100% Extraordinary  
Performance: 200% Completion of 3 years employment

In addition, please provide a numerical example of the calculation under the Performance Stock Program for a given three-year performance period if annual results are 105% higher than target in Year 1 of 3, 85% of Target in Year 2 of 3, and 120% of Target in Year 3 of 3. In addition, the example should incorporate an assumption that an employee met the vesting requirements under the Restricted Stock Program so that we can see how this aspect of the long-term incentive compensation is handled. (The executive in question in this second example should be assumed to be measured by company or Power Delivery results.)

**Response:**

For this example, we will use Mr. Wraase's award opportunities of restricted stock and performance restricted stock for 2008 and the provided assumptions. Further details on this award are shown in the 2008 proxy statement on pages 32-36.

Salary: \$1,076,000

Target LTIP as a % of Salary: 200%

Restricted stock shares: 24,283

Target Performance restricted stock shares: 48,567

Maximum Performance restricted stock shares: 97,134

Performance share award weighting: 75% PHI Earnings, 25% PHI Free Cash Flow

Assumed share price at award approval date in 2011: \$15.00

**Provided by: Atlantic City Electric Company**  
**Date Prepared: April 20, 2009**

**In The Matter of**  
**The Audit of Affiliated Transactions Between Atlantic City Electric Company**  
**and PEPCO Holdings, Inc. and Its Affiliates**  
**and**  
**The Management Audit of Atlantic City Electric Company**  
**BPU Docket No. EA07100794**

Assumed performance levels (combined results assuming weights of 75% earnings and 25% free cash flow):

2008: 105%

2009: 85%

2010: 120%

Average performance:  $(105+85+120)/3 = 103.33\%$

**Award Determination**

Restricted stock – 24,283 shares x \$15.00/share = \$364,245. The Company determines the statutory minimum withholding taxes required, and sells an amount of vesting shares required to pay those taxes. The remaining shares are released to the executive.

Performance restricted stock – 48,567 shares x award factor of 103.33% = 50,184 shares, plus an additional amount of shares representing dividends that would have accrued during the performance period on the performance adjusted shares. As with the restricted stock, the company would determine the valuation of the performance restricted stock award based on the share price of \$15.00, and sell an amount of the vesting shares to cover the statutory minimum withholding taxes. The remaining shares are released to the executive.

Please note that appropriate SEC reporting is required for Mr. Wraase at the time restricted stock award opportunities are granted, and at the time final awards of restricted stock and performance based restricted stock are determined.

**Attachment 8-5**

Exhibit 32.4

**Certificate of Chief Executive Officer and Chief Financial Officer**

**of**

**Atlantic City Electric Company**

**(pursuant to 18 U.S.C. Section 1350)**

I, Joseph M. Rigby, and I, Paul H. Barry, certify that, to the best of my knowledge, (i) the Quarterly Report on Form 10-Q of Atlantic City Electric Company for the quarter ended September 30, 2007, filed with the Securities and Exchange Commission on the date hereof fully complies with the requirements of section 13(a) or 15(d) of the Securities Exchange Act of 1934, as amended, and (ii) the information contained therein fairly presents, in all material respects, the financial condition and results of operations of Atlantic City Electric Company.

November 1, 2007

/s/ J. M. RIGBY  
Joseph M. Rigby  
President and Chief Executive Officer

November 1, 2007

/s/ P. H. BARRY  
Paul H. Barry  
Chief Financial Officer

A signed original of this written statement required by Section 906 has been provided to Atlantic City Electric Company and will be retained by Atlantic City Electric Company and furnished to the Securities and Exchange Commission or its staff upon request.

## **Chapter 9. Strategic Planning**

### **Introduction and Framework for the Strategic Planning Process**

Strategic planning fundamentally involves the following process:

- Development of a plan or vision for the long-term direction of the Company.
- Identification of objectives that can be used to measure performance.
- Development of an implementation plan.
- Evaluation of performance and adoption of adjustments as needed by changed circumstances and actual events.

Corporate objectives should be aspirational in order to incent management to perform at its full potential and deliver the best possible results. Objectives relevant to PHI would include:

- Growth in earnings per share and dividends
- Return on invested capital
- Strong bond ratings
- Increases in shareholder value measured against peers
- High customer satisfaction; customer service
- Enhancement of corporate image

The achievement of strategic objectives is a key element or indication of the likelihood of future financial performance. Therefore, it is important to employ both financial and strategic objectives in employing a balanced scorecard to measure corporate performance. Ultimately, the strategic plan must produce performance goals and result in the Company being in a favorable position relative to its peers. Absent such results, the validity of the plan and/or its execution must be considered.

Strategic planning is an ongoing and continuous process. A strategic plan must be modified when external conditions warrant reevaluation. The plan must constantly be evaluated against industry and competitive conditions.

The Board of Directors has an important role in evaluating the strategic planning process. In its oversight function in this area, the Board should:

- Evaluate the effectiveness and performance of the strategic and business plans;
- Review the performance of the CEO and senior management in delivery of key objectives; and
- Tie senior management compensation to results that benefit shareholders and customers.

## **Findings and Recommendations**

1. The Strategic Planning function currently reports to the CFO. This is a key process and a fundamental area of focus for senior management and the Board. As such, this function should report directly to the CEO.
2. The executive responsible for strategic planning devotes approximately 20-25% of his time to this area. Overland believes that management should consider a further commitment of resource time to the area, given the complexities involved with monitoring and implementation in the current environment.
3. PHI has had various degrees of success in the implementation of the “Blueprint for the Future” initiative within its various jurisdictions. Without abandoning its core objectives, the Company should be willing to adapt the various components of its plan to the preferences of each state jurisdiction. With regard to ACE, PHI may need to consider an increased effort by senior management to move its objectives forward.
4. The strategic planning process has incorporated a greater consideration of external analyses of industry and market factors in more recent years. The PHI long-term planning is reviewed in light of these long-term trends. PHI utilizes external resources to consider various factors having material impacts on the Company. In recent years, such analyses have included implications of carbon legislation and risk management.
5. The “Blueprint for the Future” initiative is the platform for the Company’s current utility strategic planning. It includes investment in technologies and programs that will assist customers in managing their energy use more efficiently. This initiative is consistent with and will facilitate compliance with the stated goals in the New Jersey Energy Master Plan.
6. Increased energy costs and variation in such prices, in combination with the significant changes in the capital markets, have dramatically increased the risk and reduced the profitability of Pepco Energy Services (PES), principally due to collateral support requirements.

## **Overview of Strategic Planning Process at PHI**

The PHI strategic planning process “develops, communicates, and monitors long term plans that increase shareholder value, mitigate risks, and position PHI for the future.” Business segment plans are developed, and “are aligned with the overall PHI strategy.” These plans are reviewed on an annual basis in the fall at a multi-day Board Retreat. Key components of the 2008 plan included infrastructure investments, implementation of the Blueprint initiative, and increasing utility operating efficiency.<sup>1</sup>

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<sup>1</sup> Response to Discovery, OC-180.

In the current timeframe, the strategic planning group is involved in various ACE initiatives, including:<sup>2</sup>

- New Jersey Master Energy Plan
- New Jersey Off Shore Wind studies
- Blueprint for the Future
- Mid-Atlantic Power Pathway
- Customer microgrid projects
- Customer distributed generation projects
- Analysis of solar generation projects

Utility operations represented about 64% of operating income in 2007.

### **Strategic Planning Organization**

From 2005 to the present, the following individuals have been responsible for the operation of the strategic planning function within PHI.<sup>3</sup>

- Kevin McGowan                      May 2008 to present
- Charles Dickerson                June 2006 to May 2008
- Dave Velazquez                    2005 to June 2006

Mr. McGowan, as VP Strategic and Financial Planning, has three primary functions, which require the following estimate of his time:

- |   |        |
|---|--------|
| • Strategic Planning                              | 20-25% |
| • Financial Planning, Budgeting & PHI Investments | 45-50% |
| • Power Delivery Financial Analysis               | 25%    |

Based on 2008 data, Mr. McGowan spends about 70% of his time on Utility operations and 30% on the unregulated businesses. In 2008, he spent about 15% of his time on ACE operations.<sup>4</sup> Given the major challenges currently facing the industry, PHI should evaluate if the level of time commitment by Mr. McGowan to strategic planning is adequate. The refocusing of operations driven by the Blueprint initiative, the current challenges associated with unregulated business activities, and the impact of the current economic and financial environment, are major factors that support greater emphasis on strategic planning requirements.

Mr. McGowan reports to the Chief Financial Officer. Strategic planning is a core element of successful business operations. This function is a key focus of senior management, the CEO and the Board of Directors. Strategic planning is monitored by the Finance Committee of the Board, as well as the Board as a whole. As such, the person responsible for strategic planning should report directly to the CEO of the Company.

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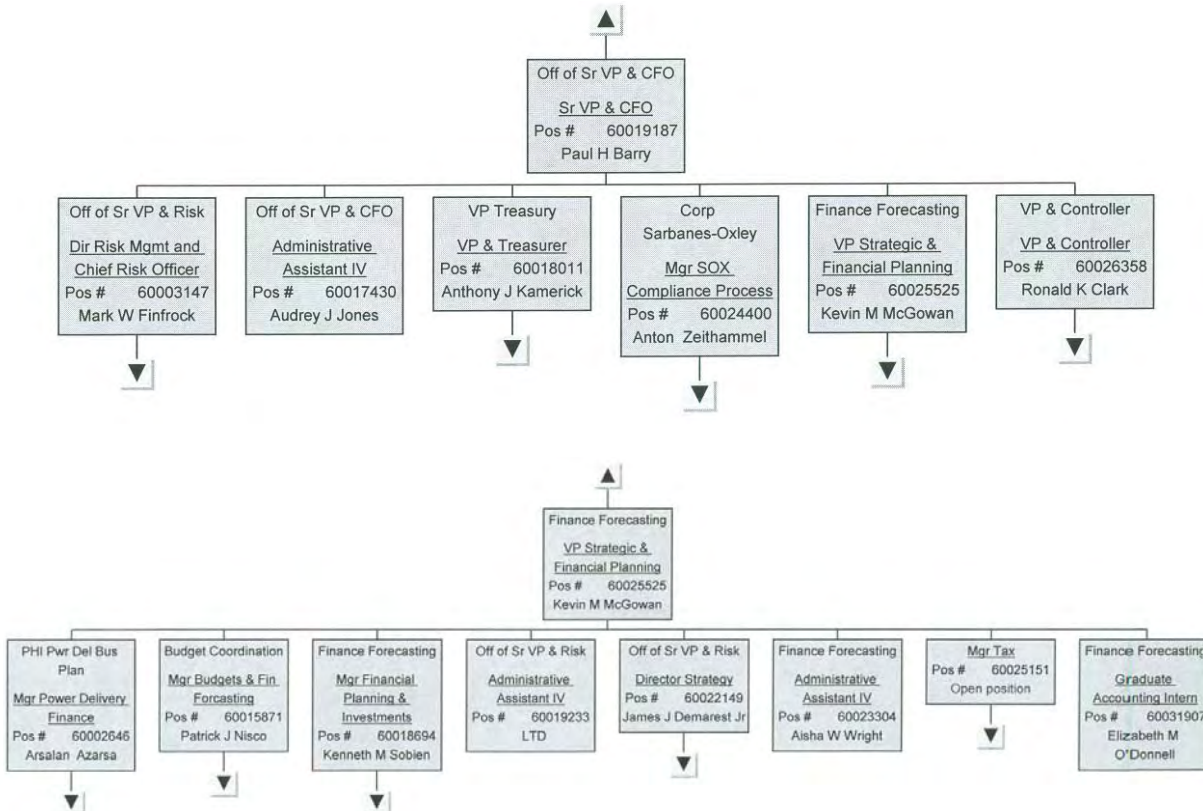
<sup>2</sup> Response to Discovery, OC-180.

<sup>3</sup> Response to Discovery, OC-181.

<sup>4</sup> Response to Discovery, OC-643.

Under the current organization structure and management practices, the ELT may consider special projects related to strategic planning through use of outside resources that do not necessarily include Mr. McGowan.<sup>5</sup> The ELT should include the person within management that is responsible for the strategic planning function in all ELT meetings where this subject is addressed, including presentations made by outside firms.

The following charts represent the Strategic and Financial Planning Organization, and how the organization currently reports to senior management <sup>6</sup>.



The PHI Key Performance Indicators (KPI's) are tracked and monitored by Strategic Planning and the business units. The KPI results are provided to the Board on a quarterly basis.<sup>7</sup>

The Company holds Quarterly Communications Meetings (QCM) with supervisors and key managers to discuss progress in meeting corporate objectives. These meetings are led by PHI senior management. This information is, in turn, reviewed with employees at group meetings. Aside from this process, Corporate Communications also provides information to employees regarding strategic and company issues.<sup>8</sup>

<sup>5</sup> McGowan interview; November 17, 2008.

<sup>6</sup> As a result of management changes, Mr. McGowan is now Vice President and Treasurer reporting to Anthony Kamerick who is Senior Vice President and CFO. Mr. McGowan is still the executive responsible for managing the strategic planning group.

<sup>7</sup> Response to Discovery, OC-180.

<sup>8</sup> Response to Discovery, OC-639.



PHI employs a robust system of communication to its employees regarding corporate, organizational and industry information and issues, which is ultimately focused on understanding and support of the PHI business strategy.<sup>9</sup>

In 2007, a primary effort of The Strategic Decision Group was to consider the implications of carbon restrictions, renewable portfolio standards (RPS) targets, and energy conservation on the PHI business units. In this context, the Strategic Decision Group (SDG) activities included:<sup>10</sup>

- Development of analyses for the Executive Leadership Team and business unit teams that identified potential key drivers of change impacting PHI's various business segments;
- Development of scenarios to assess business unit sensitivity to external events; and
- Identification of strategic options and long-term planning for PHI and its business units.

Management's input to the Board consideration of the strategic planning process is summarized in the following basic components.<sup>11</sup>

**[BEGIN CONFIDENTIAL]**

**[END CONFIDENTIAL]**

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<sup>9</sup> Response to Discovery, OC-640.

<sup>10</sup> Response to Discovery, OC-267.

<sup>11</sup> Response to Discovery, OC-266. (Restricted) Based on the 2007 planning process employed.

The strategic planning process includes an evaluation of potential changes in focus for each of the major business segments, which currently reflect recognition of the implications of energy conservation and carbon mitigation.

Before a final presentation of the Strategic Plan to the Board at its Annual Retreat, the plan is reviewed with the Finance Committee.

The strategic planning process has incorporated a greater consideration of external analyses of industry and market factors in more recent years. The PHI long-term planning is reviewed in light of these long-term trends. PHI utilizes external resources to consider various factors having material impacts on the Company. In recent years, such analyses have included implications of carbon legislation and risk management.

### **Summary of PHI and ACE Strategic Plans, Business Plans, and Financial Forecasts Presented to Board**

As previously addressed, the 2007 strategic plan was based upon an assessment of current and expected trends in environmental and energy conditions. This assessment became the basis for the PHI planning process as presented to the Board at its September 2007 Retreat. Within this macroeconomic assessment, the major PHI initiatives were evaluated by the Board as presented by management. The primary projects or initiatives include:

- The Mid-Atlantic Power Pathway (MAPP) project ;
- Blueprint for the Future;
- Distribution filings to address decoupling.

The PHI strategic planning included a robust analysis of the longer-term implications of green house gas restrictions:<sup>12</sup>

**[BEGIN CONFIDENTIAL]**

**[END CONFIDENTIAL]**

The response to these conditions will include a necessity for a smart grid and communications infrastructure to facilitate end-use efficiency, demand response, and distributed generation. The grid will need a capacity and reliability sufficient to accommodate significant additions of intermittent renewable generation.

The PHI management skill set is focused on regulated operations. Utility operations are focused primarily on:

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<sup>12</sup> Response to Discovery, OC-274 (restricted).

- A significant infrastructure investment;
- Execution of the MAPP project;
- Implementation of Blueprint;
- Continuing development of productivity improvements; and
- Improvement in reliability and customer service.

PHI expects to spend approximately \$4.4 billion in utility capital expenditures for the period 2007 to 2011.

The September 2008 Retreat focused on the implications of the economic downturn and adverse credit environment on the Company's strategic and business plans. Short-term strategic initiatives are focused on cash flow and liquidity.

Importantly, **[BEGIN CONFIDENTIAL]**

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**[END CONFIDENTIAL]**

PHI has considered the implementation of programs to improve reliability, proposing to increase capital expenditures by \$75 million over three years to achieve potential improvements, which include:<sup>14</sup>

- Repair or replace cable leading to highest failure rates.
- Increase transformer inventory necessary to reduce replacement time and risk after failure.
- Replace oil-filled circuit breakers to remove aging equipment, reduce failures and reduce customer outages.
- Reduce time to dispatch component by CAIDI 20%.
- Increase use of distribution automation and Blueprint technology.
- Increase application of asset management and reliability improvement best practices.

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<sup>13</sup> Response to Discovery, OC-274 (restricted); 2008 Utility Operations Strategic Review.

<sup>14</sup> Response to Discovery OC-570 (restricted) also reflects the commitment to increased capital investment for reliability projects. 2007 Budget Assumptions for Utility Operations as presented to the PHI Board.

## The 2007 Base Case and Strategic Value Cases, Including the 2008 Update<sup>15</sup> [BEGIN CONFIDENTIAL]

[END CONFIDENTIAL]. These investments are assumed to be recoverable through traditional regulatory recovery mechanisms. In fact, the MAPP project qualified for FERC incentive rate treatment, providing among other things, a 150-basis point ROE adder resulting in a total equity return of 12.8%.<sup>16</sup> [BEGIN CONFIDENTIAL]  
[END CONFIDENTIAL].<sup>17</sup>

The Base Case plan is expected to require approximately \$2.8 billion of external financing over the five-year period 2009 to 2014. This funding is driven by the above projects, as well as base utility construction expenditures of \$3.1 billion for the 2007-2011 period. It is assumed that this capital will be raised with equal amounts of debt and equity.

PHI financial ratios are expected to improve over the plan period, but the metrics and the ratings are assumed to remain in the BBB range in the base case. The equity ratio goals are in the mid-40s for PHI consolidated and mid to high-40s for the utilities.

Utility rate filings are expected throughout the 2009-2011 timeframe, including ACE filings in New Jersey. Regulated earnings are expected to represent 70-75% of corporate earnings.

The “Strategic Value Case” is driven primarily by a somewhat more optimistic view of utility cost recovery than Base Case assumptions, resulting in about \$500 million of additional cash flow over the five-year period. These results also push the credit ratings metrics toward the A rating range.

### **“Blueprint for the Future” Initiative**

The Blueprint initiative has generally been described by the Company as: an investment in technologies and programs that will assist customers in managing their energy use more efficiently; a basis to reduce energy costs; a program that will reduce greenhouse gas emissions; and a program that will enhance system reliability. This initiative is consistent with and will facilitate compliance with the stated goals of the New Jersey Energy Master Plan.<sup>18</sup> While some utilities are focused on earning premium returns on conservation and energy efficiency programs, PHI’s Blueprint initiative is based on traditional cost recovery and regulated returns.

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<sup>15</sup> Response to Discovery, OC-274 (restricted); 2007.

<sup>16</sup> FERC Order issued November 3, 2008.

<sup>17</sup> Response to Discovery, OC-274 (restricted); 2008 MAPP Presentation.

<sup>18</sup> Response to Discovery, OC-632.

Blueprint evolved from objectives to improve customer reliability; service quality; and customer satisfaction:

- Identification of 70 customer wants or needs. As rate caps came off, customers had more interest in conservation.
- Outages can be identified more readily.
- System losses can be reduced.
- Implementation is key to improving customer reliability and service quality benchmarks.

Shareholder benefits will come indirectly if the utility is a top quartile performer:

- Result may be a premium return, but only asking regulators for cost recovery.
- Primary focus is customer benefits; mitigation of customer prices.

### Rate Decoupling

PHI sees rate decoupling as an integral part of the implementation of the Blueprint initiative. This is evidenced in comments made by the PHI CEO at the 2007 Analyst Conference:<sup>19</sup>

- “Blueprint for the Future” – a comprehensive program to implement advanced technologies and energy efficiency programs, *enabled by decoupling*. (emphasis added)
- Economic downturn.
- Expected energy consumption reduction of 20%.

Of course, the primary objective is to allow utility cost recovery in the face of declining sales. There are a number of mechanisms that can accomplish this objective. Regulators may not all accept the same approach, even if they are committed to supporting efficient cost recovery mechanisms.

### Smart Grid

The development of Distribution Automation (DA) capabilities has evolved since 2007. In 2007, PHI announced a strategic partnership with IBM to work on the Blueprint Smart Grid initiatives. Potential benefits from DA include: improved customer reliability; increased revenues opportunities; and reduced operating costs.<sup>20</sup> Integral to the implementation of the Blueprint initiatives, is the development of a Smart Grid. PHI has defined its vision of a Smart Grid as follows:<sup>21</sup>

- Development of an infrastructure that includes smart sensors and intelligent end devices including AMI, demand response devices and Advanced Distribution Automation (ADA) devices;
- Establishment of communications capability for collection of significant new data;
- Integration of IT systems needed to process data;
- Development of new data analysis capabilities; and

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<sup>19</sup> Response to Discovery, OC-251.

<sup>20</sup> Response to Discovery, OC-225.

<sup>21</sup> Response to Discovery, OC-110.

- Capability for real-time optimization of distribution network performance.

### **Smart Metering**

Advanced metering infrastructure (AMI) is envisioned to provide many potential benefits to customers including:<sup>22</sup>

**[BEGIN CONFIDENTIAL]**

**[END CONFIDENTIAL]**

Based on internal analysis, as well as industry data, the implementation of AMI generally results in a positive benefit when measured on a net present value basis.<sup>23</sup>

Assuming large-scale implementation, the installed cost per meter for AMI is about \$233.<sup>24</sup>

### **Current Status**

ACE filed its “Blueprint for the Future” initiatives, requesting the approval of cost recovery mechanisms, with the BPU on November 19, 2007. The stated objectives in the filing were to assist customers manage their energy needs more efficiently; to reduce the overall cost of energy; to promote GHG emission reductions; and to enhance system reliability. The primary mechanisms proposed to accomplish these objectives included:

- Demand-side management programs expanded to include dynamic electricity pricing and Direct Load Control programs;
- AMI installed to provide more detailed pricing and usage data, to enhance system reliability, outage management; and
- Utility-provided energy efficiency and conservation programs.

ACE has proposed to replace approximately 540,000 existing meters with new computer-embedded advanced metering devices by 2012. These meters will allow the Company to collect and transmit customer information such as billing data, usage patterns and outage information. AMI can also be used for direct communication with customers’ thermostats and appliances and control the use of equipment based on energy prices. Eventually, these devices will allow the transmittal of real time or day-ahead pricing. ACE has estimated that the cost of AMI in New Jersey to be about \$128 million. Network upgrades necessary to utilize AMI more efficiently are estimated to cost New Jersey customers approximately \$2.8 million.

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<sup>22</sup> Response to Discovery, OC-274 (restricted).

<sup>23</sup> Response to Discovery, OC-633.

<sup>24</sup> George Potts interview; November 18, 2008.

ACE has introduced a “Bill Stabilization Adjustment”, which provides a mechanism for rate decoupling to separate the collection of distribution costs from customer usage.<sup>25</sup> ACE requested an “AMI Adjustment Mechanism” to recover AMI expenditures, net of cost savings, in between and independent of base rate filings.<sup>26</sup>

By September 2008, the Blueprint project included the following regulatory response in the various PHI retail jurisdictions:

Delaware:

- AMI approved in August 2008, with direction to install smart meters.
- Approved implementation of direct load control program.
- Formation of Sustainable Energy Utility (SEU) to manage energy efficiency programs outside of the utility and the PSC.

Maryland:

- Approved Residential direct load control.
- Energy efficiency program to be managed by utilities.

Based on the Company’s analysis at September 2008, “minimal progress” had been made on the regulatory response to the Blueprint initiatives in the District of Columbia and New Jersey. The NJBPU response included the following, as identified by PHI management.

- BPU and Rate Counsel continue to express concerns over cost of AMI.
- BPU consultant recommends efficiency programs be moved back to BPU from the Office of Clean Energy.
- Filed DLC program in August 2008, for implementation in Summer 2009.
- Solar financing program.

Based on the New Jersey response to AMI, ACE will conduct a pilot study, with the intention of having full deployment in 2012. AMI is expected to be fully deployed in its other jurisdictions from 2009-2011. The cost estimate of \$539 million for full implementation of AMI has remained unchanged.<sup>27</sup>

### **New Jersey Energy Master Plan Initiative**

In response to the oil shocks of the early 1970’s, the New Jersey State Legislature enacted a law requiring an Energy Master Plan (the ‘Plan’) in 1977. The ultimate goal of this plan is to ensure that New Jersey electricity and heating fuel customers will receive a reliable supply of electricity and heating fuels at a reasonable price and in accordance with the State’s environmental policies. Trying to maintain a balance between environmental and economic goals requires a plan that is dynamic enough to adapt to the changing needs of New Jersey. As such, State law requires that the Plan be revised and updated at least once every three years.

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<sup>25</sup> Response to Discovery, OC-54.

<sup>26</sup> Response to Discovery, OC-567.

<sup>27</sup> Response to Discovery, OC-274 (restricted); 2008 Utility Operations Strategic Review.

To help oversee and monitor the results of the Plan, the Governor has established a State Energy Council. This council is responsible for:

- Conducting annual reviews over the progress of the Plan.
- Identifying regulatory changes that are necessary to meet energy challenges.
- Making updates to the Plan every three years (at a minimum).
- While this council maintains responsibility for the monitoring of the Plan, there are many key aspects affecting the supply and price of New Jersey's electricity and heating fuel that are beyond the State's direct control. For example, as a result of the signing of the Electric Discount and Energy Competition Act (EDECA) electric generation was no longer under the direct control of the utilities. Therefore, a substantial amount of power for the reliability and pricing of New Jersey's electricity now rests with the power plant owners and other regulatory bodies (such as the FERC).
- Due to these limitations, the Plan focuses on the environmental and economic aspects that New Jersey can control. The Plan highlights five key goals that the State feels will lead to a safe, reliable, and profitable energy future:
  - Maximize energy conservation and energy efficiency by reducing energy consumption.
  - Reduce peak electricity demand by implementing demand response programs and offering incentives to large industrial customers to reduce peak-time energy usage.
  - Strive to exceed the State's current Renewable Portfolio Standard (RPS) and provide 20% of the State's electricity needs with renewable energy by 2020.
  - Develop a 21<sup>st</sup> century energy infrastructure by modernizing the electric grid and offering incentives to stimulate the construction of cogeneration plants.
  - Invest in innovative clean energy technologies and businesses to stimulate the industry's growth in New Jersey by establishing the Energy Institute of New Jersey to support clean energy research efforts and investing in the energy research of the Edison Innovation Fund.

At the time this management review was conducted, ACE had not developed or filed any proposals associated with Governor Corzine's \$500 million funding for the Energy Efficiency Initiative. However, in an informal estimate, approximately \$44 million of the statewide funding was identified for ACE.<sup>28</sup>

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<sup>28</sup> Response to Discovery, OC-563.



The New Jersey statutes exclude energy efficiency and conservation programs from their definition of renewable portfolio standards (RPS).<sup>29</sup>

The NJ Energy Master Plan sets a 20% reduction of energy consumption by 2020 as its goal.<sup>30</sup>

As of December 2008, ACE had 853 net metering customers: 833 solar; 18 wind; 1 fuel cell; and 1 microturbine. In total, these customers have approximately 22.4 Mw of capacity based on nameplate ratings.<sup>31</sup>

### **PHI Commitment to Non-Regulated Business Units**

Like many other utility holding companies, PHI has investments in generating assets and regulated utility transmission and distribution operations. Some utility holding companies have also diversified into business activities that presumably complement the core business model.

Type	Electric Generating Facility	Owner	Generating Capacity (MW)	Percentage of Portfolio
<b>Coal-Fired</b>				
	Edge Moor	Conectiv Energy	260	
	Deepwater	Conectiv Energy	80	
		<b>Total Coal Fired</b>	<b>340</b>	<b>7.5%</b>
<b>Oil-Fired</b>				
	Benning Road	Pepco Energy Services	550	
	Edge Moor	Conectiv Energy	450	
		<b>Total Oil Fired</b>	<b>1,000</b>	<b>21.9%</b>
<b>Combustion Turbines / Combined Cycle Units</b>				
	Hay Road Units	Conectiv Energy	1,120	
	Bethlehem Units	Conectiv Energy	1,130	
	Buzzard Point	Pepco Energy Services	240	
	Cumberland	Conectiv Energy	84	
	Sherman Avenue	Conectiv Energy	81	
	Middle	Conectiv Energy	77	
	Carll's Corner	Conectiv Energy	73	
	Cedar	Conectiv Energy	68	
	Missouri Avenue	Conectiv Energy	60	
	Mickleton	Conectiv Energy	59	

<sup>29</sup> Response to Discovery, OC-564.

<sup>30</sup> Response to Discovery, OC-692.

<sup>31</sup> Response to Discovery, OC-565.

<b>Table 9-1</b>				
<b>Pepco Holdings, Inc.</b>				
<b>Generation Portfolio as of December 31, 2008</b>				
<b>Type</b>	<b>Electric Generating Facility</b>	<b>Owner</b>	<b>Generating Capacity (MW)</b>	<b>Percentage of Portfolio</b>
	Christiana	Conectiv Energy	45	
	Tasley	Conectiv Energy	26	
	Edge Moor	Conectiv Energy	13	
	West	Conectiv Energy	15	
	Delaware City	Conectiv Energy	16	
		Total Combustion Turbines / Combined Cycle Units	3,107	68.2%
<b>Solar Photovoltaic</b>				
	Atlantic City Convention Center	Pepco Energy Services	2	0.0%
<b>Other Natural Gas Fired Units</b>				
	Deepwater	Conectiv Energy	78	1.7%
<b>Landfill Gas Units</b>				
	Fauquier County Project	Pepco Energy Services	2	
	Bethlehem Landfill Project	Pepco Energy Services	5	
	Eastern Landfill Project	Pepco Energy Services	3	
		Total Landfill Gas Fired	10	0.2%
<b>Diesel Units</b>				
	Crisfield	Conectiv Energy	10	
	Bayview	Conectiv Energy	12	
		Total Diesel Fired	22	0.5%
		<b>Total Electric Generating Capacity</b>	<b>4,559</b>	<b>100.0%</b>
Source: Derived from December 31, 2008 10-K filing with the SEC.				

PHI has three major businesses that represent a diversification into non-core market opportunities. The principal corporate entities that engage in these businesses are as follows.<sup>32</sup>

- Conectiv Energy Supply, Inc. (CESI). Engages in energy trading and procurement, transportation and wholesale sales of fuels and related products.
- Pepco Energy Services, Inc. (PES). Involved in construction, consulting and sales of commodity and related services in retail and wholesale competitive energy markets. Products include electricity, natural gas, energy-efficiency contracting, equipment operation, fuel management, testing and maintenance, HVAC services, and advisory services regarding energy procurement and usage.

<sup>32</sup> Response to Discovery, OC-3.

- Potomac Capital Investment Corporation (PCI). Maintains a portfolio of cross-border energy sale-leaseback transactions.

PHI's view of the Conectiv Energy (CE) and PES business segments is that "the competitive energy businesses are strategic and integral components of PHI's growth". PES is the 5<sup>th</sup> largest retail energy marketer in the US.<sup>33</sup>

In October 2007, Towers Perrin presented an assessment of risk management procedures regarding Conectiv Energy and PES. It made a number of recommendations at that time. Among other things, a recommendation was made to link risk metrics to the corporate financial objectives. In this connection, they proposed a consideration of reporting Earnings-at-Risk and Cash-Flow at Risk, in addition to the current focus of Value-at-Risk as a measure of portfolio market risk.<sup>34</sup> As of March 2009, the recommendations had generally been implemented.<sup>35</sup>

### **Pepco Energy Services (PES)**

In the late 2007 timeframe **[BEGIN CONFIDENTIAL]**

**[END CONFIDENTIAL].**<sup>36</sup>

In its overview of operations in late 2008, expectations were generally consistent with the 2007 update. That is, earnings had come primarily from the retail electric supply business. Energy Services was expanding through new projects and in new geographic regions. However, increased energy costs and variation in such prices, in combination with the significant changes in the capital markets, have dramatically increased the risk and reduced the profitability of this business due to collateral support requirements.

PES, through its **[BEGIN CONFIDENTIAL]**

**[END CONFIDENTIAL].**<sup>37</sup>

Subject to Commission oversight and approval, PHI utility subsidiaries are capable of developing energy efficiency and renewable opportunities and offer them as regulated services

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<sup>33</sup> Response to Discovery, OC-251.

<sup>34</sup> Response to Discovery, OC-301 (restricted).

<sup>35</sup> Response to Discovery, OC-1117 (restricted); Tab 10. See also OC-1206.

<sup>36</sup> Response to Discovery, OC-274 (restricted); PES Strategic Review -2007.

<sup>37</sup> Response to Discovery, OC-274 (restricted); 2008 PES Strategic Update.

within PHI's utility service area. PHI represents that these opportunities are separate and distinct from any activities undertaken by PES or other unregulated subsidiaries.<sup>38</sup>

**[BEGIN CONFIDENTIAL]**

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<i>Table 9-2</i>				
<b>Estimated PES Total Collateral Needs (In Millions \$)</b>				
<b>Wholesale Price Change Relative to PES Cost of Supply</b>	<b>2008</b>	<b>2009</b>	<b>2010</b>	<b>2014</b>

**[END CONFIDENTIAL]**

Based on the above, it clear that at least under certain conditions, the credit support requirements can impose significant capital or credit needs in relation to the total size of PHI. The above analysis, as indicated, assumes current credit ratings. Should the credit capacity be measured on the basis of a potential downgrade, this would further magnify the impact of this business on the Company.<sup>40</sup>

In order to mitigate these risks, the following options are under review:

- Expand the PHI credit facility
- Insurance products
- Credit products tied to short-term decreases in energy prices
- Expand portfolio of suppliers to take advantage of unsecured credit.

Aside from collateral requirements, as energy prices increase, peak cash requirements will also rise. At fall 2008 prices, peak payments to suppliers will increase from \$130 to \$220 million over the forecast period.

In a 2008 strategic evaluation of PES, **[BEGIN CONFIDENTIAL]**

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<sup>38</sup> Response to Discovery, OC-695.

<sup>39</sup> Response to Discovery, OC-274 (restricted); 2008 PES Strategic Update.

<sup>40</sup> Constellation Energy was faced with similar conditions in September 2008, where their "downgrade" collateral requirements actually exceeded their available collateral.

<sup>41</sup> Response to discovery, OC-274 (restricted); 2008 Strategic Assessment of Pepco Energy Services.

**[END CONFIDENTIAL]**

Based on the above conditions, management has recommended a divestiture or restructuring of the retail energy business, while growing energy efficiency and renewable opportunities through ESCO. In making this recommendation, the following benefits were anticipated:

- Improved PHI earnings growth;
- Accretion to PHI operating cash flow per share;
- Reduction of contingent capital requirements and credit capacity volatility; and
- Enhancement of PHI credit profile due to reduced business risk.

**Conectiv Energy (CE)**

**[BEGIN CONFIDENTIAL]**

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<sup>42</sup> Response to Discovery, OC-274 (restricted); 2008 CE Presentation.

<sup>43</sup> Response to Discovery, OC-274 (restricted); CE Strategic Review – 2007.

**[END CONFIDENTIAL].**<sup>45</sup>

**Pepco Investment Capital**  
**[BEGIN CONFIDENTIAL]**

**[END CONFIDENTIAL].** The investments are structured as sale leasebacks generally referred to as sale-in/lease-out or SILO transactions. The lease expiration dates range from 2017 to 2042.<sup>46</sup> The \$1.3 billion investment produces about \$56 million annually in tax benefits. The IRS has challenged the tax treatment of these transactions, and the audit periods outstanding are from January 1, 2001 to the present. The total tax benefits accumulated through March 2009 are approximately \$475 million. On March 31, 2009, the IRS issued a RAR for 2003 to 2005 proposing to disallow depreciation and interest in excess of rental income with respect to all PCI leases.<sup>47</sup>

The original strategic objective of the portfolio was to provide supplemental earnings, using substantial leverage – about 85%.<sup>48</sup> In its 2008 Strategic Planning update, the Company

**[BEGIN CONFIDENTIAL]**

**[END**

**CONFIDENTIAL].**<sup>49</sup>

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<sup>44</sup> Response to Discovery, OC-274 (restricted); 2007 “Conectiv Energy – Strategic Alternatives presentation.

<sup>45</sup> Response to Discovery, OC-274 (restricted); 2008 CE Strategic Update.

<sup>46</sup> Response to Discovery, OC-1117 (restricted); Tab 3, page 15.

<sup>47</sup> SEC Filing, Form 10-Q; dated March 31, 2009.

<sup>48</sup> McGowan interview; November 17, 2008.

<sup>49</sup> Response to Discovery, OC-274 (restricted); 2008 Financial Forecast Summary.

## **Mergers & Acquisitions Process**

[BEGIN CONFIDENTIAL]

[END CONFIDENTIAL].<sup>50</sup>

At the 2008 Board retreat, [BEGIN CONFIDENTIAL]

[END CONFIDENTIAL].<sup>51</sup>

Utility mergers generally evolve to create a more cost-efficient operation and to expand geographic coverage. The industry activity in mergers and acquisitions over the last ten to fifteen years has been fairly robust. The principal underlying factors have included favorable capital markets, deregulation and industry restructuring. Significant foreign investment in US utilities has begun to occur in recent years.

**Monitoring procedures.** The review of potential strategic opportunities in recent years has been minimal, with reliance on investment firm briefings. PHI spends relatively less time and effort than other firms in tracking and monitoring industry transactions and opportunities relevant to PHI. Similarly, M&A industry events and opportunities are not a major focus for the Board.<sup>52</sup>

**PHI interest in transactions.** PHI understands that the opportunities for utility or asset acquisitions is increasing based on the current economic environment and changes in valuations. That being said, such opportunities are not a major focus for the Company, which has no current appetite for any acquisitions. It views its commitment to a significant increase in rate base investment as somewhat equivalent to a significant merger.

**Strategic view of PHI competitive position.** In assessing its commitments to unregulated business segments, the Company must determine its relative competitive strength. How does PHI rank against its major competitors, and what is it that gives the PHI business units a competitive advantage? While PHI certainly considers these questions, it continues to trade below its peers, primarily due to the market view of unregulated investment value.

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<sup>50</sup> Response to Discovery, OC-274 (restricted); 2007 "Strategic Landscape Overview".

<sup>51</sup> Response to Discovery, OC-274 (restricted); 2008 "Mergers, Acquisitions, and Strategic Asset Plays".

<sup>52</sup> Based on interviews with Kevin McGowan and members of the Board.

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## Chapter 10. External Relations

### Scope

For purposes of this report, the scope of external relations is limited to the responsibilities of the Government Affairs and Public Policy (GAPP group). The primary responsibility associated with the external relations function is to balance the needs of PHI and its shareholders with the policy objectives of legislators, regulators and consumers.

### Findings

1. The External Relations function (internally known as the GAPP group) is centrally coordinated along utility brands. On-site local management of the function is the domain of the Regional President who interacts with the legislature, governor's office, and the Board of Public Utilities.
2. Recent goals of the GAPP group include, but are not limited to, education of stakeholders on the Blueprint for the Future initiative, fostering support for the Mid-Atlantic Power Pathway (MAPP) project, and securing funding through the Economic Stimulus Bill.
3. While the GAPP group is focused on both federal and state matters, in New Jersey, particular emphasis has been placed on the Energy Master Plan, smart metering, and decoupling.
4. Lobbying is conducted internally and by outside firms. Expenditures on ACE's most significant external lobbying firms has ranged from \$217,000 to \$385,000 annually between 2005 and 2008.

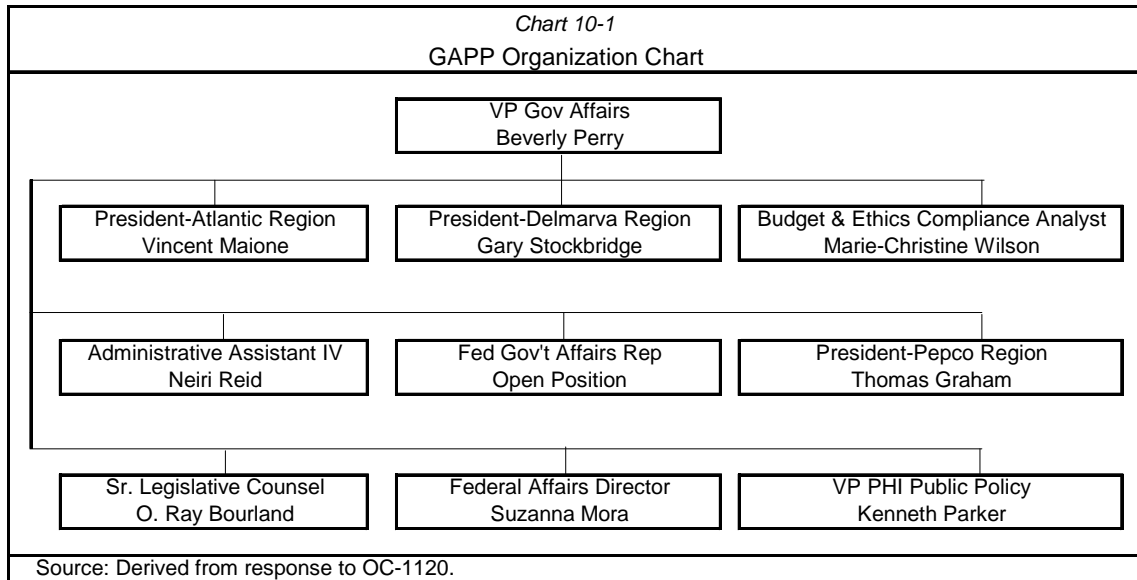
### Organization

Until his retirement, the GAPP group reported to William Torgerson, Vice Chairman & Legal Officer.<sup>1</sup> GAPP is headed by Ms. Beverly Perry, Senior Vice President Government Affairs. Ms. Perry now reports directly to Joseph Rigby, PHI Chairman, CEO & President.<sup>2</sup> A mid-2009 organization reflecting functions reporting to Ms. Perry is shown below:

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<sup>1</sup> Response to Discovery, OC-18.

<sup>2</sup> Response to Discovery, OC-1120.



In total, approximately 45 people work in the GAPP group. Most are located in the jurisdictions they serve.<sup>3</sup>

As discussed in Chapter 7, PHI Organizational Structure, ACE is one of three utilities in the Power Delivery Business Segment. During the audit period, ACE had approximately 500 employees. Utility Operations are generally managed through a centralized organization, ultimately reporting to the COO. Utility operations are managed primarily through the PHI Service Company, while utility specific employees are responsible for functions unique to the utility geographic area.

Until the 2005 timeframe, the local ACE senior position was that of Vice President. This position was created at the time of the Pepco merger in 2002. The equivalent current position is that of Regional President. Structured by brands, each utility has a Regional President and two Regional Vice Presidents.<sup>4</sup> The Regional President's primary responsibilities are to interact directly with the community, to coordinate key company initiatives in the region, and to communicate company positions to interested parties. These communications extend to the legislature, the governor's office, and the Board of Public Utilities. These activities are coordinated at the PHI level.

The ACE Regional president is not responsible for distribution operations and maintenance or capital projects.

<sup>3</sup> Interview with Beverly Perry, Senior Vice President GAPP (December 12, 2008).

<sup>4</sup> Interview with Beverly Perry, Senior Vice President GAPP (December 12, 2008).

Prior to June 1, 2009, Kenneth Parker was President – Atlantic Region. He is now Vice President, Public Policy for PHI. Vincent Malone, former Project Manager for PHI's MAPP project, is currently the Regional President of ACE.<sup>5</sup>

## **Goals and Responsibilities**

In the mid-2000's, PHI adopted its current organization structure under Ms. Perry. The primary responsibility associated with the external relations function is to balance the needs of PHI and its shareholders with the policy objectives of legislators, regulators and consumers. In this context, the primary functions of the GAPP group are to:<sup>6</sup>

- Influence legislation;
- Collect and analyze political intelligence;
- Educate stakeholders regarding business policies and actions;
- Develop strategic political relationships;
- Promote PHI image and values through corporate social responsibility; and
- Engage employees in grassroots advocacy programs.

PHI's key constituencies include Federal, State and local governmental agencies, as well as business and community associations. Trade associations include Edison Electric Institute (EEI) and American Gas Association (AGA).

The primary 2009 goals identified by the GAPP group include:

- Education of stakeholders on the Blueprint for the Future initiative;
- Securing funding through the Economic Stimulus Bill;
- Fostering support for the MAPP Project;
- Developing stronger relationship of PHI operations and development of goodwill in communities;
- Expanding PAC participation and ensuring ethical business practices among lobbyists; and
- Tempering and reshaping the regulatory and legislative environment.

The following is a brief description of the various PACs currently associated with PHI entities.

- Pepco Holdings, Inc. PAC (PHI PAC). Established March 2003. There are 186 members. The PAC is governed by its bylaws and Steering Committee, whose members are appointed by the CEO. It contributes to Federal, state and local candidates, except for Maryland and New Jersey, as required by law.

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<sup>5</sup> Interview with Kenneth Parker, President – Atlantic Region (November 17, 2008) and PHI press release dated May 19, 2009.

<sup>6</sup> Response to Discovery, OC-1117 (restricted); Tab 9. The overview of the GAPP organization was based largely on these May 2009 materials.

- Maryland Pepco PAC. Established in 2003. There are 104 members. The PAC is governed by its bylaws and Steering Committee, whose members are appointed by the CEO. Contributes to state and local candidates, as well as state PAC's.
- Atlantic City Electric Employee PAC (ACE PAC). Currently has 14 members. Operates independent of PHI; its officers are appointed by its Steering Committee. Contributes solely to candidates in New Jersey, excluding Governor, Lt. Governor, and state political committees.

These PACs support those individuals who understand and support issues impacting the utility industry, PHI and its subsidiaries.

PHI has 19 in-house lobbyists who meet with legislators and members of federal, state or local government administrations or agencies to influence legislation and shape policy on utility industry and PHI matters. The in-house lobbyists are registered to lobby on behalf of PHI in the jurisdictions in which it operates. To comply with regulations issued by the New Jersey Election Law Enforcement Commission, employees having contact with the BPU, and its staff or the Department of Environment Protection Commissioner and staff, must register as lobbyists. The primary in-house lobbyist in New Jersey is Robert Revelle, State Relations Director. In late 2008, Mr. Revelle reported directly to Kenneth Parker.<sup>7</sup>

Ethics Compliance is supported by GAPP through two basic corporate policies where employees are informed of restrictions: in running for public office or assisting candidates who are running for offices; and limitations on campaign contributions and activities in support of public officials.

PHI's Congressional delegations include:

- 6 Senators – all Democrats
- 12 voting and one non-voting member of the House – 10 Democrats
- Key Senate Committee seats include: Energy, Environment, Finance, and Appropriations
- Key House Committee seats include: Ways & Means, Infrastructure, Natural Resources, and Homeland Security

Key Federal Issues now include:

- \$787 billion Economic Stimulus Bill – significant funding is included for energy efficiency programs; upgrading the transmission network; and research in support of renewable and energy efficiency technologies.
- Climate change – House position is 20% reduction in GHG by 2020.

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<sup>7</sup> Interview with Kenneth Parker, President – Atlantic Region (November 17, 2008) and response to Discovery, OC-18.

- Renewable Portfolio Standards – House position is currently in the 17.5% to 25% range; the Senate is currently at 15%, both to be targeted by 2020.
- Energy Efficiency Standards – Utilities may be mandated to reduce energy sales by annual targets or pay penalties.
- Dividend taxation rate – the administration position may propose to raise the 15% rate to 25% on incomes over \$250,000.

Current Legislative and Regulatory activities and challenges in New Jersey are:

- The State Senate and Assembly are beginning to address legislation necessary to implement the Energy Master Plan.
- PHI believes that the scale of the BPU agenda and the state political culture have led to a slow-decision-making process.
- New Jersey has not embraced PHI’s smart metering and decoupling proposals.
- ACE must begin to focus on compliance with the Energy Master Plan, including:
  - ACE plan to be filed by June 2010.
  - Transfer of Energy Efficiency programs back to ACE.
  - 20% reduction of energy sales.
  - 20% RPS by 2020.
  - 3,000 Mw of offshore wind by 2020.

**Outside Lobbying**

The following is a summary of outside lobbyist activities associated with ACE:

**[BEGIN CONFIDENTIAL]**

	Lobbyist Firm	2005	2006	2007	2008

**[END CONFIDENTIAL]**

The MMW Group provided general legislative, public affairs, and strategic support, including regional and local outreach in support of infrastructure construction projects. Its engagement

ended in 2006. Princeton Public Affairs provided strategic guidance, general lobbying, and governmental outreach activities. Its engagement ended in 2006. Riker Danzig provided legislative and general public affairs support, including tracking and analyzing legislation and general lobbying support. Its engagement was terminated in early 2008. Florio, Perrucci, et al supported ACE lobbying and public affairs activities through strategic guidance, general lobbying and governmental outreach activities. Its engagement ended in 2008. Finally, Fox & Shuffler and Cooper Levenson continue to support ACE lobbying and public affairs activities through strategic guidance, general lobbying, and governmental outreach activities.<sup>8</sup>

ACE lobbying activities are generally coordinated by the ACE President, with some involvement by the VP Government Affairs.

### **ACE Relationship with the BPU**

Members of PHI senior management are available to meet with Commissioners and senior staff on issues important to PHI and ACE. While the ACE Regional President may facilitate and attend these meetings, the subject matter is generally beyond the detailed expertise and specific responsibility of the position.

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<sup>8</sup> Response to Discovery, OC-647.

## Chapter 11. Finance

This Chapter addresses PHI's financing activities, its cost of capital, and the implications of diversification on utility operations. Regulatory filings are also discussed in this section.

### Findings and Recommendations

1. PHI has no particular dividend payout target objective, other than recognition of growth in line with earnings<sup>1</sup>. Utility payouts to the parent are generally measured against equity ratio effects. The Financing Plans generally reflect the management of a capital structure consistent with strong credit ratings. Overland agrees with this approach and these commitments.
2. *The ACE equity ratio has declined somewhat in 2008, and should be increased to protect current credit ratings.*
3. ACE dividend payouts have been high in relation to earnings. There are a number of legitimate reasons for these high payout ratios during the audit period. Under certain circumstances this could be a potential concern. However, PHI has the financial strength to support ACE capital and operating requirements. Therefore, Overland does not recommend the use of any ring-fencing measures to restrict PHI policies over the cash flow and capital structure of ACE.
4. The business risk profile of PHI is impacted by its investments in CE and PES. The potential effects of these risks has become more obvious over the last twelve to eighteen months, given the major volatility in energy prices, coupled with the significant events in the US and global financial markets at this time.
5. If the PHI and ACE cost of equity are assumed to be equal, then the regulated cost of capital is impacted by PHI unregulated activities. While regulators may measure a surrogate cost of equity based on pure-play regulated utility risk, the actual cost is PHI's cost of equity.
6. PHI has historically assumed that the risk premium for unregulated investments is approximately 2%. However, in light of more recent economic conditions, this premium is much greater.
7. While CE and PES may make strategic sense to PHI, the market has continued to value the unregulated businesses below PHI's internal view of the value of such assets.

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<sup>1</sup> Based on page 89 of ACE's 2009 third quarter 10-Q SEC filing, PHI has paid capital contributions of \$129 million to ACE.

8. ACE's debt primarily consists of first mortgage bonds and long-term transition bonds issued by Atlantic City Electric Transition Funding (ACE Funding). ACE Funding was created to securitize ACE's recoverable stranded costs pursuant to EDECA.
9. Because of disruptions in the credit market in late 2008, commercial paper was not a viable option for short-term borrowings. ACE had no commercial paper outstanding as of December 31, 2008.
10. ACE successfully placed \$250 million in long-term debt in November, 2008 maturing in 2018. This issuance aided in smoothing out the scheduled maturities of debt over the next thirty years. It also provided ACE with the necessary liquidity to execute its 2009 plan.
11. Funds raised through equity offerings take place at the PHI (parent) level since ACE is a wholly-owned subsidiary. PHI generated approximately \$442 million in gross proceeds from two separate issuances of common stock in November 2007 and November 2008. To a lesser extent, PHI also obtains funds through its Shareholder Dividend Reinvestment Plan.
12. ACE has an overall strategy of achieving and maintaining investment-grade (BBB to A) credit ratings on its debt. This is primarily accomplished by managing the Company's equity ratio to be in the mid-to-high 40 percent range.
13. Like ACE, PHI has a goal of maintaining or improving its credit ratings. This is important in the face of a major capital program. In order to accomplish this goal, PHI may have to be willing to issue equity in an adverse market environment.
14. No affiliate has an encumbrance on ACE's assets.
15. PHI management believes that it has taken the necessary steps to insulate ACE from potential financial difficulties of its affiliates. These steps include preserving a healthy utility equity ratio, limiting participation in the corporate money pool, and maintaining separate credit ratings and separate debt issues.
16. *PHI should place more emphasis on its strategic and business plans and related financial forecasts in assessing cost recovery requirements. This may require heightened efforts to develop consensus with regulators and legislators.*

### **Cost of Capital and Capital Structure**

The following is a high level estimate of the PHI cost of equity for the audit period. Pure-play utility betas are generally somewhat lower than the betas contained in the peer group analysis reflected below.



<b>Table 11-1</b> <b>Pepco Holdings, Inc.</b> <b>Cost of Equity Estimate</b> <b>Based on Capital Asset Pricing Model</b> <b>Risk-Free Rate Based on Yield of Intermediate-Term Government Bond as of Dec 31, 2008</b> <b>Risk Premium Based on Intermediate-Term Government Bond Rate</b> <b>As of December 31, 2006</b>					
Line#	Peer Utilities [1]	Risk Free Interest 12/31/06 [2]	Beta [3]	Equity Risk Premium [4]	Cost of Equity [5]
1	Pepco Holdings, Inc.	2.25%	0.90	6.9%	8.46%
2	Avista	2.25%	0.95	6.9%	8.81%
3	Consumers Energy Company	2.25%	1.65	6.9%	13.64%
4	Idacorp	2.25%	1.05	6.9%	9.50%
5	Nstar	2.25%	0.80	6.9%	7.77%
6	Portland General	2.25%	NMF	6.9%	N/A
7	Puget Energy	2.25%	0.85	6.9%	8.12%
8	Sierra Pacific	2.25%	1.25	6.9%	10.88%
9	Xcel	2.25%	0.90	6.9%	8.46%
<b>10</b>	<b>Peer Group Average</b>				<b>9.60%</b>
Reference: Column [1] Selected Companies from the Utilities industry as identified through Value Line. Column [2] Yield on 10-Year US Treasury Bond as of 12/31/2008. Obtained from US Treasury website. Column [3] Value Line Investment Survey - March 2, 2007; March 30, 2007; May 11, 2007. Column [4] Total Return on Large Company Stocks: Stocks, Bonds, Bills and Inflation - Ibbotson 2007 Yearbook (12.3%) LESS Risk-Free Rate of Return (Return on Intermediate-Term Government Bonds = 5.4%): Stocks, Bonds, Bills and Inflation - Ibbotson 2007 Yearbook. Column [5] (Product of Column [3] and Column [4]) plus Column [2] Line 10 Average of Lines 2 through 9					

The following provides a comparative summary of the utility subsidiary equity ratios:

<b>Table 11-2</b> <b>Utility Company Equity Ratios</b>			
Date	Pepco	ACE	DPL
December 31,2006	46.30%	47.60%	44.60%
December 31,2007	44.30%	47.70%	44.50%
November 30,2008	46.10%	45.70%	44.80%
Source: Derived from response to OC-662.			

The ACE equity ratio has declined somewhat in 2008, and should be increased to protect current credit ratings.

The capitalization of the utilities as of November 30, 2008 is:

	<b>Pepco</b>	<b>ACE</b>	<b>DPL</b>
<b>Common Equity</b>			
Common Stock	1	25,638	2
Add'l Paid in Capital	611,406	345,511	313,828
Capital Stock Expense	0	(574)	(9,924)
Retained Earnings	644,644	166,674	453,235
<b>Total Common Equity</b>	<b>1,256,051</b>	<b>537,249</b>	<b>757,141</b>
Preferred Stock	0	6,215	0
Long Term Debt	1,244,775	632,552	781,364
Short Term Debt	225,000	0	150,000
<b>Total Debt and Equity</b>	<b>2,725,826</b>	<b>1,176,016</b>	<b>1,688,505</b>
<b>Common Equity Ratio</b>	<b>46.1%</b>	<b>45.7%</b>	<b>44.8%</b>
Source: Derived from response to Discovery, OC-662. Note: Calculation above is based on the Company's definition of capital structure.			

### **Financing Activities of Utilities and Affiliates**

For the period 2005 to 2008, PHI issued \$900 million of long-term debt, and retired \$850 million of long-term debt. During this same period, PCI issued no debt, but retired approximately \$185 million of long-term debt.<sup>2</sup> ACE received a capital contribution from PHI (through Conectiv) of \$35 million.<sup>3</sup>

Based on the increased level of capital expenditures, the utilities can no longer be financed solely with debt without a material erosion of the utility capital structures and credit metrics. As a result, PHI committed to providing capital contributions to its utility subsidiaries from proceeds of its November 2008 equity offering.<sup>4</sup>

### **Uses of Funds for Utility and Affiliate Operations**

In its assessment of the deployment of capital for investment projects, ACE relies on a discount rate equal to the after-tax cost of capital. For instance, in the evaluation of the AMI investment, the cost/benefit analysis employed the following cost of capital.

<sup>2</sup> Response to Discovery, OC-851.

<sup>3</sup> Response to Discovery, OC-661.

<sup>4</sup> Response to Discovery, OC-1092 (restricted).

	ACE NJ-Electric		
	Pre-Tax Cost %	After-Tax Cost %	Weight %
Debt	6.71%	4.00%	50.64%
Trust Preferred	7.84%	4.67%	2.51%
Preferred	4.27%	4.27%	0.63%
Equity	9.75%	9.75%	46.22%
Cost of Capital	8.14%	6.69%	
Tax Rate (used in debt %)		40.40%	
Source: Derived from response to Discovery, OC-468.			

This analysis was used as a component of the Blueprint filing in November 2007 in New Jersey. In assessing the fair market value of debt securities, JP Morgan had provided PHI with discount rates based upon a risk premium over long-term treasury securities. These rates were 5.91% and 6.05% as of December 31, 2006 and 2007, respectively.<sup>5</sup>

PHI considers its ability to realize tax benefits such as ITC and accelerated depreciation when evaluating the economic viability of potential projects by its various subsidiaries. Certain projects, such as renewables, may only be justified where PHI can capture tax benefits sufficient to satisfy a threshold investment return.<sup>6</sup>

### **Impact of Diversification on ACE**

#### **Impact of Asset Write-Downs or Write-Offs**

Potomac Capital Investment (PCI) has made substantial equity investments in leverage leases of large power plants outside the US. In 2003, PHI announced that this investment activity would cease, and the portfolio would liquidate under the terms of the agreements. The IRS has disputed tax benefits arising from PHI and similar portfolios. As of mid-2008, the recorded deferred taxes were approximately **[BEGIN CONFIDENTIAL]** **[END CONFIDENTIAL]**, which would be immediately payable should the IRS prevail. The total exposure, including penalty and interest, could exceed **[BEGIN CONFIDENTIAL]**

**[END CONFIDENTIAL]**.<sup>7</sup> In the August 2008 timeframe, PHI announced a write-down of approximately \$93 million related to its cross-border SILO leases, indicating that earnings would be reduced by \$20 million per year.<sup>8</sup>

<sup>5</sup> Response to Discovery, OC-468.

<sup>6</sup> Response to Discovery, OC-642.

<sup>7</sup> Response to Discovery, OC-559; Lehman Brothers Equity Research, August 12, 2008. See also Response to Discovery, OC-1117 (restricted); Tab3, page 16.

<sup>8</sup> Response to Discovery, OC-559; Merrill Lynch equity research, August 13, 2008.

The historic returns on equity realized by PCI are as follows:

2005	13.8%
2006	9.5%
2007	8.6%
YTD September 2008	-11.7%

In June 2008, PHI revised its assumptions regarding the timing of tax benefits. As of that time, PCI assumed a 20% deferral of tax benefits.<sup>9</sup> Based on the reduced tax benefit assumptions, anticipated returns in the 2009-2012 timeframe range from 3.4% to 5.2%.<sup>10</sup> PHI apparently has not developed any estimate of the impact of the reduced tax benefit on the market value of the lease portfolio.<sup>11</sup>

PCI has made no dividend payments to its parent during the period 2005 to 2008.<sup>12</sup>

### **Risk Premium Associated with Non-Utility Investments**

The Credit Suisse valuation analysis assumes a 7% discount rate for utility investment, and a 10% discount rate on CE.<sup>13</sup>

PHI stock is currently selling **[BEGIN CONFIDENTIAL]**

**[END CONFIDENTIAL].**<sup>14</sup>

At the time of the audit review, PHI held the view that the risk premium threshold for unregulated investment was a 2% on return on equity. The objective for competitive businesses was 2% over a utility return.<sup>15</sup>

### **PES Cash Requirements and Implications on Utility Operations**

As of March 2009, PES collateral requirements were about \$563 million. This is after a \$200 million reduction arising from a Credit Intermediation Agreement with an investment bank that resulted in the release about \$200 million of collateral. PES is currently pursuing other opportunities for the novation of power supply contracts.<sup>16</sup>

<sup>9</sup> Response to Discovery, OC-628.

<sup>10</sup> Response to Discovery, OC-629.

<sup>11</sup> Response to Discovery, OC-630.

<sup>12</sup> Response to Discovery, OC-848.

<sup>13</sup> Response to Discovery, OC-559, Credit Suisse Equity Report, dated November 4, 2008.

<sup>14</sup> Response to Discovery, OC-1117 (restricted); Tab 8, page 1.

<sup>15</sup> McGowan interview, held the week of November 17, 2008.

<sup>16</sup> Response to Discovery, OC-1133.

## **ACE Cost of Capital as Compared to Other Utilities**

The most recent authorized returns on equity for PEPCO and Delmarva are 10%; ACE is 9.75%. The utilities currently **[BEGIN CONFIDENTIAL]**  
**[END CONFIDENTIAL]**.<sup>17</sup>

Regulatory risk is considered a central component of utility business risk. S&P uses a five-category ranking from most supportive to least credit supportive in ranking state jurisdictions. It currently classifies no regulatory jurisdictions in the category as “most credit supportive”, and only 8 as “more credit supportive”. New Jersey is considered “credit supportive”, along with twenty other states. The other jurisdictions in which PHI operates are all considered “least credit supportive”, and constitute three of the six jurisdictions in this category.<sup>18</sup>

### **Implications of Non-utility Operations on Utility Credit Quality**

PHI owns and operates a mix of regulated and unregulated businesses that have varying business and financial risks. The impact of unregulated risk is a function of the proportion of unregulated activities to total operations, as well as the degree of risk associated with specific unregulated businesses. Generally, companies with unregulated investments that exhibit greater business risks require stronger financial ratios to achieve a given credit rating. Companies with higher-risk unregulated investments, all else equal, will trigger ratings notch differentials over wholly-regulated utility businesses. Merchant power generation and energy trading and marketing are considered medium to high business risks.<sup>19</sup>

The relative relationship of utility ratings to its holding company parent is principally a function of the differential in consolidated risk and the extent to which ring fencing measures insulate the utility from unregulated risks.

Regulated earnings currently represent about 60% of net earnings. However, the relative contribution of regulated earnings is expected to **[BEGIN CONFIDENTIAL]**  
**[END CONFIDENTIAL]**.<sup>20</sup>

The cost of capital at PES has increased as a result of the massive erosion in the credit markets over the last year, coupled with the exposure to substantial collateral requirements in a period of volatile energy prices. Presumably, these costs, at least to some extent, are built into gross margins. However, the risk-return and liquidity issues related to this business have become a concern in the investment community.<sup>21</sup>

Looking at the most significant risks currently facing PHI, some are a function of industry characteristics or economic conditions, while others are more PHI specific. Industry and macroeconomic risks would contribute to potential changes in absolute risk, but would

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<sup>17</sup> Response to Discovery, OC-1117 (restricted); Tab 3, page 5.

<sup>18</sup> Response to Discovery, OC-635.

<sup>19</sup> Response to Discovery, OC-280; Moody's Rating Methodology, p. 5-6.

<sup>20</sup> Response to Discovery, OC-274 (restricted); 2008 Financial Forecast Summary.

<sup>21</sup> Response to Discovery, OC-559, Credit Suisse Equity Research, dated November 4, 2008.

presumably have little impact in terms of relative risk measured against PHI peers. The major unique or PHI-controllable risks include:<sup>22</sup>

**[BEGIN CONFIDENTIAL]**

**[END CONFIDENTIAL]**

In spite of PHI's commitment to reduce its risk exposure by exiting the PES retail business, PHI collateral positions are still significant. They were at approximately **[BEGIN CONFIDENTIAL]**

**[END CONFIDENTIAL].**<sup>23</sup>

To help determine the extent that PHI's unregulated businesses were affecting its cost of equity, Overland calculated the cost of equity for PHI relative to its peer group. Despite the additional risks that PHI is undertaking with their unregulated businesses the analysis of PHI's cost of equity (documented in Table 11-1) proved inconclusive. An additional analysis performed by Overland that compared the Price-to-Earnings and Price-to-Book ratios of PHI to its peers showed that PHI had lower PE and PB ratios in three of the four years analyzed.

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<sup>22</sup> Response to Discovery, OC-1117(restricted), Tab 10.

<sup>23</sup> Response to Discovery, OC-1117 (restricted); Tab 10, Attachment IV.

Table 11-5

## PHI Peer Company PE Ratio and PB Ratio Comparison

Ref #	Company Name	Ticker Symbol	P/E Ratio				P/B Ratio				
			2008	2007	2006	2005	2008	2007	2006	2005	
1	Pepco Holdings	POM	12.08	18.20	18.10	14.90	0.93	1.46	1.38	1.18	
<b>Comparable Company Analysis - Large Cap</b>											
1	Allegheny Energy	AYE	14.41	22.00	20.40	26.90	2.01	3.81	3.65	3.06	
2	Con Edison	ED	8.89	13.80	15.50	15.10	1.10	1.50	1.55	1.55	
3	Dominion Res	D	11.31	20.60	16.00	24.90	2.07	2.91	2.27	2.58	
4	Duke Energy (1)	DUK	13.90	16.10	N/A	N/A	0.91	1.20	N/A	N/A	
5	Exelon Corp	EXC	13.37	18.20	16.50	15.40	3.31	5.32	4.16	3.88	
6	FPL Group, Inc.	FPL	12.28	18.90	13.70	17.90	1.76	2.57	2.22	1.93	
7	First Energy	FE	11.02	15.60	14.20	16.10	1.79	2.46	2.13	1.76	
8	PPL Corporation	PPL	12.33	17.30	14.10	15.10	2.27	3.50	2.69	2.53	
9	Progress Energy	PGN	12.49	17.90	21.60	14.80	1.21	1.50	1.52	1.38	
10	Public Service Enterprise Group	PEG	6.82	16.50	17.80	16.50	1.90	3.42	2.49	2.71	
11	Southern Co.	SO	16.37	16.00	16.20	15.90	2.17	2.39	2.42	2.39	
12	Ameren	AEE	11.55	17.40	19.40	16.70	0.99	1.67	1.69	1.65	
13	American Electric Power	AEP	9.70	16.30	12.90	13.70	1.26	1.85	1.79	1.61	
14	DTE Energy Co.	DTE	10.58	18.30	17.40	13.80	0.97	1.23	1.47	1.33	
15	Entergy Corporation	ETR	13.01	19.30	14.30	16.30	1.98	2.94	2.28	1.92	
16	Wisconsin Energy	WEC	13.67	16.50	16.00	14.50	1.47	1.84	1.92	1.70	
17	Edison International	EIX	8.73	16.00	13.00	11.70	1.10	2.06	1.92	2.15	
18	PG&E	PCG	10.63	16.80	14.80	15.40	1.51	1.78	2.11	1.89	
19	Sempra Energy	SRE	9.47	14.00	11.50	11.80	1.30	1.94	1.96	1.87	
20	Xcel Energy	XEL	12.62	16.70	14.80	15.40	1.21	1.54	1.61	1.38	
<b>Average of Large Cap</b>			11.66	17.21	15.79	16.21	1.61	2.37	2.20	2.07	
<b>Comparable Company Analysis - Mid Cap</b>											
1	Northeast Utilities	NU	14.32	18.70	27.10	19.80	1.24	1.68	1.55	1.07	
2	Nstar	NST	16.44	16.60	15.90	15.50	2.18	2.27	2.32	2.00	
3	Constellation Energy (2)	CEG	-3.42 (2)	20.50	15.60	16.00	1.57	3.43	2.70	2.09	
4	Scana Corporation	SCG	12.07	15.00	15.40	14.40	1.38	1.67	1.67	1.69	
5	TECO Energy	TE	16.04	13.30	13.80	17.10	1.31	1.80	2.09	2.25	
6	Alliant Energy	LNT	11.18	15.10	16.80	12.60	1.14	1.67	1.65	1.34	
7	CMS Energy Corporation	CMS	7.84	26.80	22.20	12.60	0.93	1.84	1.67	1.38	
8	Centerpoint Energy	CNP	9.49	15.00	10.30	19.10	2.15	3.05	3.34	3.07	
9	Cleco Corporation	CNL	13.43	19.60	17.30	15.00	1.29	1.65	1.66	1.52	
10	DPL Inc.	DPL	10.29	16.00	26.60	26.90	2.71	3.86	4.41	3.20	
11	Great Plains Energy	GXP	12.80	16.30	18.30	14.00	0.90	1.61	1.90	1.71	
12	ITC Holdings Corporation	ITC	19.41	27.60	33.00	26.30	2.33	4.30	3.18	3.55	
13	Integrus Energy	TEG	26.05	21.40	14.60	13.40	1.05	1.21	1.53	1.70	
14	OGE Energy Corporation	OGE	10.31	13.80	13.70	14.90	1.27	1.98	2.27	1.76	
15	Vectren Corporation	VVC	15.16	15.30	18.90	15.10	1.50	1.80	1.83	1.80	
16	Westar Energy	WR	12.06	14.10	12.20	14.80	1.02	1.36	1.47	1.32	
17	Avista Corporation	AVA	14.15	30.90	15.40	19.40	1.06	1.25	1.45	1.12	

Table 11-5

## PHI Peer Company PE Ratio and PB Ratio Comparison

Ref #	Company Name	Ticker Symbol	P/E Ratio				P/B Ratio			
			2008	2007	2006	2005	2008	2007	2006	2005
18	Black Hills Corporation	BKH	9.80	15.00	15.80	17.30	0.99	1.72	1.56	1.55
19	Hawaiian Electric	HE	20.69	21.60	20.30	18.30	1.44	1.49	2.02	1.72
20	Idacorp, Inc.	IDA	13.51	18.20	15.10	16.70	1.06	1.31	1.50	1.22
21	NV Energy, Inc.	NVE	11.11	19.10	12.60	27.50	0.74	1.32	1.42	1.27
22	Pinnacle West	PNW	13.39	14.90	13.70	19.20	1.61	1.21	1.47	1.20
23	Portland General (3)	POR	14.01	11.90	23.40	N/A	0.90	1.32	1.39	N/A
24	Unisource Energy	UNS	75.28 (2)	22.00	17.70	23.90	1.53	1.61	1.97	1.76
<b>Average of Mid Cap</b>			13.80	18.28	17.74	17.82	1.39	1.93	2.00	1.80
			<b>P/E Ratio Analysis (4)</b>				<b>P/B Ratio Analysis (5)</b>			
<b>Expected Pepco Market Price Based on Peer Ratios</b>			18.71	30.52	21.80	32.49	28.53	43.13	39.55	36.46
<b>Actual Pepco Market Price</b>			17.76	29.33	26.01	22.37	17.76	29.33	26.01	22.37
<b>% Difference of Actual Price vs Expected Price</b>			-5.34%	4.06%	16.20%	45.25%	60.63%	47.06%	52.06%	63.01%
<p>(1) Duke Energy spun off its midstream gas operations into a new company, Spectra Energy (NYSE: SE), to shareholders in early 2007. Data for the 'old' Duke Energy are not shown because they are not comparable.</p> <p>(2) These PE Ratios were noted as extreme outliers and were removed from the 'Average of Mid Cap Companies' calculation.</p> <p>(3) Portland General Electric was formerly a wholly owned subsidiary of Enron corporation. PGE obtained its independence from Enron in 2006 and began trading its shares on the NYSE.</p> <p>(4) The 'Expected' price for the P/E Ratio Analysis was calculated as follows: [Pepco's Basic EPS * Average P/E Ratio of the Mid Cap and Large Cap Peer Companies].</p> <p>(5) The 'Expected' price for the P/B Ratio Analysis was calculated as follows: [Pepco's Book Value Per Share * Average P/B Ratio of the Mid Cap and Large Cap Peer Companies].</p> <p>Sources: Value Line Investment Survey for November 28, 2008; December 26, 2008; May 8, 2009. 'Historical Quotes' and 'Financials' features on MarketWatch.com</p>										

## Credit Ratings and Credit Quality

PHI is considered to have a medium business risk profile, similar to most regulated U.S. utilities. About 65%-70% of consolidated cash flow comes from its regulated transmission and distribution activities. ACE contributes about 20%-25% of the PHI consolidated cash flow.<sup>24</sup> The CE and PES business segments reflect high business risk profiles.<sup>25</sup> The rating agencies, and particularly S&P, view the corporate credit ratings of the utility subsidiary to be directly linked to the ratings of its parent company.

### PHI Stated Objectives

PHI expects to maintain strong investment grade credit ratings. The primary objective of the PHI financing plan is to **[BEGIN CONFIDENTIAL]**

**[END CONFIDENTIAL].**<sup>27</sup>

<sup>24</sup> Response to Discovery, OC-19, Standard & Poor's Ratings Direct, dated March 17, 2008 (restricted).

<sup>25</sup> Response to Discovery, OC-19, Moody's Credit Opinion, dated May 25, 2007 (restricted).

<sup>26</sup> Response to Discovery, OC-1092 (restricted).

<sup>27</sup> Response to Discovery, OC-467. 2008 Financing Plan released in December 2007 (restricted).



The capital budget will continue to put pressure on credit ratings.<sup>28</sup> Further, given the current view of the rating agencies that the industry is becoming somewhat more risky, financial metrics may need to improve over historic targets. Specifically, an equity ratio in the high 40s is no longer likely to support an A- corporate credit rating<sup>29</sup>.

**ACE and PHI Credit Metrics**

PHI financial ratios and credit rating metrics are expected to **[BEGIN CONFIDENTIAL]**

**[END CONFIDENTIAL]**.<sup>30</sup> Refer below for

tables summarizing the Moody's and Standard and Poor's ratings for PHI and ACE.

<i>Table 11-6</i>			
<b>Pepco Holdings, Inc.</b>			
<b>Ratings Summary</b>			
<b>Year</b>	<b>Security</b>	<b>S&amp;P</b>	<b>Moody's</b>
2008	Corporate Credit Rating	BBB	Baa3
	Credit Ratings Outlook	Stable	Stable
2007	Corporate Credit Rating	BBB	Baa3
	Credit Ratings Outlook	Stable	Stable
2006	Corporate Credit Rating	BBB	Baa3
	Credit Ratings Outlook	Stable	Stable
Note 1: In some instances, Overland received multiple rating reports for the same year. In such instances, Overland relied on the most recent issue to include in the above summary.			
Source: Derived from responses to Discovery, OC-19 and OC-559.			

<sup>28</sup> Response to Discovery, OC-558 (restricted).

<sup>29</sup> S&P Ratings Direct, "US Utilities Ratings Analysis Now Portrayed In The S&P Corporate Ratings Matrix", date November 30, 2007

<sup>30</sup> Response to Discovery, OC-274 (restricted); 2008 Financial Forecast Summary.

<b>Table 11-7 Atlantic City Electric Ratings Summary</b>			
<b>Year</b>	<b>Security</b>	<b>S&amp;P</b>	<b>Moody's</b>
2008	Sr. Secured	(1)	A3
	Sr. Unsecured	(1)	Baa1
	Commercial Paper	A-2	P-2
	Preferred Stock	BB+	(1)
	Corporate Credit Rating	BBB	(1)
	Corporate Credit Ratings Outlook	Stable	Negative
2007	Sr. Secured	BBB+	A3
	Sr. Unsecured	BBB-	Baa1
	Commercial Paper	A-2	P-2
	Preferred Stock	BB+	Baa3
	Corporate Credit Rating	BBB	Baa1
	Corporate Credit Ratings Outlook	Stable	Stable
2006	Sr. Secured	BBB+	A3
	Sr. Unsecured	BBB-	Baa1
	Commercial Paper	A2	P-2
	Preferred Stock	BB+	Baa3
	Corporate Credit Rating	BBB	(1)
	Corporate Credit Ratings Outlook	Stable	Stable
Note 1: This information was not available through discovery.			
Note 2: In some instances, Overland received multiple rating reports for the same year. In such instances, Overland relied on the most recent issue to include in the above summary.			
Source: Derived from responses to Discovery, OC-19 and OC-559.			

Standard and Poor’s characterized its view of ACE operations as follows:

The lack of competition, low operational risk, and supportive regulatory environment contribute to cash flow stability by ACE. Furthermore, ACE no longer operates under rate caps in New Jersey and benefits from regulatory mechanisms that allow the utility to pass through wholesale power costs to ratepayers without a rate case.

PHI’s consolidated business profile is weaker than ACE’s due to challenging regulatory environments in some of its jurisdictions. Standard & Poor’s Ratings Services considers PHI’s unregulated businesses substantially more risky than the utilities due to their exposure to volatile commodity prices and very competitive retail energy markets...<sup>31</sup>

<sup>31</sup> Response to Discovery, OC-19, Standard & Poor’s Ratings Direct, dated March 17, 2008 (restricted).

## ACE Credit Ratings

In a July 2008 credit report, Moody's released the following statement regarding the ACE ratings.<sup>32</sup>

On July 3, 2008 Moody's changed the rating outlook for ACE, the smallest utility in the PHI family, to negative from stable and affirmed ACE's debt ratings including its A3 senior secured and Baa1 senior unsecured long-term ratings and its Prime-2 commercial paper rating.

The outlook change reflects our contemplation of a weaker-than-expected financial profile, as ACE's cash flows will likely be pressured over the next several years as the company encounters increased operating and maintenance (O&M) expenses and capital expenditures which will lead to additional external debt financing to meet the higher levels of negative free cash flow as ACE has not filed a rate case in several years. In addition, ACE will be refunding previously collected over-recoveries under its Non-Utility Generation Charge (NGC) beginning June 2008 over the next four years.

The customer refund referenced above is approximately \$250 million, to be amortized over four years. This amount represents a material cash outflow relative to ACE's ongoing funds from operations.<sup>33</sup>

As of its August 2008 report, the S&P credit rating for ACE was BBB/Stable. It identified the following major negative factors implicit in the rating:

- Higher than average residential rates;
- Riskier unregulated operation comprise 1/3 of consolidated cash flow;
- Contingent liabilities associated with IRS challenge of- sale-in lease-out investments; and
- Large capital spending program likely to put pressure on financial metrics.

S&P considers the ACE corporate ratings on the basis of the consolidated rating of its parent – PHI, as a diversified energy company. In a November 2008, S&P released a report addressing its position on notching of utility investment grade unsecured debt, which generally established a direct relationship to the corporate credit rating.<sup>34</sup> Thus, ACE is rated on the basis of the PHI regulated and unregulated businesses. S&P considers the unregulated businesses to be significantly more risky than the utilities due to their exposure to volatile commodity prices and a competitive retail energy market.<sup>35</sup> However, with regard to senior secured debt, S&P actually raised the ACE rating to A- from BBB+.<sup>36</sup>

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<sup>32</sup> Response to Discovery, OC-559, Moody's Investor Credit Opinion, dated July 14, 2008.

<sup>33</sup> Response to Discovery, OC-559; Moody's Investor Credit Opinion, dated July 14, 2008.

<sup>34</sup> Response to Discovery, OC-559; S&P Ratings Direct, dated November 10, 2008.

<sup>35</sup> Response to Discovery, OC-559; S&P Ratings Direct, dated August 12, 2008.

<sup>36</sup> Response to Discovery, OC-559; S&P Ratings Direct, dated August 5, 2008.

## Review of External Financing

Our review of external financing is one component of our overall review of ACE's finances. It is focused primarily on the trends in debt and equity levels and associated activity, underlying objectives and policies that shape management's decisions regarding the Company's capitalization and associated debt structure, and the mechanisms which isolate ACE from negative financial impacts of affiliates.

PHI has committed to funding its external requirements for capital expenditures with roughly comparable amounts of debt and equity. This implies the issuance of \$1.2 to \$1.5 billion of equity over the 2008-2012 timeframe. The debt funding to occur for 2009-2014 is now expected to total about \$2.9 billion. Given that PHI stock is now trading materially below book value, there will be significant incentives to rely more heavily on debt and cash flow from operations until the stock price recovers. In fact, PHI has no explicit forecast of any equity offerings for the 2009-2014 period, but rather expects to consider equity offerings on the basis of incremental equity requirements necessary to "maintain the target debt and equity goals of the utility subsidiaries and PHI".<sup>37</sup>

**Trends in Debt Levels and Associated Activity** - ACE's debt consists of the following types as of year-end for the past three years:

Description	As of Dec 31, 2006	As of Dec 31, 2007	As of Dec 31, 2008
First Mortgage Bonds (A)	\$467,200,000	\$466,200,000	\$612,000,000
Medium-Term Notes (Unsecured) (B)	15,000,000	--	--
Net Unamortized Discount	(500,000)	(500,000)	(2,000,000)
<b>Total Long-Term Debt</b>	<b>\$481,700,000</b>	<b>\$465,700,000</b>	<b>\$610,000,000</b>
Long-Term Transition Bonds - ACE Funding (C)	\$494,500,000	\$464,500,000	\$433,000,000
Net Unamortized Discount	(200,000)	(100,000)	--
<b>Total LT Transition Bonds - ACE Funding</b>	<b>\$494,300,000</b>	<b>\$464,400,000</b>	<b>\$433,000,000</b>
Commercial Paper	\$1,200,000	\$29,100,000	\$ --
Variable Rate Demand Bonds (D)	22,600,000	22,600,000	1,000,000
Bonds Held Under Standby Bond Purchase Agreement (D)	--	--	22,000,000
<b>Total Short-Term Debt</b>	<b>\$23,800,000</b>	<b>\$51,700,000</b>	<b>\$23,000,000</b>
<b>Total Debt</b>	<b>\$999,800,000</b>	<b>\$981,800,000</b>	<b>\$1,066,000,000</b>
Source: PHI 2006, 2007, and 2008 Form 10-K's (some summing required). (A) The maturity of these bonds ranged from 2007 to 2036. They are secured by a lien on substantially all of ACE's property, plant, and equipment (PHI 2007 Form 10-K, pp. 318-319 and PHI 2008 Form 10-K, p. 345). (B) \$15.0 million in medium-term notes were retired at maturity in 2007 (2007 PHI Form 10-K, p. 71). (C) ACE Funding was created solely for the purpose of securitizing ACE's recoverable stranded costs. Proceeds from the sale of these bonds were transferred to ACE in exchange for ACE Funding's right to collect a non-bypassable transition bond charge from ACE customers (2008 PHI Form 10-K, p. 346). (D) At the bondholders' discretion, \$22 million in variable rate demand notes were tendered in 2008 under the terms of a Standby Bond Purchase Agreement. ACE intends to re-market these bonds when market conditions are favorable (2008 PHI Form 10-K, p. 347). Note 1: Balances for Long-Term Debt and Long-Term Transition Bonds - ACE Funding include current maturities of long-term debt. Note 2: Some amounts were adjusted for rounding differences.			

<sup>37</sup> Response to Discovery, OC-1207 (restricted). See detail provided later in this chapter.

Included in the first mortgage bonds in the preceding table is \$105 million that was executed via a private placement in 2006 to a group of insurance companies. This was the first private placement in more than a decade for any of the PHI companies. Subsequently, both DPL and PHI (the parent) issued debt through private placement. Private placement of debt is an attractive means of financing because it minimizes issuance costs and eases execution workload.<sup>38</sup>

The ability to raise funds through commercial paper was significantly curtailed by the liquidity crisis in the U.S. credit markets in the latter part of 2008. ACE was unable to issue commercial paper in the amounts or maturities that it required on a day-to-day basis during this time. As noted in the preceding table, ACE had no commercial paper outstanding as of December 31, 2008.

The change in debt levels presented in the preceding table is the result of the following underlying activity:

Description	Amount
Balance as of December 31, 2006	\$999,800,000
Long-Term Debt Redemptions	(45,900,000)
Net Short-Term Debt Issuances	27,900,000
Balance as of December 31, 2007	\$981,800,000
Long-Term Debt Issuances	250,000,000
Long-Term Debt Redemptions	(137,100,000)
Net Short-Term Debt Repayments	(28,700,000)
Balance as of December 31, 2008	\$1,066,000,000
Sources: PHI 2007 and 2008 Form 10-K's.	
Note 1: Some amounts were adjusted for rounding differences.	

All 2007 and 2008 redemptions involving long-term debt were planned in advance (as evidenced by their classification in prior years' financial statements as "current maturities") with the exception of those involving insured tax-exempt auction bonds issued by municipal authorities for the benefit of ACE. Because of the disruption in securities markets involving these insured bonds, ACE purchased \$32 million of bonds issued by Cape May County and \$23 million of bonds issued by Salem County in 2008.<sup>39</sup> By doing so, ACE avoided the re-set of interest rates to the maximum levels permitted as a result of failed auctions.<sup>40</sup> Just as with variable rate demand notes, ACE is holding these bonds in anticipation of future re-marketing.

ACE originally planned to issue up to \$150 million in debt during the fourth quarter of 2007, but later concluded such action could be postponed given its short-term debt position and projected cash flows for the remainder of that year. Subsequent plans called for **[BEGIN CONFIDENTIAL]**

<sup>38</sup> Response to Discovery, OC-1092 (2007 PHI Financing Plan, p. 3) (restricted) and ACE Form 8-K dated March 15, 2006.

<sup>39</sup> PHI 2008 Form 10-K, pp. 84-85.

<sup>40</sup> Review of February 2008 Board of Director package.

**[END CONFIDENTIAL].**<sup>41</sup> In November 2008, ACE issued \$250 million in first mortgage bonds at 7.75%, maturing in 2018.<sup>42</sup>

As compared to ACE, PHI's other utilities (DPL and Pepco) issued and redeemed the following amounts of debt in 2007 and 2008:

Description	ACE	DPL	Pepco
Long-Term Debt Issuances:			
2007	\$ --	\$ --	\$250,000,000
2008	250,000,000	400,000,000	\$500,000,000
Long-Term Debt Redemptions:			
2007	(46,000,000)	(65,000,000)	(210,000,000)
2008	(137,000,000)	(116,000,000)	(238,000,000)
Net Short-Term Debt Issuances / (Redemptions)			
2007	28,000,000	90,000,000	113,000,000
2008	(29,000,000)	(190,000,000)	(55,000,000)
Source: PHI 2008 Form 10-K (pp. 243, 286, and 327).			
Note: Some amounts were adjusted for rounding differences.			

Of the two, DPL is most similar in size to ACE. Pepco is a larger electric utility, serving approximately 40 percent more customers than ACE and having total assets that are 1.5 times to 2.0 times the amount reported by ACE.<sup>43</sup> In terms of debt loads, DPL and Pepco began 2007 with balances of \$812,000,000 and \$1,267,000,000, respectively. This compares with ACE's outstanding debt as of December 31, 2006 of \$1,000,000,000.<sup>44</sup>

ACE's outstanding debt as of December 31, 2008 is scheduled to mature as follows<sup>45</sup>:

<sup>41</sup> Response to Discovery, OC-1092 (PHI 2007 Financing Plan, pp. 8 and 11; PHI 2008 Financing Plan, pp. 3 and 7) (restricted).

<sup>42</sup> PHI 2008 Form 10-K, pp. 43-44.

<sup>43</sup> Derived from the PHI 2008 Form 10-K.

<sup>44</sup> 2007 Form 10-K, pp. 231, 268, and 301 (some summing required). As noted in Table 11-8, ACE's balance includes ACE Transition Funding debt which is offset by a transitional bond charge on customers' bills.

<sup>45</sup> Includes amounts classified as Short-Term Debt on ACE's December 31, 2008 Balance Sheet, as well as debt owned by ACE, and currently planned to be remarketed in 2010.

**Table 11-11**  
**ACE Scheduled Debt Maturities**  
**for Outstanding Long-Term Debt as of December 31, 2008**

Year	ACE	ACE Funding	Total
2010	\$1,000,000	\$ 33,700,000	\$34,700,000
2011	--	35,400,000	35,400,000
2012	--	37,300,000	37,300,000
2013	68,600,000	39,300,000	107,900,000
2014	25,200,000	41,400,000	66,600,000
2015	15,000,000	43,700,000	58,700,000
2016	2,000,000	46,200,000	48,200,000
2017	4,400,000	34,700,000	39,100,000
2018	250,000,000	31,000,000	281,000,000
2019	--	18,400,000	18,400,000
2020	--	19,600,000	19,600,000
2021	38,900,000	20,700,000	59,600,000
2025	4,000,000	--	4,000,000
2029	23,200,000	--	23,200,000
2034	120,000,000	--	120,000,000
2036	105,000,000	--	105,000,000
<b>TOTAL</b>	<b>\$657,300,000</b>	<b>\$401,400,000</b>	<b>\$1,058,700,000</b>

Source: Correspondence from company dated January 5, 2010.

In terms of total long-term debt outstanding, 20 percent matures in the first five years, 47 percent matures in Years 6 - 10, 9 percent matures in Years 11 - 15, and 24 percent matures in Years 16 - 30.

Based on current construction plans, PHI projects future debt issuances as follows:

**Table 11-12**  
**Projections of Future New Debt Issuances**

Year	Pepco	DPL	ACE	PHI	Total
2009	\$110,000,000	\$100,000,000	\$100,000,000	\$ --	\$310,000,000
2010	250,000,000	--	--	--	250,000,000
2011	250,000,000	250,000,000	150,000,000	--	650,000,000
2012	250,000,000	250,000,000	--	250,000,000	750,000,000
2013	250,000,000	--	150,000,000	--	400,000,000
2014	250,000,000	150,000,000	150,000,000	--	550,000,000
<b>Total</b>	<b>\$1,360,000,000</b>	<b>\$750,000,000</b>	<b>\$550,000,000</b>	<b>\$250,000,000</b>	<b>\$2,910,000,000</b>

Source: Response to Discovery, OC-1207 (restricted).  
Note: This schedule does not include future debt refinancings.

Issuances of equity and parent contributions to subsidiaries **[BEGIN CONFIDENTIAL]**

**[END CONFIDENTIAL]**.<sup>46</sup>

### Equity Activity

ACE - ACE is a wholly-owned subsidiary of Conectiv, which in turn, is a wholly-owned subsidiary of PHI. As such, ACE's common stock is not publicly traded, and it does not issue its own stock to raise capital for its operations. Instead, any changes in common equity are primarily the result of three items – earnings, dividends, and capital infusions.<sup>47</sup> In addition to

<sup>46</sup> Response to Discovery, OC-1207 (restricted).

<sup>47</sup> ACE does have several series of preferred stock outstanding as of December 31, 2008. However, in comparison to common equity, the book amount outstanding is immaterial (\$6 million in preferred stock vs. \$536 million in common equity) (see the PHI 2008 Form 10-K, p. 326). Also, in recent years, PHI has chosen to redeem

the management of dividends as described later in this chapter concerning ring-fencing measures, the amount of dividends paid by ACE is restricted by New Jersey statute. ACE cannot make distributions to shareholders if it would result in its inability to pay its debts or if its total liabilities exceeded its total assets after giving rise to the distribution.<sup>48</sup>

The amount of dividends paid by ACE to its parent in the last three years was:

- 2006 - \$109 million
- 2007 - \$50 million
- 2008 - \$46 million

This compares to ACE net income of:<sup>49</sup>

- 2006 - \$62 million
- 2007 - \$60 million
- 2008 - \$64 million

PHI - PHI's (the parent's) common stock is publicly traded on the New York Stock Exchange. The performance of PHI's common stock relative to the Dow Jones Utilities Average since the end of 2005 is summarized in the following chart:

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the preferred stock of both Pepco and DPL because it is treated as an expensive form of debt by credit ratings agencies (see response to Discovery, OC-1092, PHI 2007 Financing Plan, pp. 3 and 9) (restricted). Given this, we have not performed additional analysis on preferred stock as a form of financing for ACE.

<sup>48</sup> N.J.S.A. 14A:7-14.1.

<sup>49</sup> 2008 PHI Form 10-K, p. 324 and p. 327.



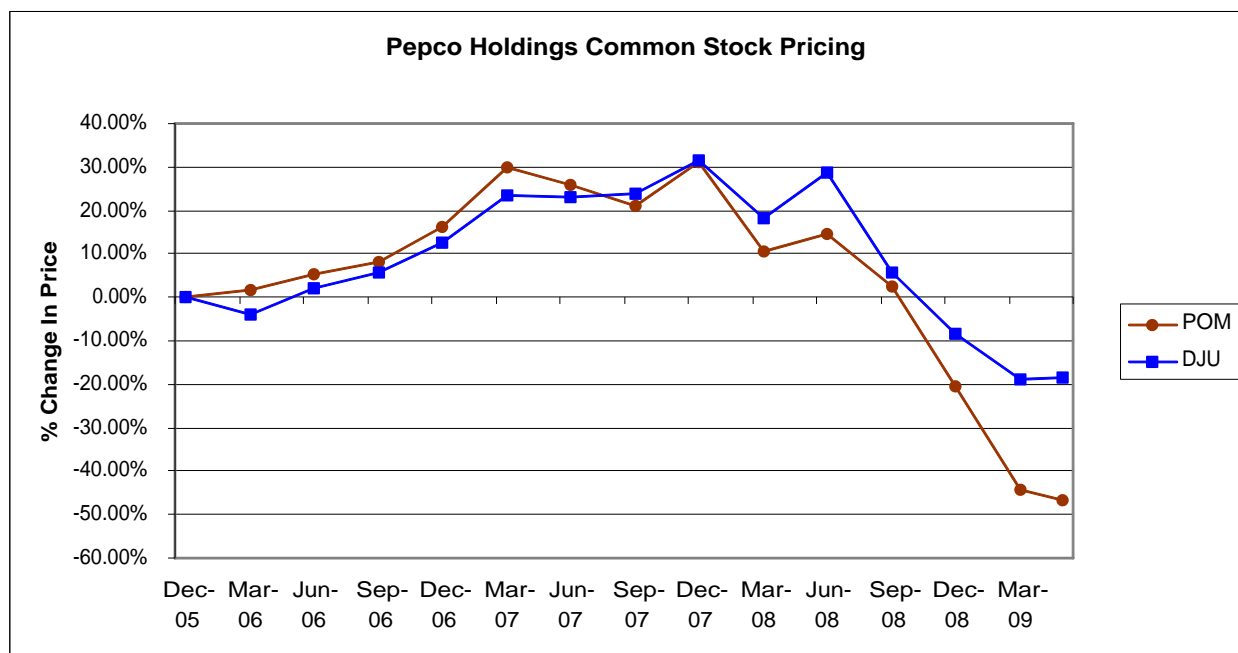


Chart 11-1

In the past, proceeds from parent equity offerings were used to infuse capital into its subsidiaries.<sup>50</sup> PHI has had two primary issuances of common stock since the beginning of 2006. In November 2007, PHI sold 6,500,000 shares for \$27.00 per share to JP Morgan Securities, Inc. (JP Morgan) for \$176 million before expenses.<sup>51</sup> Coinciding with PHI's inclusion in the S&P 500 index, JP Morgan agreed to waive fees associated with the issuance that saved PHI between 3% and 5% of a typical public offering.<sup>52</sup> Approximately one year later, PHI issued 16,100,000 shares at a price of \$16.50 per share, raising approximately \$266 million in gross proceeds.<sup>53</sup> According to management, the price per share obtained in the latter issue was slightly less than what it originally expected.<sup>54</sup>

In addition to the large blocks of stock issued in November of 2007 and 2008, PHI maintains a Shareholder Dividend Reinvestment Plan that permits direct purchases by shareholders of PHI common stock of not less than \$25 each calendar month and not more than \$200,000 each calendar year. PHI can either issue original shares or purchase these shares on the open market. In the three-year period 2006-2008, PHI had original issues of shares totaling 3.5 million shares under this program.<sup>55</sup>

<sup>50</sup> Interview with Anthony Kamerick, Vice President and Treasurer (December 10, 2008). Mr. Kamerick has subsequently been promoted to Senior Vice President and Chief Financial Officer (effective June 13, 2009). For interview citation purposes, we attribute to Mr. Kamerick his then current position.

<sup>51</sup> PHI Form 8-K dated November 8, 2007.

<sup>52</sup> Response to Discovery, OC-1092 (PHI 2008 Financing Plan, p. 3) (restricted).

<sup>53</sup> 2008 PHI Form 10-K, p. 82.

<sup>54</sup> Interview with Anthony Kamerick, Vice President and Treasurer (December 10, 2008).

<sup>55</sup> 2008 PHI Form 10-K, pp. 154 and 211 (some summing required).

As a matter of long-standing policy, PHI does not provide earnings per share guidance to the investment community.<sup>56</sup>

Financing and Debt Management Objectives and Policies - As part of an overall strategy to achieve and maintain investment grade ratings (BBB or A) from ratings agencies, PHI management strives for ACE to maintain an equity ratio (excluding the transition bonds issued by ACE Funding) in the mid-to-high 40 percent range.<sup>57</sup> The same is true of PHI's other utility subsidiaries. As previously noted, the achieved equity ratios for these companies over a two-year period are as follows:

Entity	Dec 31, 2006	Dec 31, 2007	Dec 31, 2008
ACE	47.6%	47.7%	45.7%
DPL	44.6%	44.5%	44.7%
Pepco	46.3%	44.3%	43.3%

Source: Responses to Discovery, OC-662 and OC-1114.

Other factors that come into play in achieving a successful financing plan include:

- Achieving and maintaining capital structures at the regulated utilities that are acceptable to regulators, while maximizing but not exceeding the equity component on which regulators will allow the utilities to earn a return,
- Achieving and maintaining a debt level at the holding company that is “consistent with the borrowing needs of non-debt issuing subsidiaries (PES, PCI, CEH)” and is “consistent with the holding company cash flow needs and assets”,
- Taking advantage of opportunities to lower financing costs and minimizing future re-issuance risks,
- Smoothing out the debt maturity schedule to better diversify re-issuance risk, and
- Maintaining adequate liquidity.

These objectives are accomplished in the following manner. Utilities, including ACE, dividend net income to the parent in amounts that allow them to maintain adequate capital structures. ACE funding has historically been self-sufficient; it typically meets its debt obligations with its own cash flow. PHI's unregulated businesses also meet their own debt obligations with any excess used to pay dividends to the parent or pay down intercompany loans. Most importantly, cash is made available to the parent for its own debt reduction only after its subsidiaries satisfy their debt maturities, capital structure goals, and capital requirements.<sup>58</sup>

<sup>56</sup> Response to Discovery, OC-696.

<sup>57</sup> Interview with Anthony Kamerick, Vice President and Treasurer (December 10, 2008) and response to Discovery, OC-186.

<sup>58</sup> Response to Discovery, OC-1092 (PHI 2006 Financing Plan, pp. 6-7) (restricted).

Expectations are that maturities of long-term debt will **[BEGIN CONFIDENTIAL]**

**[END CONFIDENTIAL].**<sup>59</sup>

Encumbrances on Utility Assets - While substantially all of ACE's assets are pledged under the mortgage, no affiliate has an encumbrance (including pledges) on any of ACE's assets.<sup>60</sup>

Mechanisms to Protect ACE from the Financial Problems of Affiliates (Ring-Fencing) - For some time, regulators have been concerned about the negative financial implications that holding companies and affiliates might have on regulated utilities. Investments in unregulated businesses are often seen as riskier than regulated activities. In a worst case scenario, the difficulties of a more volatile, unregulated subsidiary could theoretically bankrupt a parent and its other holdings, such as a regulated utility, if the parent siphons assets out of its financially healthy subsidiaries to unsuccessfully stem the losses of its weakening subsidiaries. Although such an occurrence might be remote, the three major credit reporting agencies have recognized a linkage between the credit ratings of utility companies within a holding company structure.<sup>61</sup>

In the case of Standard & Poor's, this was recently evidenced in an August 12, 2008 RatingsDirect report on ACE which indicated that "the ratings on Atlantic City Electric Co. (ACE) are based on the consolidated rating on its parent, Pepco Holdings Inc. (PHI)," and a specific weakness of ACE was that "riskier unregulated operations comprise over one-third of consolidated cash flow."<sup>62</sup>

To mitigate these concerns, the concept of "ring fencing" has evolved. If properly designed, ring fencing should protect a utility company's financial viability by creating a financial buffer from affiliate creditors. While there is no one comprehensive list that encompasses all measures that a company might take, ring fencing solutions can include capital structure requirements, dividend restrictions, unregulated investment restrictions, prohibitions on utility asset sales, collateralization requirements, working capital restrictions, prohibitions on inter-company loans, maintenance of stand-alone bonds, and independence of Board members.<sup>63</sup>

When asked what ring-fencing measures ACE has taken, the Company formally responded as follows:<sup>64</sup>

ACE's dividend policy is to dividend up to Conectiv on a quarterly basis, dividends that maintain its equity ratio (excluding ACETF securitization bonds) in

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<sup>59</sup> Response to Discovery, OC-1092 (PHI 2008 Financing Plan, p. 7) (restricted).

<sup>60</sup> Response to Discovery, OC-668.

<sup>61</sup> Grygiel, Dr. Fred and Garvey, John. "Fencing in the Regulated Utilities", Public Utilities Fortnightly, August 2004.

<sup>62</sup> Response to Discovery, OC-559, p. 2.

<sup>63</sup> Maryland Commission Staff Analysis of Ring-Fencing Measures for Investor-Owned Electric and Gas Utilities, February 18, 2005, p. 5.

<sup>64</sup> Responses to Discovery, OC-186 and OC-731.

the mid-to-high 40% range. ACE's consolidated equity ratio (including securitization bonds) is also examined to keep the ratio above 30%. (OC-186)

. . . ACE only participates in the money pool to facilitate the settlement of inter-company payments and ends the day with a \$0 balance in the pool. There is no commingling of cash between ACE and any of its affiliates. (OC-186)

ACE believes that having separate bond ratings, separate debt financings, a formalized process around determining dividends to its parent, whereby ACE's capital structure is managed so that its equity ratio is maintained in the high 40 percent range, and the limited money pool participation . . . sufficiently insulate ACE from affiliates and its parent. (OC-731)

In addition, Company management indicated that there are no guarantees of debt between ACE and its affiliates.<sup>65</sup>

PHI management believes it has adopted financial objectives and taken all necessary legal steps to insulate ACE from its affiliates short of restricting dividends paid by ACE to its parent, which would severely limit the ability to manage the utility's capital structure.<sup>66</sup> Overland agrees that current measures are adequate. However, given the current state of the economy and global financial markets, it is possible that the exposure to PHI unregulated investments may require PHI, or its regulators, to consider additional measures to protect the financial strength of the utility subsidiaries.

### **Utility Rate & Other Commission Filings**

Average customer bills are expected to remain relatively stable among the utility companies, with ACE customer costs being slightly higher than Pepco and DPL. ACE customer bills are expected to **[BEGIN CONFIDENTIAL]**

**[END CONFIDENTIAL].**<sup>67</sup>

### **Rate Filings**

The Company completed four distribution base rate cases in 2007.<sup>68</sup> The distribution cases in Delaware and Maryland provided for rate increases of \$34.5 million, with decreases in depreciation accruals of \$33.7 million per year.<sup>69</sup>

In its last ACE New Jersey rate case, the NJBPU authorized an annual pre-tax earnings increase of approximately \$20 million effective June, 2005.<sup>70</sup>

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<sup>65</sup> Joint interview with William Torgerson, Vice Chairman & Chief Legal Officer, and Kirk Emge, Senior Vice President & General Counsel (December 9, 2008).

<sup>66</sup> Joint interview with William Torgerson, Vice Chairman & Chief Legal Officer, and Kirk Emge, Senior Vice President & General Counsel (December 9, 2008) and interview with Anthony Kamerick, Vice President and Treasurer (December 10, 2008).

<sup>67</sup> Response to Discovery, OC-274 (restricted); 2008 Rate Case Update.

<sup>68</sup> Response to Discovery, OC-251. Delmarva and Pepco cases in Delaware, Maryland and DC.

<sup>69</sup> Response to Discovery, OC-274 (restricted); 2007 Utility Operations Strategic Review.

<sup>70</sup> Response to Discovery, OC-274 (restricted); 2007 Utility Operations Strategic Review.

ACE has historically earned somewhat higher returns than utility operations in other PHI jurisdictions. This is due principally to a somewhat higher growth rate in sales, while rate base growth is somewhat lower. Growth in the Atlantic City area has had a positive impact on earnings, allowing for less pressure on rates compared to the other utility subsidiaries.

PHI plans to file six distribution base rate cases in the 2009-2010 timeframe, which will include recovery of AMI and increases in rate base. Infrastructure investment will **[BEGIN CONFIDENTIAL]** <sup>71</sup> **[END CONFIDENTIAL]** of expenditures are currently anticipated within Power Delivery for the 2009-2013 forecast period.<sup>72</sup>

The PHI regulatory affairs group monitors rate requirements through analysis of revenue requirements based on precedents in each regulatory jurisdiction. While coordinated with financial model data, the policies and precedents of each jurisdiction drive the timing and extent of rate applications. While Overland understands this rationale, PHI must be sensitive to the relationship of its strategic and business plans to revenue recovery. That is, implementation of the strategic plan should not lead to under-earnings. To avoid such conditions, PHI utilities must be able to prevail on important policies consistent with the PHI strategic and business plans, or face increased financial risk.

#### **Blueprint Initiative Filing Status**

No procedural schedule has been set in New Jersey for a comprehensive review of the filing. However, several filings have been made that directly relate to the Blueprint initiative.

- Board Order was issued, dated March 27, 2009, which approved an ACE proposal for an SREC-based Solar Financing Program. The Board's decision was appealed and subsequently resolved by settlement. The Board approved the settlement at its August 19, 2009 Agenda meeting.
- ACE's Demand Response Stipulation (Docket Nos. EO08080543 & EO0805326), approving roll-out of a Direct Load Control program, was approved by the Board at the July 29 Board Agenda meeting. The program is being implemented.
- AMI Smart Community Demonstration Project (Docket No. EO07110881). Proposed by ACE in December 2008. By letter dated September 29, 2009, ACE withdrew the Smart Community Demonstration Project proposal.

**Decoupling.** Pepco implemented revenue decoupling in Maryland in 2007.<sup>73</sup> The utility subsidiaries have all filed for a "bill stabilization adjustment mechanism" in filings made during the period of audit review. Such a filing was made with the NJBPU regarding ACE on February 20, 2009.

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<sup>71</sup> Response to Discovery, OC-274 (restricted); 2008 Regulatory Update.

<sup>72</sup> Response to Discovery, OC-1117 (restricted); Tab 5, page 9.

<sup>73</sup> Response to Discovery, OC-251.

## Integrated Resource Planning

The current and future RPS mandates for states within the PHI utility service area are as follows:

State	Solar Energy	Tier 1 / Class 1 / Schedule 1	Tier 2 / Class 2 / Schedule 2	Total
Maryland	0.01%	2.00%	2.50%	4.51%
Delaware	0.01%	4.00%	2.00%	6.01%
New Jersey	0.22%	4.69%	2.50%	7.41%
District of Columbia	0.02%	2.50%	2.50%	5.02%
Note1: 'Tier 1' & 'Tier 2' resources apply to standards implemented in Maryland and the District of Columbia. 'Class 1' & 'Class 2' resources apply to standards implemented in New Jersey. 'Schedule 1' and 'Schedule 2' apply to standards implemented in Delaware.				
Note2: The standards noted for Delaware and New Jersey became effective 06/01/2009.				
Source: Obtained from the Database of State Incentives for Renewables & Efficiency website				

State	Goal
Maryland	20% by 2022
Delaware	20% by compliance year 2019-2020
New Jersey	20% by compliance year 2020
District of Columbia	20% by 2020
Source: Obtained from the Database of State Incentives for Renewables & Efficiency website	

PHI is anticipating **[BEGIN CONFIDENTIAL]**

**[END CONFIDENTIAL].**<sup>74</sup>

As of the period of this audit, PHI companies have not filed for or received approvals for any “Green Tariffs” allowing retail customers to elect the delivery of energy sourced from renewable power alternatives.<sup>75</sup>

Conectiv Energy is currently developing a **[BEGIN CONFIDENTIAL]**

**[END**

**CONFIDENTIAL].**<sup>76</sup>

<sup>74</sup> Response to Discovery, OC-274 (restricted); Conectiv Energy Strategic Review – 2007.

<sup>75</sup> Response to Discovery, OC-646.

<sup>76</sup> Response to Discovery, OC-1117 (restricted); Tab 6, page 20.

## Chapter 12. Cash Management

Our review of cash forecasting and management includes a summary of the utility's sources and uses of funds as well as an overview of ACE's access to and use of the corporate lines of credit and money pool. Due to the liquidity crisis that affected the U.S. capital markets in late 2008, the monitoring of cash balances became a high priority of management. This is more fully described in the section regarding the PHI Response to 2008 Credit and Economic Events.

### Summary of Findings and Recommendations

1. Cash generated from ACE's operating activities is supplemented by debt issuances and occasional capital infusions and sales of assets to fund the Company's capital expenditures and dividends.
2. ACE has direct or indirect access to two lines of credit totaling \$900 million with a syndicate of financial institutions, none of which have commitments for more than 9.2% of the total line extended to PHI and its subsidiaries.<sup>1</sup>
3. In conformance with an agreement reached with the New Jersey BPU, ACE has not invested in the corporate money pool since October 15, 2006. ACE has also elected not to borrow from the money pool since this time except for one instance.
4. The amount of ACE's dividends to its parent is driven by a desire to maintain strong utility investment grade ratings (BBB or A) by managing ACE's underlying equity ratio in the high 40 percentile.
5. The credit reporting agencies have linked ACE's debt ratings to that of its more risky parent. This results in higher capital costs than measured against utility-only financial and business risks.
6. Pursuant to New Jersey BPU authorization; ACE cannot issue, renew, or extend unsecured short-term debt in excess of \$250 million.
7. The effective use of the secondary credit facility by the unregulated businesses to meet collateral requirements could restrict ACE's access to liquidity by up to \$400 million.
8. In response to disruptions in the capital and credit markets, PHI management began daily monitoring of cash and liquidity availability in October 2008, and the Board of Directors was provided bi-weekly updates.
9. Taking advantage of an opportunity to raise capital to fund its 2009 plan, PHI and its subsidiaries issued approximately \$1 billion of debt and equity in November and

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<sup>1</sup> \$500 million under the primary credit facility and \$400 million under a second credit facility entered into by ACE's parent.

December, 2008. PHI also secured a second line of credit to provide additional flexibility in November, 2008.

10. In order to conserve cash, ACE and PHI's other utilities have scaled back their planned capital spending for the remainder of 2008, 2009, and 2010. At the consolidated PHI level, most of the reductions in capital expenditures involved utility deferrals of MAPP and Blueprint project spending to future years. PHI also reduced costs by instituting a hiring freeze and eliminating management merit salary increases.
11. We recommend the money pool conditions agreed to by ACE in the previous Competitive Service Offerings audit be maintained, and ACE should file any proposed changes to these terms with the New Jersey BPU and receive approval before implementing them. Both parties should come to an understanding regarding the use of the money pool to settle intercompany transactions.

### **Cash Forecasting and Cash Flow Activity**

Monthly cash flow is forecasted as part of the annual budgeting process by the Budget Coordination and Planning Department with Treasury input. This serves as the primary cash forecasting tool employed by ACE. However, during the year, Treasury also projects more detailed, daily cash flow activity for the upcoming month with particular focus on large non-recurring payments (e.g., payroll, debt payments, etc.). This daily cash forecast is updated on a weekly basis as new information becomes available.<sup>2</sup>

As would be expected of a mature business, cash from operations serves as the primary source of funds for ACE. It is generally supplemented by debt issuances to fund capital expenditures and to pay dividends to ACE's ultimate parent, PHI. Proceeds from the occasional sale of assets and parent capital contributions provide additional sources of funds. This is demonstrated for the past three years in the following table:

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<sup>2</sup> Response to Discovery, OC-673.



Description	2006	2007	2008
<b>Primary Sources of Cash:</b>			
Net Cash From Operating Activities	\$21,000,000	\$196,000,000	\$153,000,000
Net Debt Issuances / (Redemptions)	12,000,000	(18,000,000)	85,000,000
Proceeds from Sales of Assets (A)	177,000,000	9,000,000	1,000,000
Capital Contribution from Parent	--	--	35,000,000
Sub-Total	210,000,000	187,000,000	274,000,000
<b>Primary Uses of Cash:</b>			
Capital Expenditures	(108,000,000)	(149,000,000)	(162,000,000)
Dividends Paid to Parent	(109,000,000)	(50,000,000)	(46,000,000)
Other	4,000,000	14,000,000	(8,000,000)
Sub-Total	(213,000,000)	(185,000,000)	(216,000,000)
<b>Net Change in Cash</b>	<b>\$(3,000,000)</b>	<b>\$2,000,000</b>	<b>\$58,000,000</b>
Source: Derived from 2008 PHI Form 10-K, p. 327. (A) In 2006, this amount represents the proceeds from the sale of ACE's interests in the Keystone and Conemaugh generating facilities to Duquesne Light Holdings Inc. (see 2006 PHI Form 10-K, p. 305).			

Beginning in June 2008, ACE agreed pursuant to a stipulation agreement with the New Jersey BPU and other parties that it would refund approximately \$254 million to its customers over a four-year period for over-collecting on past non-utility generation contracts. This was partially offset by under-recoveries on state-mandated social programs for one year. For the period from June 1, 2008 to May 31, 2009, the net decrease in customer rates was expected to be \$117 million.<sup>3</sup>

ACE maintains its own banking and short-term investment accounts. No cash is commingled with cash from other PHI entities.<sup>4</sup> ACE's cash management function has been delegated to PHI Service Company and its employees.<sup>5</sup> The distribution of the costs for this function and others is discussed in Phase I of our report.

## **Credit Facilities**

ACE historically was able to access the commercial paper markets when short-term cash needs warranted. That source of funds no longer was a viable option in the latter half of 2008 as a result of a liquidity crisis that began with a lack of confidence in the value of securitized mortgages in the U.S. credit markets and then spread to other debt products.

However, PHI and its utility subsidiaries maintain credit facilities with a group of banks that provide for short-term liquidity needs. The aggregate borrowing limit under the primary credit facility totals \$1.5 billion and can be used either to obtain loans or issue letters of credit. The credit limit of each PHI entity is the lesser of:<sup>6</sup>

<sup>3</sup> Response to Discovery, OC-559 (Moody's Credit Opinion dated July 14, 2008) and the PHI June 30, 2008 Form 10-Q, p. 35.

<sup>4</sup> Response to Discovery, OC-664.

<sup>5</sup> Response to Discovery, OC-665 and PHI 2008 Form 10-K, p. 200.

<sup>6</sup> Review of April 26, 2007 Unanimous Written Consent of ACE Directors.

- PHI - \$875 million
- ACE - \$500 million
- DPL - \$500 million
- Pepco - \$500 million

and the amount of short-term debt authorized by regulatory authorities, which limits ACE to \$250 million as authorized by BPU Order of Docket No. EF 07080625 dated November 29, 2007, with a further stipulation that the total amount borrowed by ACE, DPL, and Pepco at any given time in aggregate cannot exceed \$625 million.<sup>7</sup> The greatest amount borrowed by the three utilities at any one time under the present terms of the credit facility was \$485 million (ACE - \$135 million, DPL - \$150 million, and Pepco - \$200 million for the time period from October 9, 2008 to November 20, 2008).<sup>8</sup> ACE's repayment of the \$135 million loaned under this credit facility corresponds to its issuance of its first mortgage bonds in the latter half of November 2008.

Interest rates charged under the primary facility are at the election of the borrower, either based on (1) the greater of the prime rate and federal funds rate plus 0.5% or (2) the Eurodollar rate plus a margin dependent on the borrower's credit rating. All indebtedness incurred under the facility is unsecured. The term of the loan facility expires on May 5, 2012. Each company has the right to extend the expiration of any outstanding loan balance as of May 5, 2012 by one year on non-revolving loan terms. To access the facility, borrowers must be in compliance with various covenants which include, but are not limited to, a maximum debt ratio, restrictions on most dispositions of assets, and restrictions on the incurrence of new liens. The facility has no ratings triggers.<sup>9</sup>

In November 2008, PHI entered into a second credit facility with a syndicate of lenders totaling \$400 million. This 364-day facility permits PHI to obtain revolving and swingline loans but not to issue letters of credit, unlike the primary credit facility. PHI can select among several different types of loans that, in turn, dictate the methods used to compute an interest rate, some of which are based on the prime rate or the federal funds rate, while others are based on Eurodollar rates. Interest rates are dependent on PHI's credit ratings, but the facility does not include any ratings triggers. Covenants for this facility are the same as those of the primary credit facility.<sup>10</sup> While the syndicate is made up of some of the financial institutions that also participate in the primary credit facility, no one institution had commitments exceeding 9.2% of the total credit line extended to PHI and its subsidiaries as of December 31, 2008.<sup>11</sup> While ACE is not a signor to this second credit facility, it provides ACE with indirect access to additional liquidity through its parent.

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<sup>7</sup> Correspondence from company dated December 18, 2009 and New Jersey BPU Amendment to Order of Approval in Docket No. EF 07080625 dated April 14, 2008.

<sup>8</sup> Response to Discovery, OC-659.

<sup>9</sup> PHI 2008 Form 10-K, p. 78.

<sup>10</sup> PHI 2008 Form 10-K, pp. 78-79.

<sup>11</sup> PHI analyst conference presentation dated March 27, 2009 (Barry Financial Overview Appendix, p. 23).

ACE had no borrowings under the primary credit facility as of December 31, 2008, and PHI did not have any outstanding borrowings under the second credit facility as of this same date.<sup>12</sup>

### **Money Pool**

**[BEGIN CONFIDENTIAL]**

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**[END CONFIDENTIAL]**<sup>15</sup>

As a result, the following audit recommendation was made:

Place restrictions on ACE investments in the money pool similar to those required by the Board for JCP&L.<sup>16</sup>

The Company proposed to take the following actions in response to this recommendation:<sup>17</sup>

- ACE would not petition the New Jersey BPU to create a utility money pool at the then present time.
- ACE would remove any current investment in the PHI money pool by October 15, 2006.

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<sup>12</sup> PHI 2008 Form 10-K, pp. 199, 201, and 348.

<sup>13</sup> Responses to Discovery, OC-183 (Money Pool Agreement dated August 2, 2002) and OC-666.

<sup>14</sup> Audit of the Competitive Service Offerings of Atlantic City Electric Company d/b/a Conectiv Delivery Power - Docket No. EA02020095 dated March 31, 2003.

<sup>15</sup> Audit of the Competitive Service Offerings of Atlantic City Electric Company d/b/a Conectiv Delivery Power - Docket No. EA02020095 dated March 31, 2003, pp. 133-134.

<sup>16</sup> These restrictions included limitations on lending to entities with lower credit ratings than the utility and to non-utility affiliates of the holding company (see response to Discovery, OC-1: Audit Recommendation No. 31, memo dated August 2, 2006 and NJBPU Order dated April 20, 2005 re: Docket No. EF02030185).

<sup>17</sup> Response to Discovery, OC-1: Audit Recommendation No. 31 - letter dated September 25, 2006 from Jeffery E. Snyder, Assistant Treasurer of ACE, to Mark Beyer, Chief Economist of the New Jersey BPU.

- ACE pledged not to invest in the PHI money pool after October 15, 2006.
- ACE would only borrow from the PHI money pool if it could borrow at a lower rate than it could issue short-term debt.

In addition, a quarterly report is sent to the BPU showing that ACE maintains a \$0 balance in the money pool.<sup>18</sup>

The New Jersey BPU accepted these actions in satisfaction of the audit recommendation.<sup>19</sup>

Since the acceptance of these company proposals by the New Jersey BPU, ACE's course of action with regard to the money pool has not changed. Generally speaking, ACE only uses the money pool to settle intercompany transactions with no end-of-day carryover balance.<sup>20</sup> From September 25, 2006 to May 14, 2009, ACE did not borrow from the PHI money pool.<sup>21</sup>

We recommend that the money pool conditions agreed to by ACE in the previous Competitive Service Offerings audit be maintained, and ACE should file any proposed changes to these terms with the New Jersey BPU and receive approval before implementing them. Both parties should come to an understanding regarding the use of the money pool to settle intercompany transactions.

As the Money Pool Agreement is currently written, ACE is not prohibited from entering into transactions that are counter to the spirit of the informal agreement the company has with the New Jersey BPU (as outlined in the September 28, 2006 letter). To ensure that there is no misunderstanding as to when these conditions expire, we believe they bear repeating.

## **Dividend Policy**

### **PHI**

The review and recommendation of dividends to be paid to PHI common stock shareholders are **[BEGIN CONFIDENTIAL]**

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<sup>18</sup> Response to Discovery, OC-37 (PHI Orientation Presentation dated May 12, 2008, p. 44).

<sup>19</sup> Response to Discovery, OC-1: Audit Recommendation No. 31 - letter dated September 28, 2006 from Mark C. Beyer, Chief Economist of the New Jersey BPU, to Jeffery E. Snyder, Assistant Treasurer of ACE.

<sup>20</sup> The New Jersey BPU Staff questions whether it is within the spirit of the previous agreement to use the money pool to settle intercompany transactions.

<sup>21</sup> Response to Discovery, OC-182 and interview with Anthony Kamerick, Vice President and Treasurer (December 10, 2008). In correspondence received from the company on December 18, 2009, it acknowledged that a last-minute funding requirement on May 15, 2009 led ACE to borrow from the money pool over a weekend beginning on May 15, 2009.

<sup>22</sup> Response to Discovery, OC-256 (restricted).

**[END CONFIDENTIAL]**<sup>23</sup> The expected dividend yield measured against the S&P 500 Electric Companies and the PHI peer group average is also tracked and taken into consideration.<sup>24</sup> The following table compares PHI's historical dividends to that of a sample of its peers:

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<sup>23</sup> Response to Discovery, OC-274 (restricted); 2008 Financial Forecast Summary.

<sup>24</sup> Response to Discovery, OC-1132 (restricted).

<b>Table 12-2</b>				
<b>Pepco Holdings, Inc.</b>				
<b>Dividends to Shareholders</b>				
<b>Company</b>	<b>Year</b>	<b>Declared Dividend Per Share</b>	<b>Earnings Per Share</b>	<b>Payout Ratio</b>
Pepco Holdings, Inc.	2008	\$1.08	\$1.47	73%
	2007	\$1.04	\$1.72	60%
	2006	\$1.04	\$1.30	80%
Avista	2008	\$0.69	\$1.37	50%
	2007	\$0.60	\$0.73	82%
	2006	\$0.57	\$1.48	39%
Consumers Energy Company	2008	\$0.36	\$1.23	29%
	2007	\$0.20	-\$1.02	-20%
	2006	\$0.00	-\$0.41	0%
Idacorp	2008	\$1.20	\$2.17	55%
	2007	\$1.20	\$1.86	65%
	2006	\$1.20	\$2.34	51%
Nstar	2008	\$1.43	\$2.22	64%
	2007	\$1.33	\$2.07	64%
	2006	\$1.54	\$1.94	79%
Portland General	2008	\$0.97	\$1.39	70%
	2007	\$0.93	\$2.33	40%
	2006	\$0.68	\$1.14	59%
Puget Energy	2008	\$1.00	\$1.20	83%
	2007	\$1.00	\$1.20	83%
	2006	\$1.00	\$1.20	83%
Sierra Pacific	2008	\$0.34	\$0.89	38%
	2007	\$0.16	\$0.89	18%
	2006	\$0.00	\$1.33	0%
Xcel	2008	\$0.94	\$1.47	64%
	2007	\$0.91	\$1.38	66%
	2006	\$0.88	\$1.39	63%
Source: Derived from respective 10-K's for Pepco and peer companies.				

**ACE**

ACE's dividends are approved by its Board of Directors.<sup>25</sup>

Dividend pay-out ratios are not a primary driver of the amount of dividends paid by PHI's subsidiary utilities to its parent. This is demonstrated in the following table which shows a wide range of ACE dividend pay-out ratios in the past four years:

Company	Year	Total Dividends	Net Income	Payout Ratio
ACE	2008	\$46,000,000	\$64,000,000	72%
	2007	50,000,000	60,000,000	83%
	2006	109,000,000	62,000,000	176%
	2005	96,000,000	63,000,000	152%

Source: Derived from responses to Discovery, OC-660 and OC-848 and PHI's 2008 and 2007 Form 10-K filings.

Instead, in establishing the level of dividends paid by the utilities (including ACE) to their respective parents,<sup>26</sup> PHI considers the impact on each of the utility capitalization structures. The objective is to maintain utility equity ratios in the high 40s for all three companies.<sup>27</sup> The ultimate goal of these targeted equity ratios is to maintain strong investment grade ratings (BBB or A).<sup>28</sup> As tracked by management, the historical equity ratios for the three PHI utilities have been as follows:

Date	ACE	Pepco	DPL
December 31, 2006	47.6%	46.3%	44.6%
December 31, 2007	47.7%	44.3%	44.5%
November 30, 2008	45.7%	46.1%	44.8%

Source: Response to Discovery, OC-662.

However, as noted in PHI's most recent Form 10-K, "within the limitations of applicable law, and subject to the financial covenants under each company's respective outstanding debt instruments, each of Pepco's, DPL's and ACE's Board of Directors will base its decisions concerning the amount and timing of dividends, and other business decisions, on the Company's respective earnings, cash flow and capital structure, but may also take into account the business plans and financial requirements of PHI and its other subsidiaries."<sup>29</sup> (emphasis added)

<sup>25</sup> Based on a review of the ACE Board of Director minutes between January 1, 2007 and April 2, 2008. Dividends would presumably be approved by the ACE Board's sole representative after June 25, 2007.

<sup>26</sup> Organizationally, Pepco is a subsidiary of a different second-tier parent than ACE or DPL. Furthermore, some of the unregulated subsidiaries have different parent companies than the utility subsidiaries.

<sup>27</sup> Response to Discovery, OC-663.

<sup>28</sup> Interview with Anthony Kamerick, Vice President and Treasurer (December 10, 2008).

<sup>29</sup> PHI 2008 Form 10-K, p. 31.

## **Impact of Diversification on ACE**

In 2008, PHI's unregulated business operations (includes Conectiv Energy, Pepco Energy Services, and Other Non-Regulated but excludes Corporate & Other) made up 53 percent of PHI's total revenues, 28 percent of PHI's operating income, and 26 percent of its PHI's total assets.<sup>30</sup> The significance of these operations has the potential to have both a direct and indirect impact on ACE as noted in the previous section with respect to dividends, in terms of management focus and attention, and on utility cost of capital to the extent that subsidiary credit ratings cannot be de-linked from parent credit ratings.

### **Subsidiary Dividends and Capital Contributions**

A review of the historical dividends paid by ACE, its sister utility companies, and the primary unregulated subsidiaries of PHI coupled with the equity infusions made into these companies does not reveal any concerted effort by management to directly fund unregulated operations with the utilities' more steady and reliable cash flows (see Tables 12-5 and 12-6 that follow).

	2008	2007	2006	2005
ACE	\$46.0	\$50.0	\$109.0	\$95.9
Pepco	89.0	86.0	99.0	62.9
DPL	52.0	39.0	15.0	36.4
Conectiv Energy	0.0	15.0	0.0	50.0
Pepco Energy Services	0.0	0.0	0.0	0.0

Source: Responses to Discovery, OC-660 and OC-848.

Potomac Capital (PCI) has not paid any dividends to its parent for the years 2005 to 2008.<sup>31</sup>

	2008	2007	2006
Conectiv to ACE	\$35.0	\$0.0	\$0.0
PHI to Pepco	78.0	0.0	0.0
Conectiv to DPL	62.3	0.0	0.0
Conectiv to Conectiv Energy	0.0	1.8	4.8
PHI to Pepco Energy Services	0.0	0.0	0.0

Source: Response to Discovery, OC-661.

No capital contributions were made to any of these subsidiaries in 2005. Furthermore, PCI did not receive any capital contributions during the time period from 2005 through 2008.<sup>32</sup>

<sup>30</sup> Derived from PHI 2008 Form 10-K, p. 180.

<sup>31</sup> Response to Discovery, OC-848.

<sup>32</sup> Response to Discovery, OC-850.



While the prior tables do not show a direct transfer of funds, it should be noted that to the extent that parent funds (derived from utility dividends) are made available to and borrowed by PHI's unregulated businesses through the corporate money pool, the utilities could be viewed as indirectly supporting the unregulated business operations of PHI. The agreement that ACE has with the BPU on its money pool participation does not preclude such transactions.

### **Credit Ratings**

As mentioned previously, when utility holding companies diversify into unregulated businesses, there is the possibility that any increase in perceived risk taken by the parent can impact the utility. Standard & Poor's takes the position that the credit ratings of an otherwise financially healthy wholly-owned subsidiary are constrained by the ratings of its parent. The rationale being that under normal circumstances a weak parent has both the ability and the incentive to siphon assets out of a financially healthy subsidiary and to burden it with liabilities during times of financial stress.<sup>33</sup>

In a 2008 report on ACE, Standard & Poor's makes the following statements:<sup>34</sup>

- The ratings of [ACE] are based on the consolidated rating on its parent, [PHI], a diversified energy company.
- ACE's Major Rating Factors – Weaknesses – Riskier unregulated operations comprise over one-third of consolidated cash flows.
- We consider the unregulated businesses significantly more risky than the utilities due to their exposure volatile commodity prices and very competitive retail energy markets. These risks are partially mitigated by the [PHI]'s strategy to hedge a majority of its capacity over a two- to three-year period.

In late 2008, ACE's senior unsecured rating was BBB. This compares to PHI's senior unsecured rating of BBB-, which is only one notch less.<sup>35</sup>

Credit ratings affect the interest rate at which a company can issue its debt. A company with poorer credit ratings can expect to pay a higher interest rate on its debt than a company that has better credit ratings all other things being equal. This is the case because an investor choosing between the two companies would expect to be compensated in the form of higher interest payments for taking more perceived risk (e.g., increased likelihood of default) in the first company.

The relationship between credit ratings and interest rates changes over time. For instance, between the beginning of January 2008 and middle of July 2009, spreads between 20-year industrial bonds rated BBB and those rated BB+ (two-notch difference) ranged from less than

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<sup>33</sup> Standard & Poor's – "Ring-Fencing a Subsidiary" dated October 19, 1999.

<sup>34</sup> Response to Discovery, OC-559 (Standard & Poor's Report on ACE dated August 12, 2008).

<sup>35</sup> Response to Discovery, OC-559.

100 basis points to approximately 400 basis points. As of July 22, 2009, the difference was approximately 200 basis points.<sup>36</sup>

The PHI Board of Directors have historically assigned **[BEGIN CONFIDENTIAL]**

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### **Collateral Requirements of Unregulated Businesses**

Both PES and Conectiv Energy enter into contracts with third parties that, at times, impose collateral requirements on them when circumstances warrant. For instance, in the second half of 2008, PES had a significant increase in its collateral obligations due to the decrease in energy prices. As of December 31, 2008, the Competitive Energy businesses (includes PES and Conectiv Energy) had posted net cash collateral of \$331 million and letters of credit of \$558 million.<sup>38</sup>

Between cash and borrowing capacity under the credit facilities, these businesses had access to \$684 million on a consolidated basis as of December 31, 2008. In the following two months, the liquidity available to PES and Conectiv Energy fluctuated between \$378 million and \$757 million. Stress testing conducted by the Company indicated that during this two-month period, a 1 percent change in the forward prices corresponding to the various contractual arrangements would cause a cumulative change in net collateral requirements of approximately \$23 million (\$6 million for Conectiv Energy and \$17 million for PES).<sup>39</sup>

As previously noted, ACE's ability to access the primary \$1.5 billion credit facility is not affected by PHI or its unregulated subsidiaries because the credit limit is effectively bifurcated between the utilities on one hand (\$625 million) and PHI and its unregulated businesses on the other hand (\$875 million). However, use of the \$400-million credit facility by PES and Conectiv Energy for collateral requirements would limit ACE's access to additional liquidity.<sup>40</sup>

### **PHI Response to 2009 Credit and Economic Events**

While it had been building for months if not years, underlying issues surrounding the capital and credit markets came to a head in the latter half of 2008 when coupled with volatile energy prices. In short succession, the Federal National Mortgage Association and the Federal Home Loan Mortgage Corporation were placed into conservatorship, Lehman Brothers filed for bankruptcy, Merrill Lynch agreed to be bought by Bank of America to avoid its own financial undoing, AIG was infused with capital from the federal government, and a federal program was created to "bail out" other financial institutions. Closer to home, Constellation Energy Group at first agreed to be bought by MidAmerican Energy Holdings to shore up its finances and then

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<sup>36</sup> Standard & Poor's CreditWeek dated January 9, 2008; December 24, 2008; and July 22, 2009.

<sup>37</sup> Review of notes with members of PHI's Board of Directors.

<sup>38</sup> 2008 PHI Form 10-K, pp. 44-45.

<sup>39</sup> 2008 PHI Form 10-K, p. 45.

<sup>40</sup> ACE does not have direct access to the \$400 million facility. At the company's request, ACE has a \$250 million short-term debt limit imposed by the New Jersey BPU.

later accepted an alternative proposal by the French company, EDF Group, to invest in its nuclear operations. During this time, confidence in the credit markets waned, and companies were forced to change the ways they financed their operations on both a short-term and long-term basis. At PHI and ACE, it was no different.

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<sup>41</sup> Response to Discovery, OC-274 (The CEO Perspective - September 2008 Board Planning Retreat, p. 1) (restricted).

<sup>42</sup> Response to Discovery, OC-844 (excerpts from Corporate Risk Management Committee Quarterly Report provided to the Audit Committee on October 17, 2008) (restricted) and interviews with Ronald Clark, Vice President and Controller (November 19, 2008) and Kevin McGowan, Vice President of Strategic and Financial Planning (November 18, 2008).

<sup>43</sup> Responses to Discovery, OC-576 (restricted) and OC-690 (restricted). Daily changes in letters of credit and cash posted with counterparties was also monitored.

<sup>44</sup> Response to Discovery, OC-844 (excerpts from Corporate Risk Management Committee Quarterly Report provided to the Audit Committee on October 17, 2008) (restricted).

<sup>45</sup> Interviews with Kevin McGowan, Vice President of Strategic and Financial Planning (November 18, 2008) and Anthony Kamerick, Vice President and Treasurer (December 10, 2008).

<sup>46</sup> Interviews with various members of the Board of Directors (January 2009).

<sup>47</sup> Response to Discovery, OC-844 (excerpt from the October 17, 2008 read-ahead letter to the Board of Directors) (restricted).

**[END CONFIDENTIAL]**<sup>48</sup>

Significant improvements in cash and liquidity positions were realized by:<sup>49</sup>

- \$255 million in proceeds from a PHI equity issuance in November, 2008,
- \$250 million in proceeds from the issuance of ACE first mortgage bonds in November, 2008,
- Arrangement of a \$400 million credit facility with a syndicate in November, 2008,
- \$250 million in proceeds from the issuance of DPL first mortgage bonds in November, 2008, and
- \$250 million in proceeds from the issuance of Pepco first mortgage bonds in December, 2008.

By being proactive in raising capital, PHI management ensured that it would have the necessary resources to operate on a daily basis in the short term. Whether that decision will ultimately minimize PHI's and its subsidiaries' cost of capital in the long-term is unknown due to the uncertainty and volatility in the debt and equity markets. However, as of October 20, 2009, the decision to issue common stock at a price of \$16.50 per share in November, 2008 was timely on a short-term basis given the drop in PHI's share price by over 7 percent since that transaction took place.

In addition to raising funds from outside sources, PHI and its utility subsidiaries took steps to conserve their existing cash. These included:<sup>50</sup>

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<sup>48</sup> September 30, 2008 PHI Form 10-Q, pp. 12 and 124.

<sup>49</sup> PHI 2008 Form 10-K, p. 44.

<sup>50</sup> Response to Discovery, OC-844 (Liquidity Updates to the PHI Board of Directors dated November 6, 2008 and subsequently) (restricted).

**[END CONFIDENTIAL]**

In total, these actions were expected at the time to save PHI and the utilities between \$200 and \$225 million, most of it associated with the 2009 construction cut-backs. Later estimates presented to the financial community indicate that the savings from reduced utility construction spending will total \$129 million, \$229 million, and \$178 million in 2008, 2009, and 2010, respectively. Most of the reductions in spending in 2009 and 2010 are the result of delays associated with the MAPP and Blueprint projects. In addition, 2009 O&M expenses (other than pensions and bad debts) were capped at a 2 percent growth rate and management merit salary increases were eliminated.<sup>51</sup> Based on statements made to analysts, expenditures for distribution reliability and customer service are also considered as discretionary. However, given the incentive returns on the MAPP transmission project, management is committed to proceeding as planned.<sup>52</sup>

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<sup>51</sup> PHI analyst conference presentation dated March 27, 2009 (Wraase opening remarks, p. 5 and Velazquez Power Delivery comments, pp. 5 and 16.

<sup>52</sup> Response to Discovery, OC-559; Soleil research report, dated October 14, 2008.

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## Chapter 13. Accounting and Property Records.

Like many utility functions, ACE's accounting is handled in a centralized fashion as part of the larger Power Delivery business segment which includes PHI's other wholly-owned regulated utilities -- Potomac Electric Power Company (Pepco) and Delmarva Power & Light Company (DPL). Headed by the Senior Vice President & CFO, Mr. Anthony Kamerick<sup>1</sup>, and more directly by the Vice President and Controller, Mr. Ronald Clark, the accounting organization has experienced recent turnover. In addition, the department has undergone some organizational change. All of Mr. Clark's primary direct reports (the Director of Tax, the Director of Accounting and Reporting, and the Director of Technical Research and Controls) are positions that have been created by the company since the beginning of 2007. The responsibility for ACE's accounting lies with the Director of Accounting and Reporting, Mr. Timothy Pease.<sup>2</sup>

ACE uses a general ledger system purchased from a third party, SAP.<sup>3</sup> Data is input to this system from numerous feeder information systems, some of which are SAP-based (e.g., accounts payable) and others which are not (e.g., C3 - customer information / accounts receivable).<sup>4</sup> Budgeting, which used to be performed in SAP directly, was moved to a separate system beginning with the 2009 plan year, the SAP Business Planning and Consolidation system.<sup>5</sup>

Internal controls associated with these systems and the processes that they support play a critical role in providing reasonable assurance that financial reports are reliable. According to one recent book on the subject, internal controls comprise “. . . the plan or organization and all of the coordinate methods adopted within a business to safeguard its assets, check the accuracy and reliability of its accounting data, promote operational efficiency, and encourage adherence to prescribed managerial policies.”<sup>6</sup> Properly functioning internal controls over financial reporting allow objective users of such information to have reasonable assurance that they can form opinions and make judgments about a company by reviewing its financial data.

The objective of our review of controls over accounting and property records was not to duplicate the routine compliance and balance testing procedures conducted annually by ACE's external auditors. Instead, our focus was on the identification of improvements that could be adopted by the Company to refine its processes and, hopefully, enhance its profitability. As a result, we did not independently sample test for compliance with internal control procedures.

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<sup>1</sup> Anthony Kamerick replaced Paul Barry on June 13, 2009. When conducting our fieldwork, Mr. Kamerick was Vice President and Treasurer and is referred to as such in our interview note citations.

<sup>2</sup> Response to Discovery, OC-575 and interview with Ronald Clark, Vice President and Controller - November 19, 2008).

<sup>3</sup> Interview with Ronald Clark, Vice President and Controller (November 19, 2008).

<sup>4</sup> Responses to Discovery, OC-185 and OC-776.

<sup>5</sup> Response to Discovery, OC-185 and interview with Kevin McGowan, Vice President of Strategic and Financial Planning (November 18, 2008).

<sup>6</sup> Sarbanes-Oxley and the New Internal Auditing Rules, Robert R. Moeller (2004), p. 103.

## **Summary of Findings**

1. PHI has adopted an internal control framework based on an accounting industry-derived model.
2. Three different groups devote a significant amount of time assessing the effectiveness of PHI's and ACE's internal controls over financial reporting – the SOX Compliance Unit, the Internal Audit Department, and PricewaterhouseCoopers (PwC) (the Company's external auditors).
3. Neither PHI nor ACE has discovered a material weakness with internal controls over financial reporting for any of the past four years (2005 - 2008).
4. The number of PHI-observed internal control exceptions (both deficiencies and significant deficiencies) has decreased over the past four years. Although not specifically tracked in 2005 and 2006, the observed internal control exceptions for ACE have also generally declined in more recent years.
5. Internal Audit performs a number of different reviews for management and the Audit Committee including audits, special investigations, and fraud assessments.
6. None of Internal Audit's findings since the beginning of 2007 have resulted in an adjustment to quarterly results.
7. PwC opined that PHI maintained effective internal controls over financial reporting for the years 2005, 2006, 2007, and 2008.
8. ACE recognized no asset impairments from 2005 to 2008 although PHI's non-regulated businesses recognized some minor impairments during the same time period.

## **Summary of Recommendations**

1. We recommend that the Company take the necessary steps within the next twelve months to satisfactorily address, in all material respects, the finance staffing concerns that have affected the Company for the past five years.
2. On a spot basis, we recommend that Internal Audit confirm both the occurrence of actions asserted to have been taken by management in response to internal audit report recommendations and the effectiveness of those actions to remedy the noted audit findings.
3. As part of its formal internal audit report, we recommend that Internal Audit summarize its attribute sampling results and quantify in dollar terms the instances of non-compliance and total sample tested.



## **Internal Control Framework**

While they were always considered important, internal controls over accounting and financial reporting processes have been under tremendous scrutiny since the passage of SOX in 2002. In the case of PHI and ACE, at least three different groups of experts routinely review these controls every year, if not more often. They are:

- The SOX Compliance Unit and associated coordinators,
- The Internal Audit Department, and
- PwC, PHI's external auditor.

However, before discussing each of these groups' activities, an overview of PHI's internal control framework is warranted.<sup>6.1</sup> This framework is largely based on the components of internal control identified by the Committee of Sponsoring Organizations (COSO) in its 1992 report, "Internal Control - Integrated Framework."<sup>7</sup> The components adopted by PHI include:

- Control Environment
- Risk Assessment
- Information and Communication
- Monitoring

These components form the framework for the entire internal control structure of the Company. We will briefly touch on each of these components in the following discussion.

### A. Control environment

The control environment involves management processes and procedures that set an overall tone for the organization in influencing the mind-set of its people. In the case of PHI, the major components of the control environment are audit committee oversight, management's operating style, communication of values, and organizational structure.

PHI's Audit Committee oversight is established or enhanced by the requirement that all members must be independent; by its responsibilities being formally documented in a publicly available charter; by the furnishing of timely, relevant materials by Company management to committee members prior to meetings; by its unfiltered access to both the external auditor and the Company's internal audit department; by its potential membership pool being vetted by other independent directors; and by the oversight of the committee over all internal audit work performed.

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<sup>6.1</sup> Most of the following discussion on the Company's internal control framework is based on the response to Discovery, OC-165 (PHI COSO Internal Control Documentation as of June 30, 2008) unless otherwise noted.

<sup>7</sup> COSO was an industry response to corporate failures occurring in the late 1970s and early 1980s due to high inflation and instances of fraudulent financial reporting. It is sponsored and funded by the American Institute of Certified Public Accountants, the American Accounting Association, Financial Executives International, the Institute of Internal Auditors, and the Institute of Management Accountants.

Examples of management's operating style that set an overall tone for the organization include its written acknowledgment that the Board has oversight over significant corporate matters; the publishing of a formal Code of Business Conduct and Ethics as well as Business Policies; offering competitive compensation to attract and retain skilled personnel; the acquisition and regular maintenance of a suitable financial reporting system; the creation of a department to proactively research accounting matters; regular communication among management team members in the form of reports and recurring meetings; and on-going oversight over special investigations.

Communication of values takes the form of a structured new employee orientation process; a formal Code of Conduct; quarterly communications meetings conducted by Company executives; inclusion of values as an item to be measured in the performance of employees; the requirement that employees must pass a quiz on SOX responsibilities as part of the annual business policy certification process; the punishment of unethical behavior, including employee discharge; and the establishment of realistic performance targets so as not to encourage inappropriate behavior.

Finally, the control environment is enhanced through organizational structure as evidenced by the Company's formal process in hiring new employees; periodic assessment of the organization which occasionally leads to the realignment of responsibilities; semi-annual performance assessments of employees; publishing of organizational charts; a structured interview process; and formal People Strategy and Human Resources policies and procedures.

## B. Risk assessment

According to PHI, "the Risk Assessment component is defined as management processes and procedures that establish objectives so that the organization is acting in concert." (p. 16) Risk assessment is accomplished through entity-wide business objectives and activity-level business objectives as well as other processes. For instance, PHI has a Corporate Risk Management Committee that is made up of senior management personnel from all business units. This committee assesses risks, monitors them, and identifies actions to take to mitigate them.

Entity-wide business objectives which complement the Company's risk assessment component include: establishment of a corporate vision; implementation of an annual process to review the strategic plan, to present the business plans, and to set the operational budgets; reporting of monthly results by business unit to executive management; communication of corporate vision and strategy to the Board of Directors and employees using various media; and the existence of the Planning and Budgeting Department to ensure linkage of the corporate strategic plan with the strategic plans and operating budgets of each line of business.

Activity level business objectives take the form of presentations of key performance objectives by the lines of business at the Board of Directors' planning conference; monthly reporting by the business units to the CEO and other members of executive management on the achievement of activity level objectives; existence of a Finance Committee and Corporate Risk Management Committee to ensure that adequate resources are being committed to risk assessment; and alignment of employee incentive pay plans with reasonable performance goals.

Risk assessment also takes the form of input from key personnel on risk management matters; use of a comprehensive risk dashboard; on-going monitoring of changes to the internal and external business environment; use of background checks for new hires; development of an annual, risk-based Internal Audit Department plan; offering various methods for employees and other interested parties to provide confidential and/or anonymous concerns to the Company's General Auditor or the Board of Directors; and the periodic meetings held by the Disclosure Committee and the Form 8-K Meeting Group to ensure that the Company provides full and accurate disclosure of information to the public.

C. Information and communication

The information and communication component of the COSO methodology is concerned with the processes and systems that enable the Company's employees to capture and exchange information needed to conduct, manage, and control the Company's operations.

Information plays a key role in the internal control framework. Both completeness and timeliness of information is necessary. Examples of PHI procedures that are intended to improve information include the comparison of actual monthly and quarterly results to budgeted amounts at the business unit level to track performance relative to established objectives; adherence to a quarterly closing schedule for the purpose of releasing financial information on a timely basis; formation of a Technology Strategy Committee of senior management to monitor the Company's current systems and to make recommendations when change is warranted; and reporting of information technology needs to management and Board members on a regular basis.

Effective communication is promoted by PHI in a number of ways. For example, some employees' responsibilities are documented in written job descriptions and performance is assessed and discussed on a semi-annual basis. Employees must show a working knowledge of SOX responsibilities by passing an annual quiz as part of the annual business certification process. Employees have access to a dedicated hotline to report unethical behavior, and outside parties can communicate concerns to management through the Company's website. Follow-up to these reported incidents is generally evidenced by special investigations conducted by the Internal Audit Department. Additionally, the Company routinely conducts customer surveys and benchmarks its

customer service function against its peers. PHI's ethical standards are posted on its internet website for all to see.

Other steps taken by the Company in this area include the use of a standardized accounting system (SAP) to accumulate financial information used in public disclosures; the existence of an Accounting Policy Manual to promote consistent application of accounting practices; monthly business unit reporting to management; the release of employee newsletters to reaffirm Company objectives; the creation of an Accounting Research Team to analyze and communicate the Company's application of new accounting pronouncements; the occurrence of regularly scheduled staff meetings to keep management apprised of all matters affecting the Company's finances; and the continuous monitoring of the internal and external business environment by numerous management committees such as the Finance Committee, the Corporate Risk Management Committee, and the Regulatory Policy Committee.

D. Monitoring

The quality of the system's performance over time is accomplished both by on-going monitoring and separate evaluations. To assist in this endeavor, PHI uses Certus, a SOX compliance database. The current database application replaced the Internal Control Workbench tool, a PwC software program, in 2006.<sup>8</sup>

Many of the procedures listed previously also have a monitoring aspect to them. For instance, the monthly and quarterly business unit reporting not only achieves the goal of communicating information to key decision makers in a timely manner, but it also serves as a method to track on-going performance. The following examples of monitoring activities are focused on those that have not already been discussed.

On-going monitoring is exemplified by the following: quarterly sub-certifications by managers throughout PHI attesting that internal controls are in place and operational; periodic physical inventories; quarterly status reporting of internal control deficiencies to the Audit Committee; bi-weekly meetings of the SOX Compliance Unit and SOX coordinators to coordinate corporate activities; signed management acknowledgment of the corporate code of conduct; and Audit Committee approval of the Internal Audit plan.

Separate evaluations are also employed by the Company to assess performance over time. In 2004, outside consultants were employed to assist with the evaluation and documentation of SOX 404 implementation efforts. Internal Audit now tests key controls when performing operational audits. The SOX Compliance Unit ensures that all recommendations, even those made pursuant to separate evaluations, are properly documented.

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<sup>8</sup> Interview with Anton Zeithammel, Manager of SOX Compliance Process (December 8, 2008).

In addition to on-going monitoring and separate evaluations, PHI has performed a series of self-assessments of its SOX compliance efforts to identify both areas of strength and those needing improvement.

While the previous discussion is not meant to be an all-inclusive, hierarchical listing of processes adopted by the Company to frame its financial reporting controls, it does provide a structure that can be used to test for compliance. As previously mentioned, the three groups that routinely test PHI's internal controls over financial reporting are the SOX Compliance Unit, the Internal Audit Department, and the external auditors.

Further discussion of the activities of each of these organizations follows:

### **SOX Compliance Unit**

The SOX Compliance Unit is a fully-dedicated department of three individuals which oversees the Company's compliance with SOX, primarily concerning Sections 302 (Certifications) and 404 (Management Assessment of Internal Controls).<sup>9</sup> The head of this department reports directly to the CFO. The unit is supported by nine SOX coordinators that are dispersed throughout various operational organizations of the consolidated company. With the exception of one coordinator, these nine individuals have additional job responsibilities other than SOX compliance.<sup>10</sup>

These twelve individuals ensure that internal controls are systematically documented, that recurring internal control testing is performed throughout the year, that the results of this testing are communicated to management, and that business unit personnel are properly trained as to their responsibilities with respect to internal controls.<sup>11</sup>

The SOX Compliance Unit, SOX coordinators, and representatives from Internal Audit and PwC attend bi-weekly progress meetings. Topics discussed include Certus (the SOX compliance database), key deliverables for interim reporting, status of PwC testing, and scheduling of future testing.<sup>12</sup> In addition, a SOX Finance Sub-Committee meeting is held every other month, unless circumstances warrant a more frequent schedule. This meeting is chaired by the CFO and attended by the SOX Compliance Unit, SOX coordinators, heads of business units and/or financial "leads", Internal Audit, and PwC. The purpose of these meetings is to keep management aware of the status of SOX compliance activities.<sup>13</sup>

#### **A. Historical Testing**

The Company maintains a list of key controls in its SOX compliance database. These key controls are primarily designed to ensure the integrity of the Company's accounting

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<sup>9</sup> Response to Discovery, OC-165.

<sup>10</sup> Interview with Anton Zeithammel, Manager of SOX Compliance Process (December 8, 2008).

<sup>11</sup> Response to Discovery, OC-165 (SOX Compliance Unit Charter).

<sup>12</sup> Responses to Discovery, OC-165 and OC-651 (restricted).

<sup>13</sup> Response to Discovery, OC-165.

records with one of four objectives in mind – completeness, accuracy, validity, or restricted access.<sup>14</sup> The number of key controls has varied dramatically from year to year. While there has been a general bias towards de-designating key controls by the Company as it continues to consolidate processes post-merger between Pepco and Conectiv, eliminate redundancies, and adjust for those areas with relatively low risk; most importantly, the conversion of computer systems from the Internal Control Workbench tool to Certus changed the way key controls were counted.<sup>15</sup> For example, a key control performed at 5 different locations was counted as one key control by the Internal Control Workbench tool but five key controls by Certus.<sup>16</sup> The following table summarizes the number of PHI key controls identified by the Company for the past several years:

<b>Date</b>	<b>Internal Control Workbench</b>	<b>Certus</b>
December 31, 2005	781	
December 31, 2006		1,348
December 31, 2007		1,044
December 31, 2008		882
Sources: Responses to Discovery, OC-295, Sub-Part D, p. 7 (restricted), OC-911, and e-mail clarification dated March 10, 2009.		

The frequency of key control testing is dependent on the nature of the control. If it is a manual control, the key control is tested at least once per year. Automated key controls (e.g., system-performed) are tested once every three years. According to the Company, baseline testing of automated key controls occurred in 2004 and 2007, and is scheduled to be performed in 2010.<sup>17</sup> The following table quantifies the number of tests of key controls performed in the past several years:

<b>Year</b>	<b>Quantity</b>
2005	3,282
2006	4,454
2007	3,869
2008	3,053
Sources: Responses to Discovery, OC-287 (February 21, 2007 SOX Compliance Update, p. 2) and OC-911.	

## B. Addressing Non-Compliance

Although the management assessment called for by Section 404 of SOX is as of a particular point in time (year-end), the testing of internal controls by the SOX Compliance Unit and its coordinators occurs throughout the year. From a practical standpoint, this

<sup>14</sup> Response to Discovery, OC-306 (November 2006 PwC In-House Training Materials, Slide 14).

<sup>15</sup> Response to Discovery, OC-287 (February 21, 2007 SOX Compliance Update, p. 1).

<sup>16</sup> Interview with Anton Zeithammel, Manager of SOX Compliance Process (December 8, 2008).

<sup>17</sup> Response to Discovery, OC-654.

makes sense as it would not be feasible to perform all internal control testing on the last day of the year. In order to reach a conclusion on the effectiveness of its internal controls, management must decide what to do with instances of non-compliance. This section focuses on these matters.

It is important to understand how exceptions are measured by the accounting profession with respect to SOX compliance. The three categories of exceptions are:

- Deficiencies,
- Significant deficiencies, and
- Material weaknesses.

While the classification of exceptions is dependent on qualitative matters such as risk, impact on trends and ratios, impact on direction of earnings, etc.; quantitatively speaking, the classification is driven by an exception’s potential impact on pre-tax income. The thresholds are as follows:<sup>18</sup>

- Deficiency (less than 1% of pre-tax income)
- Significant deficiency (greater than 1% but less than 5%)
- Material weakness (greater than 5%)

In dollar terms, these thresholds equate to the following:

Description	2006*		2007*	
	PHI	ACE	PHI	ACE
Deficiency	x < \$4.1	x < \$0.9	x < \$4.1	x < \$0.8
Significant Deficiency	\$4.1 < x < \$20.6	\$0.9 < x < \$4.6	\$4.1 < x < \$20.5	\$0.8 < x < \$3.8
Material Weakness	x > \$20.6	x > \$4.6	x > \$20.5	x > \$3.8

Source: Response to Discovery, OC-287 (February 21, 2007 SOX Update, pp. 18-19) and (April 25, 2007 SOX Update, pp. 19-20).  
\*2006 amounts are based on actual amounts, 2007 amounts are based on the budget.

With that in mind, as tests are performed on key controls during the year, exceptions are noted. Some exceptions are determined to be minor or subject to mitigating circumstances. These are documented in Certus, and to the extent necessary, corrective action is taken.

If the issue remains unremediated at year-end and if management believes that the matter has the potential to be considered a significant deficiency or material weakness, a framework evaluation is processed. This document summarizes the results of the review and the Company’s reasoning for coming to its conclusion. Framework evaluations are also performed for any material quarterly out-of-period adjustment since management believes that its procedures are designed to prevent such adjustments

<sup>18</sup> Response to Discovery, OC-287 (February 21, 2007 SOX Update, p. 18) and (April 25, 2007 SOX Update, p. 19).

from having to be made after the fact.<sup>19</sup> A summary of ACE's quarterly out-of-period adjustments for 2005, 2006, and 2007 are summarized in the following table along with ACE's reported net income (to put the adjustments in proper context):

Description	No. of Adjustments	Adjustment \$'s	Net Income
1 <sup>st</sup> Quarter - 2005	4	\$0.8	
2 <sup>nd</sup> Quarter - 2005	--	--	
3 <sup>rd</sup> Quarter - 2005	--	--	
4 <sup>th</sup> Quarter - 2005	6	1.9	
<b>2005 Total</b>	<b>10</b>	<b>\$2.7</b>	<b>\$63.2</b>
1 <sup>st</sup> Quarter - 2006	2	\$0.8	
2 <sup>nd</sup> Quarter - 2006	--	--	
3 <sup>rd</sup> Quarter - 2006	3	(0.1)	
4 <sup>th</sup> Quarter - 2006	2	1.4	
<b>2006 Total</b>	<b>7</b>	<b>\$2.1</b>	<b>\$62.7</b>
1 <sup>st</sup> Quarter - 2007	--	\$--	
2 <sup>nd</sup> Quarter - 2007	2	(0.4)	
3 <sup>rd</sup> Quarter - 2007	1	0.6	
4 <sup>th</sup> Quarter - 2007	2	(3.6)	
<b>2007 Total</b>	<b>5</b>	<b>\$(3.4)</b>	<b>\$60.1</b>
Source: Response to Discovery, OC-726 and 2007 ACE Form 10-K.			
Note: Amounts are shown net of tax (assumes a 40% effective tax rate in some cases).			

While the SOX Compliance group is testing key controls, both the external auditors and the Internal Audit Department (at the external auditor's behest) are simultaneously performing tests. If either one of these groups identifies a significant exception, these too are documented in Certus and tracked by the SOX Compliance Unit. Otherwise, testing performed by these two groups is not routinely documented in Certus.<sup>20</sup>

The finding of a material weakness precludes management from asserting the effectiveness of internal controls over financial reporting. That has never occurred for either PHI or ACE, as a sub-registrant, through the 2007 reporting period.<sup>21</sup>

When a significant deficiency is identified, it is reported to the Audit Committee and external auditors, and its remediation status is subsequently monitored. We saw evidence of this tracking in our review of minutes of every regularly-scheduled Audit Committee meeting from early 2007 to mid-2008. Remediation of all deficiencies and significant deficiencies is verified by subsequent testing performed either by the control

<sup>19</sup> Responses to Discovery, OC-648 and OC-573. OC-648 was clarified in an e-mail exchange dated February 20, 2009. In addition, PwC requires management to perform a SOX Framework Evaluation to determine classification when a quarterly out-of-period adjustment is made (see OC-648, p. 2).

<sup>20</sup> Response to Discovery, OC-652.

<sup>21</sup> Response to Discovery, OC-648.



owner, the SOX liaison, or the SOX coordinator. Testing by either the control owner or SOX liaison is confirmed by the SOX coordinator.<sup>22</sup>

The reporting of exceptions categorized only as “deficiencies” to the Audit Committee has been relaxed over time. Detailed reports to the Audit Committee on deficiency remediation status were eliminated by senior management beginning in July, 2007. Now, the Audit Committee only receives statistics on deficiency status. However, detailed reporting is still reviewed by the CFO, other senior management, accounting and finance leads, Internal Audit, and PwC.<sup>23</sup> Presumably, if a particular issue warrants disclosure to the Audit Committee, a number of different parties can bring the matter to its attention, including management, the Chief Internal Auditor, and PwC.

At the PHI level, the number of observed deficiencies and significant deficiencies has decreased over time. This is evidenced in the following table:

Year	Company	Deficiencies	Significant Deficiencies	Total
2005	PHI	34	11	45
2006	PHI	34	5	39
2007	PHI	11	1	12
2008	PHI	10	1	11
2005	ACE	N.A.	N.A.	N.A.
2006 (A)	ACE	N.A.	1	N.A. (B)
2007 (A)	ACE	6	2	8
2008	ACE	0	1	1

Sources: Response to Discovery, OC-649 and OC-917 (update).  
 (A) 2007 was the first year that the SEC required management to attest to the effectiveness of internal controls of sub-registrants such as ACE. In anticipation of this requirement, management focused on identifying significant deficiencies at the sub-registrant level beginning in 2006 (see response to Discovery, OC-649).  
 (B) A total cannot be determined since the company did not quantify the number of ACE-specific deficiencies in 2006.

The decrease in observed deficiencies at the PHI level is most likely due to the maturing of the SOX compliance process combined with an overhaul of the Controller’s Department. The latter is discussed in more detail below.

At the end of 2004, PHI concluded (with PwC’s concurrence) that errors in the application of generally accepted accounting principles (GAAP) and process errors were the result of insufficient Finance area staffing levels and employee skill sets.<sup>24</sup> This finding was designated a significant deficiency. Not long afterwards, Mr. Ronald Clark was hired to be Vice President and Controller of PHI. The significant deficiency concerning Financial Reporting and Staffing Issues went unremediated during the remainder of 2005 as Mr. Clark began assessing the competencies of his staff and

<sup>22</sup> Response to Discovery, OC-931. “SOX liaisons” are a network of individuals who assist SOX coordinators in their respective areas (e-mail clarification dated March 12, 2009)..

<sup>23</sup> Response to Discovery, OC-648.

<sup>24</sup> Response to Discovery, OC-297.

focused on other matters.<sup>25</sup> In 2006, contractors were retained to address this significant deficiency and other noted exceptions in the Controller's Department (the "Big 3"). As a result, these three exceptions were reclassified to the status of deficiency at the end of 2006.<sup>26</sup> 2007 saw the hiring of several key accounting personnel, including a new CFO, Mr. Paul Barry, and two direct reports to the Controller. While PHI made progress in internalizing its accounting capabilities from the year before when it relied upon outside help, there continued to be noted deficiencies in the income tax area. Most likely due to this and the learning curve associated with new accounting staff, finance staffing continued to be classified as a deficiency at the end of 2007 – the only unremediated deficiency carried forward from the previous year-end.<sup>27</sup> Management's goal was to have the finance staffing deficiency remediated by the end of 2008, but the 2008 year-end status indicated that concerns about staffing in the income tax area still remained and were once again classified as a deficiency.<sup>28</sup>

While management has indicated that competition for qualified staff is high, especially in the Washington, D.C. metropolitan area,<sup>29</sup> the finance staffing deficiency has been an issue in some form or another for at least five years running. Overland noted no other exception to SOX compliance that went so long without being satisfactorily resolved.

We recommend that the Company take the necessary steps within the next twelve months to satisfactorily address, in all material respects, the finance staffing concerns that have affected the Company for the past five years. To do otherwise sends the message that management does not consider the matter an important priority.

As noted in the previous table, the first year that management was required to attest to the effectiveness of internal controls at the sub-registrant level (2007), it noted eight ACE deficiencies of differing magnitude. None of these deficiencies rose to the level of material weakness. These deficiencies included:<sup>30</sup>

- Lack of a deferred tax basis balance sheet (Significant deficiency)
- Transmission expense adjustment due to use of an incorrect FERC rate (Significant deficiency)
- Footnote disclosure errors (Deficiency)
- Incorrect continuation of amortization on BL England investment tax credit (Deficiency)
- Errors in FIN 48 (uncertainty in income taxes) interest expense calculation (Deficiency)

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<sup>25</sup> Mr. Clark was hired by PHI in June, 2005 (interview with Ronald Clark, Vice President and Controller - November 19, 2008). Mr. Clark is also the Controller of ACE according to Unanimous Written Consent of ACE's Directors (dated June 25, 2007).

<sup>26</sup> Responses to Discovery, OC-297 and OC-287 (February 21, 2007 SOX Compliance Update, p. 5).

<sup>27</sup> Notes from review of minutes to the Audit Committee meeting dated February 27, 2008.

<sup>28</sup> Response to Discovery, OC-917 (2008 SOX Deficiency Remediation Status dated March 2, 2009).

<sup>29</sup> Interviews with Paul Friel, Vice President and Chief Auditor (November 17, 2008) and Ronald Clark, Vice President and Controller (November 19, 2008).

<sup>30</sup> Response to Discovery, OC-648 (2007 SOX Deficiency Remediation Status dated December 11, 2008, pp. 5-6, 13-15).

- Access concerns related to the STaR system, the wholesale and retail supplier invoice application (Deficiency)
- Lack of reconciliation between the Load Profile Settlement System and the StaR system (Deficiency)
- Incomplete controls over Load and Market settlements process (Deficiency)

As of March 6, 2009, seven of the eight deficiencies listed above had been remediated. Only the deficiency concerning errors in the FIN 48 interest expense calculation had not been resolved. Errors in the calculation were identified in three different periods – the fourth quarter of 2007, the third quarter of 2008, and the fourth quarter of 2008. Due to the recurrence of these errors, the Company was unable to consider the testing successful. Subsequently, the Company performed follow-up testing, noting no exceptions and concluded that this particular tax matter was completely remediated. However, as noted in an October 21, 2009 update on the status of SOX deficiency remediation, until the review of the annual tax return true-up is completed, a significant deficiency concerning ACE's aggregated income tax issues remains outstanding.<sup>31</sup>

## **Internal Audit Department**

As noted in its charter, the "Internal Audit's objective is to furnish the Audit Committee and management of Pepco Holdings, Inc. and its business units with independent assurances regarding the integrity and adequacy of internal controls and Corporate governance processes."<sup>32</sup> Organizationally, the head of Internal Audit, the Vice President and General Auditor (Paul Friel), reports to the Audit Committee of the Board of Directors and takes administrative direction from the CEO, to the extent that independence from management is not compromised.<sup>33</sup> Personnel in the department are either located in the Washington, D.C. or Wilmington, Delaware metropolitan areas.<sup>34</sup> In the first quarter of 2008, the department had seventeen employees, all but one having either an advanced degree or professional certification.<sup>35</sup>

Work performed by this department is framed by an internal audit plan which is reviewed and approved by the Audit Committee on an annual basis. In previous years, the Internal Audit Department devoted a large percentage of its cumulative time to SOX compliance. In fact, as recently as 2004, Internal Audit attributed over 27,000 hours of effort to SOX compliance.<sup>36</sup> In the 2008 internal audit plan, this number had dwindled to approximately 4,000 hours. Focus in 2008 instead was centered on audits of internal controls related to financial reporting and business unit operations.<sup>37</sup> Internal Audit is also responsible for carrying out special

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<sup>31</sup> Responses to Discovery, OC-931 including attachment (ACE 2007 SOX Deficiency Remediation Status, p. 4), OC-917 (2008 SOX Deficiency Remediation Status dated March 2, 2009, p. 8), and 2008 SOX Deficiency Remediation Status dated October 21, 2009, pp. 4-5) provided by the Company on December 18, 2009.

<sup>32</sup> Response to Discovery, OC-308 (Internal Audit Manual, Section 1.1).

<sup>33</sup> Response to Discovery, OC-308 (Internal Audit Manual, Section 1.4).

<sup>34</sup> Interview with Paul Friel, Vice President and Chief Auditor (November 17, 2008).

<sup>35</sup> Response to Discovery, OC-288 (Internal Audit Report to the Audit Committee of the Board of Directors dated February 27, 2008, p. 3) (restricted).

<sup>36</sup> Response to Discovery, OC-295, Subpart D, p. 8 (restricted).

<sup>37</sup> Response to Discovery, OC-299 (Internal Audit 2008 Audit Plan, p. 4).

investigations requested by management or the Audit Committee, some of which may be generated by confidential and/or anonymous reports of unethical behavior.

It should be noted that there is one important distinction between the SOX compliance work performed by the Internal Audit Department and that performed by the SOX Compliance Unit and associated SOX coordinators. The Internal Audit Department SOX compliance testing is considered to be performed independently of management and is therefore used to reduce the scope of the work required of the external auditors. The same cannot be said for the testing conducted by the SOX Compliance group. Its testing, while important and necessary, is not considered independent.<sup>38</sup> Compliance testing performed by all groups is incorporated in the determination of total SOX deficiencies. The results of this testing have been previously discussed.

#### A. Financial, Compliance, and Operational Audits

In recent years, the majority of the Internal Audit Department staff's time was spent on financial, operational, and compliance audits.<sup>39</sup> The specific audits to be performed in an upcoming year are determined by a process that first requires an assessment of the potential business risks faced by PHI. The next step focuses on measuring the relative risk and materiality of each risk exposure. Using this framework, the following actions were taken to develop the 2007 and 2008 plans:<sup>40</sup>

- Management and PwC were surveyed to identify areas of risk that should be considered.
- Activities supporting continuous compliance with SOX Section 404 were considered.
- The Corporate Risk Matrix was reviewed.
- Internal Audit staff was queried for specific audit recommendations.
- "Core" audits were incorporated due to their inherent and continuing risk and materiality factors.
- Other factors were contemplated, including time elapsed since the last audit, organizational changes, and new business initiatives.
- PwC was consulted to avoid areas of duplication.

Based on this process, a list of proposed audits with estimated departmental effort was prepared. A draft of this plan was provided to the Executive Leadership Team and PwC

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<sup>38</sup> Response to Discovery, OC-165 (SOX Compliance Unit Charter).

<sup>39</sup> Internal Audit time which can be tracked to SOX testing totaled 3,066 hours in 2008. This amount excludes time spent testing Pepco Energy Services' SOX compliance (see response to Discovery, OC-882). This equates to only 10 percent of the total productive time budgeted for the department in 2008 (see response to Discovery, OC-299, 2008 Internal Audit Plan, pp. 4-5).

<sup>40</sup> Responses to Discovery, OC-299 (2007 and 2008 Internal Audit Plans) and OC-308 (Internal Audit Manual, Section 2.2.3).

for their review and comments, and the plan was then ultimately presented to and approved by the Audit Committee.<sup>41</sup>

Audits such as these are generally assigned to one of three Audit Managers, two of which are based out of the Washington, D.C. office with the other located in the Wilmington, Delaware area. Staffing for audits is the responsibility of the Vice President and Chief Auditor and the assigned Audit Manager. Travel is taken into account when staffing is assigned.<sup>42</sup>

The typical audit includes a planning phase that involves a risk analysis, an opening conference with staff of the area being audited, and an accumulation of background information (e.g., prior audit findings, SOX key controls, etc.). Specific field work tasks are highly dependent on the audit being performed but generally involve interviews with process owners, on-site observations, and sample testing. All of this information is documented in formal, cross-referenced audit workpapers, much like those that external auditors have historically produced.<sup>43</sup>

The end product of such work is a written audit report. These reports generally consist of a short narrative of the objective and scope of the project, conclusions reached, recommendations (if applicable), and a management response to each recommendation (if applicable). The reports are finalized only after undergoing a formal process whereby the internal auditors and direct management of the area being audited agree to the factual content and tone of the document. Differences in opinion concerning conclusions and recommendations made in the report may still exist, but the intent is for the report to accurately portray the conditions as found. A similar “clearing process” protocol is repeated as the report is reviewed by successive levels of management. Once finalized, the report is sent to the responsible management, vice president, and Executive Leadership Team.<sup>44</sup>

**[BEGIN CONFIDENTIAL]**

**.[END**

**CONFIDENTIAL]**<sup>45</sup> Audit recommendations requiring further action on the part of

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<sup>41</sup> Our review of the Audit Committee minutes indicates that the 2008 Audit Plan was approved by the Audit Committee during the October 24, 2007 meeting.

<sup>42</sup> Response to Discovery, OC-308 (Internal Audit Manual, Section 3.3).

<sup>43</sup> Response to Discovery, OC-308 (Internal Audit Manual, Sections 4.2 - 4.4). From a records retention standpoint, due to constraints on filing space, hard copies of workpapers for audits performed by the Wilmington, Delaware office are scanned electronically, and hard copies are shipped off-site. The Washington, DC office keeps hard copies of its workpapers for three years at its offices and then ships them off-site (see response to Discovery, OC-865 and e-mail clarification dated March 10, 2009). All workpapers are retained for six years after review, consistent with the PHI Records Retention Schedule (see restricted response to Discovery, OC-705). One set of workpapers that Overland asked to see (O&M Budget and Internal Reporting Report dated May 17, 2007) was not available for review when Overland was on-site because it had been misplaced. According to the Company, the misfiled workpapers were later found (see response to Discovery, OC-863).

<sup>44</sup> Response to Discovery, OC-308 (Internal Audit Manual, Section 5.1 - 5.6).

<sup>45</sup> Based on a review of certain 2007 and 2008 Internal Audit Reports to the Audit Committee of the Board of Directors (see response to Discovery, OC-288) (restricted).

management to resolve concerns identified during the audit are tracked by the Internal Audit staff in an electronic database. This database includes information regarding actions taken since the recommendation was made and an estimated completion date. A Summary Status Report from the database is presented to the Audit Committee at their regular meetings. Recommendations that remain outstanding for more than a year require a written explanation from the responsible business unit / division manager which is forwarded to and discussed with the business unit head. When appropriate, the explanation is also discussed with the PHI CEO and Audit Committee.<sup>46</sup> According to the Vice President and Chief Auditor, this step has been invoked infrequently in the past.<sup>47</sup>

However, two aspects of this process are worth noting. First, Internal Audit does not verify that management responses to Internal Audit recommendations are reliable. "It is the policy of Internal Audit to accept the management responses at face value."<sup>48</sup> This comes at a time when Internal Audit management has expressed its concerns that recently audit recommendations may not always be given the attention they deserve.<sup>49</sup> Conversely, the SOX Compliance Unit and PwC (in the case of significant deficiencies) subsequently test controls to confirm that they are operating properly when SOX exceptions are noted. Secondly, recommendations are frequently considered complete even though recommendations are not fully implemented if Internal Audit management believes that satisfactory progress has been made and will likely continue to be made in the absence of Internal Audit oversight.<sup>50</sup>

On a spot basis, we recommend that Internal Audit confirm both the occurrence of actions asserted to have been taken by management in response to internal audit report recommendations and the effectiveness of those actions to remedy the noted audit findings. This is especially important for those recommendations categorized as High or Medium since they have resulted or could result in a significant deficiency or material weakness. In addition, assumptions made by Internal Audit concerning management follow-through can be tested by this process.

Since the beginning of 2007, none of the findings by Internal Audit have resulted in an adjustment to quarterly results.<sup>51</sup>

We judgmentally selected and reviewed internal audit reports of work performed in numerous functional areas throughout the Company. To the extent time permitted, we also reviewed the internal audit workpapers made available by the Company of a subset of these reports. A summary of these reports follows:

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<sup>46</sup> Response to Discovery, OC-308 (Internal Audit Manual, Sections 5.6.2 - 6.4).

<sup>47</sup> Interview with Paul Friel, Vice President and Chief Auditor (November 17, 2008).

<sup>48</sup> Response to Discovery, OC-308 (Internal Audit Manual, Section 6.3.2).

<sup>49</sup> Interview with Paul Friel, Vice President and Chief Auditor (November 17, 2008).

<sup>50</sup> Response to Discovery, OC-308 (Internal Audit Manual, Section 6.2).

<sup>51</sup> Interview with Paul Friel, Vice President and Chief Auditor (November 17, 2008).

## 1. Accounts Payable Function

- a. Disbursements and accounts payable are monitored continuously by both Internal Audit and Strategic Sourcing using a proprietary data-mining software known as Audit Command Language (ACL). ACL is programmed to look for transactions meeting certain specified characteristics. Examples include purchase order amounts that exceed an approver's authority or payments approved by employees not on the corporate approval list. Results of this testing are generated in a web-based user interface rather than a formal internal audit report. Out of [BEGIN CONFIDENTIAL] [END CONFIDENTIAL] potential exceptions reported by the company from ACL since January 1, 2007, only [BEGIN CONFIDENTIAL] [END CONFIDENTIAL] warranted further action [BEGIN CONFIDENTIAL] [END CONFIDENTIAL],<sup>52</sup> and none of these [BEGIN CONFIDENTIAL] [END CONFIDENTIAL] items resulted in adjustments to the general ledger.<sup>53</sup>
- b. In April 2008, Internal Audit issued a report on PHI's accrual process. Internal Audit discovered insufficient or incorrect documentation for a substantial percentage of accruals, both held by the user departments and Accounts Payable. (PHI requires user departments to accrue for any purchase greater than \$50,000. Support is held by the user department unless the purchase exceeds \$500,000; then support is forwarded by the user department to Accounts Payable. Standing accruals totaling approximately \$15 million have been made by PHI as a proxy for all amounts under \$50,000 and inadvertently overlooked accruals over \$50,000.)<sup>54</sup> Internal Audit also noted that Accounts Payable had to follow up on several accruals with the user departments in the past because of insufficient documentation. Internal Audit concluded that no deficiency evaluation was necessary because even though support was lacking, all accruals but one were correctly accrued. However, it recommended that written guidelines for users be enhanced.<sup>55</sup> Subsequent SOX control testing of the accounts payable accruals process in 2008 yielded favorable results.<sup>56</sup>
- c. Expense reports and procurement card (p-card) transactions were reviewed twice by Internal Audit in 2007 and 2008. In the first audit,

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<sup>52</sup> Responses to Discovery, OC-724 (restricted) and OC-874. Examples of items not requiring further action were 5,642 instances of items related to customer refunds, garnishments, child support, safety shoes, uniforms, and credit union transactions that were deemed not to be duplicate payments (see response to Discovery, OC-946 - restricted).

<sup>53</sup> Response to Discovery, OC-947.

<sup>54</sup> ACE-specific accruals are \$1.2 million for accruals under \$50,000 and another \$1.2 million for "missed" accruals over \$50,000 (see response to Discovery, OC-948).

<sup>55</sup> Response to Discovery, OC-724 (restricted) and review of underlying workpapers.

<sup>56</sup> Response to Discovery, OC-949.

Internal Audit reviewed the time period from May 1, 2005 to May 30, 2007 and discovered that a number of employees sampled had issues with their p-card and/or expense report transactions (23 out of 180 employees reviewed). These exceptions totaled approximately \$23,000. In addition to working on the recovery of these funds, Internal Audit recommended that the processes and controls over this area be re-evaluated given the discrepancies identified. Accounts Payable subsequently implemented a number of changes. Most importantly, beginning in December 2007, all p-card transactions were to be directly paid by the Company. This was designed to eliminate confusion surrounding whether an employee should be reimbursed for these expenditures. In addition, employees were required to certify that their expenses were for Company business and had not been purchased with Company p-cards as of January 2008.

Internal Audit conducted another audit focused on employee expense reports for the time period from June 1, 2007 to June 30, 2008 (released December 9, 2008). Half of all employees' expense reports sampled were deficient in some manner, such as having missing receipts, missing attendee lists, etc. However, only one incident of a double reimbursement was identified in the sample totaling \$44. Even with the level of issues associated with deficient support, Internal Audit considered the "results of the second review to be greatly improved over the first review" since the dollars paid in error had decreased dramatically.<sup>57</sup> Internal Audit recommended that business expense report guidelines be re-evaluated and communicated to improve compliance. Internal Audit also recommended implementing controls over multi-page expense reports to avoid over-payments due to confusion over totals and sub-totals. Management believes that automation of the expense report process will address many of Internal Audit's concerns. According to the Company, it transitioned to the automation of expense reports in the third quarter of 2009, with full implementation taking place on October 1, 2009. In addition, it committed to reminding employees on at least a quarterly basis of the applicable guidelines.<sup>58</sup>

Without attempting to minimize the significant reduction in the number or amount of overpayments observed between the first and second audits performed, the statistics formally reported by Internal Audit do not clearly justify the conclusion that the results of the second review show great improvement over the first review.<sup>59</sup> The second audit noted a much

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<sup>57</sup> Response to Discovery, OC-950.

<sup>58</sup> Response to Discovery, OC-724 (restricted) and review of underlying workpapers. The company provided an update for the latter half of 2009 in correspondence dated December 18, 2009.

<sup>59</sup> The objectives of the audits were fourfold: to review and evaluate controls in place over expense report disbursements, to determine if applicable procedures were being followed, and to determine if transactions were properly authorized and accurately recorded, and to determine if any transaction had been duplicated or had been previously paid by P-Card (response to Discovery, OC-724 (restricted)).



higher percentage of non-compliance (23 out of 180 employees sampled in the first review, and 55 out of 110 employees sampled in the second review). Internal Audit did not summarize its attribute sampling results in the formal audit report nor did it quantify the dollar impact of the errors found vs. the dollar amount of total reimbursements reviewed in its audit report. This information would have put the results of both reviews in proper context. It is much more meaningful to know that one \$25 dinner out of \$10,000 of expense reimbursements submitted by an employee was improperly supported and 1 expense report out of 12 expense reports filed by an employee had missing documentation rather than noting that this employee is “deficient” for not being completely compliant during the entire year.

Subsequent questions on the matter yielded the following response:<sup>60</sup>

Our review covered 110 employees submitting approximately 1455 Expense Reports which were reviewed. The Reports averaged approximately 6 line items each report. This equals approximately 8730 line items. Of this we found 180 Expense Reports with quality issues with the receipts and or the explanation of expense. This totaled approximately 240 line items. This gives a rate of 2.75% of the items had quality issues with documentation.

In terms of putting the results of testing in the proper context, this supplemental information is a step in the right direction. We believe it could be improved upon if actual data had been used instead of estimates (e.g., expense reports averaging 6 lines per report) and if the error rate and sample had been quantified in dollar terms.

As part of its formal internal audit report, we recommend that Internal Audit summarize its attribute sampling results and quantify in dollar terms the instances of non-compliance and total sample tested. By doing so, the reader of the report can make a more informed judgment of the magnitude of non-compliance than is currently available.<sup>61</sup>

## 2. Accounts Receivable Function

- a. In 2007, Internal Audit performed a review of the credit and collection activities of ACE and DPL. These two reviews were combined because both companies use

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<sup>60</sup> Response to Discovery, OC-986.

<sup>61</sup> In the payroll audit discussed later in this chapter, Internal Audit notes in its formal report that some payroll is being self-approved without subsequent timely scrutiny by management (response to Discovery, OC-724 (restricted)). However, when asked if this review of employee time is considered in a managers' performance evaluation, PHI stated that the matter was insignificant (response to Discovery, OC-867). Although one would expect that only significant findings are reported in a formal Internal Audit Report, because no quantification of the dollar amounts involved were made in the report, it is not possible for the reader to reach the same conclusion that the Company has.

the same system, the Collection Tracking & Analysis (CTA) system. The scope of the review was wide-ranging and included, but was not limited to, a high-level review of accounts receivable metrics, a review of charge-offs, a review of the customer-disconnect process, and an assessment of access given to customer information. Internal Audit concluded that “the operating procedures and controls over the credit and collection process are adequate and are in compliance with requirements from the various rate jurisdictions” with one lone exception – a documented, quarterly review of access and privilege authority to the customer information system (C3) was not performed. Management acknowledged the finding and indicated that it would comply in the future.<sup>62</sup>

- b. Also in 2007, Internal Audit performed an audit of unbilled electric revenues, the estimate of energy delivered but not billed as of month-end. PHI’s regulated utilities calculate unbilled revenues using an output-based model. This model involves a two-step process as follows:<sup>63</sup>

Step 1:

Total Regulated Billed Retail Sales  
Less: Previous Month Unbilled Sales Balance  
 Current Month Billed Regulated Retail Sales

Step 2:

Net Regulated Retail Output  
Less: Current Month Billed Regulated Retail Sales  
 Current Month Unbilled Sales Balance

(where Net Regulated Retail Output = Retail Output less Line Loss)

Internal Audit concluded that the company’s procedures and controls ensure that the unbilled revenue calculation is processed accurately, the methodology is consistently applied, and resulting entries to the accounting records are made in a timely manner. However, it did recommend that annual reasonableness tests be performed on certain underlying assumptions made in the unbilled revenue calculations. Management adopted this recommendation for future periods.<sup>64</sup>

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<sup>62</sup> Response to Discovery, OC-724 (restricted) and review of underlying workpapers.

<sup>63</sup> Response to Discovery, OC-953.

<sup>64</sup> Response to Discovery, OC-724 (restricted).

### 3. Payroll Function

a. In November 2007, Internal Audit released a report on an audit of payroll. The audit covered various aspects of the payroll process including, but not limited to, reviews of the published policies, documentation associated with new hires and terminations, systems access, exception payrolls (e.g., zero net pay, off-cycle pay, etc.), and distribution of payroll checks. While Internal Audit concluded that the Payroll Department performed their functions properly, it had the following findings and/or recommendations:

- Consider alerting applicable vice president if employee time is not approved after first notification from Payroll.
- Although there are instances of employees approving their own time, focus on the veracity of the actual time submitted.
- Develop procedures that lead to consistency in review, methods, approval, and filing. Develop a review process to ensure verification is performed properly.
- Consider modifying authorization procedures to permit electronic approval.
- Develop procedures for the paymaster role, a position involved in the distribution of physical payroll checks.
- Update intranet site with latest policies and procedures.
- Develop policies to address fixed distribution and pre-entering of time.

Management responded as follows: beginning in late 2007, employees below a certain salary grade/level will not be authorized to approve their own time except for a select group of administrative assistants. That group's time will be approved by Payroll but reported periodically to executives. A report is being developed to report adjustments to prior pay that are over a certain dollar amount. Pay cycle files will include proper support as documented in the indexed procedures. Payroll will accept electronic authorization from managers for changes to payroll. Paymasters have been notified of their duties, and additional procedures related to payroll have been posted on-line, including those associated with fixed distribution and pre-entering.<sup>65</sup>

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<sup>65</sup> Responses to Discovery, OC-724 (restricted) and OC-859 (restricted).

#### 4. Budget Reporting

- a. No formal internal audits were performed on budget reporting in recent years. However a facilitated self-assessment was performed in 2007 on the O&M budget and internal reporting. The overall conclusion of the assessment was that the process needed to be improved to ensure accountability for managing costs.<sup>66</sup> As previously mentioned, subsequent to this, PHI converted to a new budget system. PHI also implemented a data warehouse reporting tool. The combination of these two new developments led PHI management to conclude that it had addressed the recommendations documented in the 2007 self-assessment.<sup>67</sup>

#### 5. Property Accounting

- a. The Internal Audit Department issued an audit report on the capital projects process for distribution engineering in July 2007. Focused on mass plant capital projects, the overall conclusion of Internal Audit was that the activities in this area provided some assurance that process controls were being managed, and previously identified issues were being evaluated. It did however identify the following recommendations:
  - Develop a formal plan to reduce the frequency and duration of issues associated with variances in the work management information system.
  - Incorporate design accuracy, timeliness, and customer satisfaction into performance assessment.
  - Collaborate with Information Technology to standardize reports, document certain controls, and collect data.
  - Standardize processes across all PHI utilities.
  - Address the outstanding issues from a previous survey.

Management indicated that most variance issues and information technology concerns have been or will be resolved with planned system upgrades and enhancements coupled with process improvements. New performance scorecards incorporate measurements of accuracy, timeliness, and customer satisfaction. Initiatives are underway to standardize work practices across PHI. A planned course of action has

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<sup>66</sup> Response to Discovery, OC-724 (restricted).

<sup>67</sup> Response to Discovery, OC-956.

been developed to address the outstanding issues from the previous survey, and upgrades to computer applications are expected to resolve most of these issues.<sup>68</sup>

- b. In late 2008, Internal Audit issued a report on the review of processes in place for maintaining and managing contracts associated with a major substation project in Upper Pittsgrove Township, New Jersey – the Orchard Substation. This particular project had run over budget by approximately \$1.8 million as of the summer of 2008. This was attributed to extra permitting, additional site work as a result of inclement weather, an extremely compressed construction schedule, and unforeseen expenditures as a result of crew exposure to a crop spray. As part of this review, contracts, invoices, and other pertinent project-related documentation were reviewed for accuracy. Overall, the Internal Audit Department was satisfied with the results of its testing. It did make a number of recommendations, which paraphrased include:

- Re-evaluate the drift spray policy
- Improve controls associated with delivered materials
- Re-evaluate and improve controls related to on-site safety
- Monitor invoice payment status; evaluate early payment discount opportunities; and ensure adequate invoice support
- Address discrepancies related to taxes paid on invoices
- Synchronize purchase order and contract terms
- Ensure that invoice supports work performed on project
- Develop a monitoring plan to track rebates due

In response, management has revised its drift spray policy to make the regional System Operations the point of contact since it is available 24 hours a day. Company representative signatures are required for receipted materials, and consideration is being given to penalize vendors who do not properly identify deliveries. Pre-construction meetings covering safety, among other things, are held with contractors. Standard terms and conditions of construction contracts hold contractors solely accountable for their employees' and sub-contractors' safety. Management agrees that more attention must be paid to the handling of invoices. Concerns about tax matters have generated a response, but resolution is still outstanding at the time the audit report was issued. Pricing updates have been made to the purchase order in question. Construction Management and the Supply Chain Department confirm that the invoices paid were appropriate, and the vendor will be contacted to correct its billing information. Strategic Sourcing will generate lists in the

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<sup>68</sup> Responses to Discovery, OC-724 (restricted) and OC-859 (restricted).

future to monitor rebates, and the specific rebate due has been processed.<sup>69</sup>

B. Fraud Risk Assessment<sup>70</sup>

To demonstrate compliance with certain anti-fraud provisions within SOX, Internal Audit performs an annual fraud risk assessment. This work involves determining whether or not PHI's policies and procedures are designed to mitigate potential fraud schemes. Fraud risk program basics and fraud risk schemes are obtained from various sources including the Association of Certified Fraud Examiners, the American Institute of Certified Public Accountants, PwC, and peer groups.

For the years 2006, 2007, and 2008, the Internal Audit Department concluded that PHI's fraud prevention tactics compared favorably with the fraud program basics identified by the previously mentioned professional organizations. In addition, it concluded that controls were in place to mitigate the vast majority of fraud schemes considered.

The only exceptions to this were the following findings:

- Employees could divert company funds by submitting invoices to PHI for long outstanding invoices that vendors were no longer attempting to collect (2006).
- Employees could divert company funds via petty cash funds (2006 and 2007).
- Employees could divert company funds via self-approval of time reporting (2006 and 2007).

None of these findings was considered significant enough to warrant immediate remediation. However, except for one unregulated affiliate, all business unit petty cash funds were subsequently closed. In addition, only managers Grade 13 and above were permitted to approve their own time beginning with the first payroll of 2008. No exceptions were noted in the 2008 assessment.

C. Special Investigations

As previously mentioned, employees and outside parties are provided an avenue to lodge confidential and anonymous complaints with the Company about perceived illegal, unethical, or questionable behavior. This information is designed to flow through one of three people or groups – the Vice President and Chief Auditor, the Chief Ethics Officer, or members of the Board of Directors (most often the Chairman of the Audit Committee) depending on the nature of the complaint.<sup>71</sup> Generally, complaints are logged by the

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<sup>69</sup> Responses to Discovery, OC-724 (restricted) and OC-859 (restricted).

<sup>70</sup> Responses to Discovery, OC-289 and OC-941 (restricted).

<sup>71</sup> Responses to Discovery, OC-165 (COSO Internal Control Documentation dated June 30, 2008, p. 25) and OC-308 (Internal Audit Manual, Section 7).

Internal Audit Department and reviewed by the Chief Ethics Officer and Vice President and Chief Auditor to determine a course of action.<sup>72</sup> Other executives and the Board of Directors will be notified if the severity of the complaint warrants such attention.<sup>73</sup> The Internal Audit Department will generally take the lead on investigations of these types of matters. An exception to this general rule of thumb would include complaints about executive officers of the Company which are turned over for investigation by outside counsel. In addition, complaints about the Internal Audit Department itself and matters that require law enforcement agency action will most likely have a different investigatory lead.<sup>74</sup>

Workpapers of special investigations follow standard Internal Audit quality control measures. However, documentation concerning the results of a special investigation is left to the discretion of the Vice President and Chief Auditor.<sup>75</sup> The Audit Committee is kept apprised of the progress of special investigations in the Internal Audit Report to the committee.

In the 17-month period Overland reviewed Audit Committee materials, we noted the following special investigations conducted by the Internal Audit Department and reported to the Audit Committee involving corporate-wide or ACE-specific utility operations:<sup>76</sup>

- Customer documents containing personal financial information were found in the regular recycling process where privacy could not be ensured.

Resolution: The Company concluded that controls over records disposal should be improved. The Company reported to the customer that it did not believe the error was intentional. The customer was offered a credit monitoring service to provide assurance that he/she was not harmed.

- Retiree reported that he was billed for an unsolicited mail order prescription, and the benefit plan provider would not resolve the matter to his liking.

Resolution: The Company concluded that the benefits provider did not follow internal procedures and that this resulted in billing errors to the retiree and the Company. The benefits provider corrected its errors. The Company should consider future audits of the benefits provider. Employees and retirees should be encouraged to review their benefits statements for accuracy.

- Employee-installed service to residence without charge for equipment or installation.

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<sup>72</sup> For the three years ended December 31, 2008, PHI logged 17 items on a corporate-wide basis (response to Discovery, OC-936 (restricted)).

<sup>73</sup> Response to Discovery, OC-308 (Internal Audit Manual, Sections 7.2 - 7.3).

<sup>74</sup> Response to Discovery, OC-308 (Internal Audit Manual, Section 7.3). The Legal Department noted no instances of complaints sent to the Ethics Officer concerning questionable accounting or auditing matters from January 1, 2005 to present (response to Discovery, OC-937).

<sup>75</sup> Response to Discovery, OC-308 (Internal Audit Manual, Sections 7.4 - 7.5).

<sup>76</sup> Response to Discovery, OC-288 (restricted) unless otherwise noted.

Dates may have been changed in documentation to possibly avoid a local government impact fee.

Resolution: Several employees were suspended or formally reprimanded. Internal Audit investigated to determine if the problem was more widespread, found no other instances, and concluded that the overall risk exposure to ACE was low.<sup>77</sup>

- Allegations were made to management that call center operations information submitted to regulatory agencies was not accurate.

Resolution: Although the matter involved reporting to the Delaware Public Service Commission, Internal Audit reviewed data submitted to both Delaware and New Jersey in its investigation, noting no errors. The source of the allegations was given an opportunity to provide evidence supporting its claims, and nothing has been produced to date.<sup>78</sup>

## **PwC, the External Auditor**

PwC has been PHI's or its predecessor's external auditor for over one hundred years.<sup>79</sup> As part of the financial statement information submitted to the SEC, PwC issues an opinion regarding the effectiveness of PHI's internal controls over financial reporting.<sup>80</sup> This opinion is formed on the basis of identification of controls, assessment of risks, and tests and evaluations of design and operating effectiveness. For 2005, 2006, 2007 and 2008, PwC reached the following conclusion:<sup>81</sup>

... in our opinion, the Company maintained in all material respects, effective internal control over financial reporting as of [the fiscal year-end], based on criteria established in *Internal Control - Integrated Framework* issued by the Committee of Sponsoring Organizations of the Treadway Commission (COSO)...

In other words, no material weaknesses in internal controls over financial reporting were found by the Company or PwC in these years. However, less significant deficiencies were noted. Some of these deficiencies were identified by the Company and reported to PwC, while others were discovered by PwC.<sup>82</sup> The group credited with identifying PHI and ACE deficiencies found between 2005 through 2008 is summarized in the following table:

<sup>77</sup> Response to Discovery, OC-938 (restricted).

<sup>78</sup> Response to Discovery, OC-939 (restricted).

<sup>79</sup> Interview with Paul Friel, Vice President and Chief Auditor (November 17, 2008).

<sup>80</sup> PwC is not required to issue an opinion on the effectiveness of ACE's internal controls over financial reporting until 2008 (see response to Discovery, OC-287: First Quarter 2007 Sarbanes-Oxley Compliance Update presented at the April 25, 2007 Audit Committee meeting, p. 14).

<sup>81</sup> 2008 PHI Form 10-K, p. 147, 2007 PHI Form 10-K, p. 143; 2006 PHI Form 10-K, p. 140; and 2005 PHI Form 10-K, p. 156.

<sup>82</sup> Discoveries made by Internal Audit personnel as part of the independent SOX compliance testing performed in conjunction with PwC is attributed to PwC (interview with Anton Zeithammel, Manager of SOX Compliance Process (December 8, 2008)).



Description	2005		2006 (A)		2007 (A)		2008	
	Mgmt	PwC	Mgmt	PwC	Mgmt	PwC	Mgmt	PwC
Deficiencies:								
PHI	17	17	6	28	4	7	6	4
ACE	N/A	N/A	N/A	N/A	1	5	0	0
Significant Deficiencies:								
PHI	5	6	4	1	0	1	0	1
ACE	N/A	N/A	1	0	1	1	0	1
Total:								
PHI	22	23	10	29	4	8	6	5
ACE	N/A	N/A	N/A	N/A	2	6	0	1

Source: Responses to Discovery, OC-649 and OC-917 (some summing required).  
(A) 2007 was the first year that the SEC required management to attest to the effectiveness of internal controls of sub-registrants such as ACE. In anticipation of this requirement, management focused on identifying significant deficiencies at the sub-registrant level beginning in 2006 (see response to Discovery, OC-649).

As this table demonstrates, PwC still discovers problems that have eluded management's attention. However, the Company has made tremendous improvement in eliminating major internal control exceptions over financial reporting in the past four years, going from a total of 45 deficiencies and significant deficiencies in 2005 to only 11 in 2008. While complete data is much more limited in the case of ACE, it also has experienced a decrease in observed internal control exceptions.

PwC's participation in this process is not just limited to quantifying internal control test results. In the past, PwC has been retained to offer training to Company employees on SOX compliance.<sup>83</sup> One or more PwC representatives participates in the bi-weekly SOX Compliance Unit meetings. PwC attends the PHI SOX Finance Sub-Committee meetings. PwC provides input to the Internal Audit Plan and jointly develops a plan with Internal Audit management for independent SOX compliance testing.<sup>84</sup> PwC also reports regularly to the Audit Committee on matters concerning internal controls and SOX compliance.

While an external auditor's public assessment of the effectiveness of a company's internal controls is a relatively recent phenomenon,<sup>85</sup> they have historically provided management with recommendations for improvements related to internal controls and other processes based upon observations made during the annual audit. According to the Company, PwC has not provided a formal management letter to the Company since SOX took effect.<sup>86</sup> Instead, PwC now communicates its comments formally through its Summary of Aggregated Deficiencies (SAD) List and informally through "take stock" meetings with business units or shared service areas as part of the SOX compliance process.<sup>87</sup>

<sup>83</sup> Response to Discovery, OC-306.

<sup>84</sup> Response to Discovery, OC-299 (2008 Internal Audit Plan, pp. 3 and 6).

<sup>85</sup> PwC's opinion on the effectiveness of PHI's internal controls first appeared on the 2004 PHI Form 10-K, p. 155.

<sup>86</sup> Response to Discovery, OC-52, Sub-Part 4.

<sup>87</sup> Response to Discovery, OC-943.

## **Asset Impairments**

Although not specifically related to internal controls, the existence or non-existence of asset impairments can provide an indication of the quality of past decisions made by management. For example, a Company that significantly over-pays for a business will ultimately have to recognize an impairment when future cash flows do not justify the value placed on the underlying assets and liabilities. While it is possible that favorable macroeconomic conditions can temporarily mask an otherwise poorly conceived or executed decision, over long periods of time, they are likely to result in impairments if the amounts involved are significant.

While PHI has recorded some impairments since the beginning of 2005, none of them have involved ACE or the other regulated utilities. To put the impairments of the non-regulated businesses in proper perspective, PHI has recognized over \$960 million in comprehensive income in the three-year period from 2005 to 2007. The total impairments of these non-regulated businesses totaled \$27 million for this same time period, or less than 3 percent of PHI consolidated comprehensive income.<sup>88</sup>

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<sup>88</sup> Response to Discovery, OC-674 and 2007 PHI Form 10-K.

## Chapter 14. Power Supply Management

### Introduction and Summary

This Chapter addresses ACE's power supply function. Power supply affiliate issues are addressed in a Chapter 4.

### Summary of Findings

The findings and recommendations contained in this Chapter are listed below.

1. ACE's basic power supply strategy is to purchase power for its BGS customers in the BGS auction, and sell the power it buys under its legacy NUG contracts into the PJM capacity and energy markets. ACE does not purchase power outside of its BGS and non-utility generation (NUG) contracts. ACE is not a load serving entity. As a result, ACE does not purchase transmission services. ACE does not have any power supply risk management strategies beyond those embedded in its basic power supply strategy. ACE's policy of not considering longer term risk management strategies for BGS customers is not reasonable.
2. ACE does not have a documented power supply plan. ACE has not documented the basis for its power supply strategies. ACE has not prepared any power supply plans or energy resource plans for at least the past four years. The only documentation of ACE's power supply plans are its filings in the annual BGS auction proceeding at the BPU.
3. The Pepco and Delmarva power supply plans provide PHI's assessment of power supply alternatives. Pepco and Delmarva filed power supply plans with the Maryland and Delaware Public Service Commissions in October and November 2008. The Pepco and Delmarva plans provide insight into PHI's view of the markets and power supply strategies.
4. ACE's BGS and NUG power supply contracts provide a significant hedge against market price volatility. ACE purchases about twice as much energy from its BGS suppliers than it does from its NUG suppliers. Selling the NUG power into the PJM markets mitigates the impact of future PJM price increases on BGS costs because the resale margins increase when PJM energy and capacity prices increase. The three year laddering of BGS supply contracts also hedges against market price volatility.
5. With one exception, the revenues obtained by ACE from reselling NUG power are reasonable. The exception is reactive power. The energy, capacity and ancillary services revenues obtained in 2006 through 2008 from selling the NUG power were consistent with expectations.

6. ACE's reactive power generator credits have a long history. The total amount of reactive power credits available to generators in ACE's zone was set in a 1998 ACE FERC proceeding. The total available credit amount has not changed since that time. ACE allocated the credits to generation owners in its zone as it divested its power plants. The inconsistent allocation factors used by ACE resulted in unusually high allocations for the BL England and the Deepwater plants. Deepwater is owned by ACE's affiliate, Conectiv Energy Supply. Two of the plants that supply NUG power to ACE are located within ACE's zone. ACE did not allocate any reactive power credits to those plants.
7. ACE's NUG contracts provide reactive power. The NUG plants are designed to provide reactive power. ACE admits that the NUG plants provide reactive power to the ACE transmission zone. The FERC has determined that several similar NUG contracts should receive reactive power credits. ACE did not allocate any of the credits to the NUG contracts because the FERC Staff excluded them from the reactive power revenue requirement they recommended in their "top sheets" in the 1998 FERC proceeding. The FERC staff top sheets do not provide a reasonable basis for assigning none of the reactive power credits to the NUG contracts.
8. ACE's NUG contract restructuring efforts have a long history. ACE began negotiating with its NUG suppliers in 1998. The negotiations continued for over 10 years. ACE discontinued the negotiations in December 2008 for a variety of reasons.
9. ACE's decision to suspend NUG contract restructuring efforts was reasonable. The role of the NUG contracts in ACE's power supply strategy has changed significantly over the past few years. Beginning in November 2010, the contracts will no longer be a significant source of stranded costs. Instead, they will provide a beneficial hedge against capacity and energy price volatility. Buying out the NUG contracts is no longer desirable. The financial markets have experienced unprecedented difficulties in 2008 and 2009. A strategy that depends on the successful refinancing of project debt may not be practical in the current environment.
10. ACE's management of the restructuring process was reasonable during 2006, 2007 and 2008. ACE's restructuring objectives and strategies were reasonable. Management oversight and technical resources were adequate. The accounting and tax analyses reviewed by Overland were well prepared. The negotiating team had the necessary technical disciplines.

## **Recommendations**

1. ACE should prepare biennial power supply plans. ACE's power supply costs are impacted by complex interactions between a large number of external factors and strategic alternatives. Those interactions and alternatives should be analyzed on an integrated basis. ACE should prepare biennial power supply plans for its BGS firm requirements load. PHI already prepares extensive power supply plans for Pepco and Delmarva. Much of the technical analysis required for those plans is also applicable to ACE. The incremental effort and cost to prepare an ACE plan should be relatively modest.
2. A substantial portion of the ACE zone reactive power generator credits should be allocated to ACE's NUG contracts. The NUG contracts should receive annual credits of either \$818,377 or \$1.22 million, depending on the treatment given to the two plants owned by non-affiliates. PHI could implement the \$818,377 credit without FERC approval or the consent of any independent parties. Implementing the \$1.22 million credit would require negotiations with the new owners of the BL England plant. ACE should recommend an appropriate credit in its current NUG surcharge proceedings.
3. Logan and Chambers CO<sub>2</sub> allowance costs should not be passed through to ACE. The increased costs are not recoverable under the Logan or Chambers NUG contracts. The contract capacity prices greatly exceeded market prices for many years. The owners expected the contract to be honored when the capacity prices were extremely high. Those extremely high capacity prices amply compensated the owners for the risk that environmental costs might increase in the future. The owners have already been compensated for that risk and should not be allowed to increase their charges to ACE.
4. ACE should write-off all deferred NUG contract restructuring costs. ACE abandoned the buydown and buyout approaches for its NUG contracts in February 2006. ACE abandoned the more modest project financing approach in December 2008. The costs of abandoned restructuring efforts do not provide any future benefit. ACE did not obtain BPU authorization to defer the restructuring costs. The restructuring costs do not constitute an asset under Generally Accepted Accounting Principles and should be written off.

## **Background**

The following table shows ACE's sources of power for 2006, 2007 and 2008.

**Table 14-1**  
**ACE Sources of Energy (GWH)**

Description	2006	2007	2008
BGS Contracts	8,513	8,762	8,544
NUG Contracts	3,839	3,866	4,051
Retained Generation	1,805	142	0
Third Party Retail Suppliers	2,150	2,117	2,242
<b>Total Energy Sources</b>	<b>16,307</b>	<b>14,887</b>	<b>14,837</b>

Source: Response to Discovery, OC-228 and OC-824

ACE's distribution customers have the option of purchasing energy either from ACE or directly from third party retail (TPR) suppliers. The TPR suppliers are responsible for procuring the power they sell to ACE distribution customers and arranging for the delivery of the power to ACE's distribution system.

The customers who do not elect to receive service from a TPR supplier purchase power from ACE under ACE's Basic Generation Supply (BGS) tariff. ACE purchases the power for those customers through contracts with BGS suppliers. The BGS contracts have a three year term.<sup>1</sup>

The BGS contracts are competitively bid in annual auctions that are closely supervised by the BPU.<sup>2</sup> The annual auctions are conducted in February of each year for delivery beginning in June. Each auction includes approximately one third of ACE's total BGS load. ACE's BGS supply for a given month consists of three equal sized vintages of contracts. For example, during the month of August 2009, the BGS supply will consist of equal amounts of power procured in the February 2007, 2008 and 2009 auctions.

The following table shows the prices from the past six BGS auctions.

**Table 14-2**  
**ACE BGS-FP Auction Prices**  
**2004 to 2009**

Auction Date February	Price per MWH
2004	55
2005	66
2006	104
2007	100
2008	117
2009	105

Source: BGS auction web site.

ACE has three legacy power purchase agreements with non-utility generators ("NUG contracts"). The NUG contracts were entered into in the late 1980s pursuant to the Public Utility

<sup>1</sup> Response to Discovery, OC-22.

<sup>2</sup> There are two BGS auctions, the BGS Fixed Price auction procures power for residential and small commercial customers who obtain full requirements service from ACE. The BGS Large Commercial and Industrial Price (CIEP) auction procures stand-by service for large customers who are not served by TPR suppliers. The power for the BGS-CIEP customers is obtained directly from PJM's hourly energy markets. Approximately, 85 percent of the CIEP load is served directly by TPR suppliers.

Regulatory Policies Act (PURPA). PURPA encouraged the development of co-generation plants.<sup>3</sup>

The three NUG contracts are listed below.

**Table 14-3  
ACE NUG Contracts**

Project	Contract Capacity	Fuel Type	In - Service	Contract Ends	Location
Chambers	188 MW	Coal	1994	2024	Carney's Point, NJ
Logan	200 MW	Coal	1994	2024	Logan Township, NJ
DRMI	80 MW	Waste	1991	2017	Chester, PA

Source: Response to Discovery, OC-61, OC-334 and OC-330

The NUG plants are modern base load units with low fuel costs, favorable heat rates and high capacity factors.<sup>4</sup> The NUG contracts provide for variable energy charges and fixed capacity payments.<sup>5</sup>

The following table shows the annual capacity charges and average annual energy and total costs per MWH for the three contracts in 2007.

**Table 14-4  
ACE NUG Contract Average Annual Energy Price and Capacity Charge -  
Year 2007**

Contract	Capacity Cost	Average Energy Price per MWH	Average Total Price Per MWH
Chambers	\$58,869,360	45	78
Logan	106,102,209	35	106
DRMI	7,695,370	47	59
<b>Total</b>	<b>172,666,939</b>	<b>42</b>	<b>86</b>

Source: ACE 2007 Form 1, page 327

The energy charges for the Logan contract reflect actual coal prices for the plant.<sup>6</sup> The Chambers energy charges are escalated based on reported coal prices for mid-Atlantic plants. The energy price for the DRMI contract is escalated using a general inflation index.<sup>7</sup>

The capacity prices under the Chambers and DRMI contracts are **[BEGIN CONFIDENTIAL]**

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<sup>3</sup> The BPU required ACE to enter into the contracts and approved the contracts. Schuab interview.

<sup>4</sup> Overland interview with Gary Zibinski, PHI Manager Regulatory Planning (NUG restructuring manager). Response to Discovery, OC-506 Restricted, December 10, 2007 white paper titled ACE Accounting for the Logan NUG contract renegotiation, Appendix A, Useful Service Life of Logan Cogeneration Facility.

<sup>5</sup> Response to Discovery, OC-61. The contracts also contain provisions for sharing the margins on capacity and energy produced beyond the contract amounts. Those provisions are not economically significant to ACE. Zibinski interview.

<sup>6</sup> Response to Discovery, OC-903.

<sup>7</sup> Response to Discovery, OC-330, the escalator is the annual implicit price deflator index for Gross National Product.

<sup>8</sup> Response to Discovery, OC-330. The DRMI capacity charge is a fixed amount per kwh delivered during on peak periods. The Chambers capacity charge is subject to adjustment based on the plant availability factor.

*Table 14-5*  
**Logan NUG Contract Forecasted Capacity Costs**  
**\$ in Millions**

Year	Capacity	Fixed O&M	Incentives	Total

**[END CONFIDENTIAL]**

NUG costs will be more in line with PJM prices after October 2009. Overland estimates an average total NUG cost of \$77 per MWH in 2011.<sup>10</sup> Reselling the NUG capacity and energy into the PJM markets is estimated to produce total revenues of approximately \$67 per MWH in 2011.<sup>11</sup> At those prices, the NUG contracts would be approximately \$38 million over market in 2011.<sup>12</sup>

Spot market energy prices declined significantly in the second half of 2008 and early 2009 and are expected to remain at relatively low levels for several years. Spot market energy prices averaged \$81 per MWH in the ACE zone in 2008.<sup>13</sup> If 2011 prices increase to the levels seen in 2008, the NUG contracts will be approximately \$42 million below market.<sup>14</sup>

ACE recovers the costs of the NUG contracts through a surcharge paid by all distribution customers.<sup>15</sup> ACE sells the power obtained from the NUG contracts into the PJM capacity and energy markets and credits the revenue from those sales to its customers through the NUG surcharge.

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<sup>9</sup> Response to Discovery, OC-330 Logan Contract, Exhibit A to Amendment No. 9.

<sup>10</sup> 2007 energy costs escalated at 3 percent and scheduled capacity charges.

<sup>11</sup> Energy prices of \$60 per MWH based on October 2009 PJM electricity futures prices. Capacity and ancillary services revenues of \$7 per MWH based on May 2009 RPM auction results.

<sup>12</sup> NUG cost of \$77 minus PJM market price of \$67 equals a negative margin of \$10 per MWH. \$10 times 3,800,000 MWH equals \$38 million.

<sup>13</sup> PJM 2008 State of the Market Report, Volume 2 Detailed Analysis, page 52. Real time simple average LMP. Note: LMP does not include capacity or ancillary services revenues of approximately \$7 per MWH.

<sup>14</sup> PJM energy price of \$81 plus \$7 for capacity and ancillary services produces total resale price of \$88 per mwh. Subtracting NUG cost of \$77 per MWH leaves a margin of \$11 per mwh times 3,800,000 MWH equals \$41.8 million.

<sup>15</sup> The Non-Utility Generation Charge (NGC). Prior to their sale, the costs of the retain generation was also charged to the NGC and the retained generation resale revenues were credited to the NGC.



The NUG retail rate surcharge was implemented in August 2003. The NUG contract prices were significantly above market at that time. The surcharge was implemented to recover “stranded costs” resulting from electric industry restructuring. As of May 2008, the NUG rate surcharge had produce a cumulative over-collection of approximately \$254 million. The BPU ordered amortization of that amount over 48 months beginning June 1, 2008. The amortization is scheduled to end on May 31, 2012.<sup>16</sup>

ACE transferred most of its power plants to its non-regulated affiliate, Conectiv Energy Supply, in 2000. Conectiv Energy has a “mid-merit” strategy and did not want ACE’s coal plants.<sup>17</sup> ACE sold its interests in those plants to non-affiliates. ACE sold its interests in the Keystone and Conemaugh plants in September 2006.<sup>18</sup> The last plant, BL England, was sold in February 2007.<sup>19</sup>

Currently, the TPR suppliers serving ACE’s territory do not offer services to residential and small commercial customers.<sup>20</sup> As of December 2007, only 158 customers were purchasing power from third party suppliers.<sup>21</sup> ACE does not expect any significant increases in the use of TPR suppliers for residential and small commercial customers in the foreseeable future.<sup>22</sup>

The following table shows ACE’s energy deliveries to distribution customers by type.

<b>Description</b>	<b>2006</b>	<b>2007</b>	<b>2008</b>
BGS Supply	7,624	7,990	7,746
TPR Suppliers	2,077	2,004	2,160
<b>Total</b>	<b>9,701</b>	<b>9,994</b>	<b>9,906</b>
Source: Response to Discovery, OC-228 and OC-1094			

## **Power Supply Strategy**

**ACE’s basic power supply strategy is to purchase power for its BGS customers in the BGS auction and sell the power it buys under its legacy NUG contracts into the PJM capacity and energy markets.** ACE’s basic power supply has two parts: (1) purchase power

<sup>16</sup> BPU Order Approving Stipulation dated May 20, 2008 in Docket No. ER07060356.

<sup>17</sup> Conectiv.com, power generation page. Mid-merit plants are plants that can start-up and shut-down quickly and are capable of quick and repeated cycling as well as continuous service. Gas-fired combustion turbine and combined cycle plants are typical mid-merit plants.

<sup>18</sup> Testimony of Joseph Janocha in ACE’s 2007 Non-Utility Generation Charge proceeding, dated June, 1, 2007, BPU Docket No. ER07060356.

<sup>19</sup> When ACE owned the plants, their output was sold into the PJM energy and capacity markets. The costs and resale revenue of the retained generation was included in the NUG surcharge.

<sup>20</sup> Response to Discovery, OC-24.

<sup>21</sup> Response to Discovery, OC-23.

<sup>22</sup> Overland interview with Scott Razze, PD Power Supply Third Party Supplier Relationship Manager.

for its BGS customers through the BGS auction; and (2) sell the power it buys under the NUG contracts into the PJM capacity and energy markets.<sup>23</sup>

ACE does not purchase power outside of the BGS and NUG contracts.<sup>24</sup> ACE is not a load serving entity. As a result, ACE does not purchase transmission or ancillary services.<sup>25</sup>

The BGS auction has worked successfully since its inception in 2002. The policy of contracting for one third of the BGS load each year with 3 year fixed price contracts promotes price stability by reducing the risk that the entire BGS supply for a year will be purchased during a temporary spike in prices. The following table demonstrates the price stability benefits of that approach.

<b>Auction Date</b>	<b>Year Ended May 2006</b>	<b>Year Ended May 2007</b>	<b>Year Ended May 2008</b>	<b>Year Ended May 2009</b>
Feb. 2003	5.529	-	-	-
Feb. 2004	5.513	5.513	-	-
Feb. 2005	6.648	6.648	6.648	-
Feb. 2006	-	10.399	10.399	10.399
Feb. 2007	-	-	9.959	9.959
Feb. 2008	-	-	-	11.650
<b>Average Price</b>	<b>5.897</b>	<b>7.520</b>	<b>9.002</b>	<b>10.669</b>

Source: BGS auction web site. Average prices are non-load weighted simple averages.

An additional benefit of the full requirements “vertical tranche” or load slice approach is that it places the risk of load fluctuations on the BGS supplier.

ACE’s strategy of selling the output of its NUG contracts into the PJM capacity and energy markets provides a significant hedge against increases in BGS costs caused by fuel price increases and capacity shortages. That hedging strategy is discussed in more detail later in this Chapter.

ACE has not investigated the possibility of entering into long-term bilateral contracts for the resale of the NUG power.<sup>26</sup> ACE’s strategies for marketing the NUG power are discussed in more detail later in this Chapter.

ACE does not have any power supply risk management strategies other than the NUG hedging strategy and those embedded in the BGS auction process. To the extent that additional risk management strategies are needed, ACE believes they should be developed and implemented

<sup>23</sup> Overland interview with Peter Schuab, Power Delivery General Manager Bulk Power Management.

<sup>24</sup> Schuab interview, response to Discovery, OC-55 and Overland analysis of FERC Form 1, pages 326 and 327. ACE buys small amounts of power from its wholesale municipal customer, the City of Vineland.

<sup>25</sup> Schuab interview. ACE was the supplier for 4 tranches of BGS-CIEP load from June 2006 through May 2007 because of a lack of bids in the BGS auction. ACE purchased transmission and ancillary services in its role as load serving entity for those tranches.

<sup>26</sup> Schuab interview.

by the BGS suppliers not ACE.<sup>27</sup> Because the BGS contracts are limited to three years, the risk management strategies of BGS suppliers cannot benefit BGS customers beyond a three year time horizon. ACE's policy of not considering longer term risk management strategies for BGS customers is not reasonable.

Additional observations about ACE's power supply strategy are listed below.

- ACE's power supply philosophy is that it should not take any power supply risks because it does not make any profit on power supply transactions. ACE believes that market price risks should be borne by its BGS customers and not ACE.<sup>28</sup>
- ACE does not view the regional greenhouse gas initiative as being a significant risk to ACE because it does not own any generation.<sup>29</sup> The RGGI is a cost risk to generators and end-users.
- ACE supports the current BGS auction process. The process is fairly mature and ACE does not expect significant changes to the process.<sup>30</sup>
- PHI supports the current PJM market design, including the reliability pricing model (RPM) used to determine capacity market prices. PHI would prefer a 4 year capacity commitment under the RPM rather than the current 3 year commitment.<sup>31</sup>
- PHI supports the PJM regional transmission planning process. PHI supports the current PJM transmission cost allocation process for backbone transmission. The allocations benefit ACE on a net cost basis.<sup>32</sup>
- ACE has adequate transmission capacity. Congestion costs on ACE transmission control zone are relatively modest compared to other zones in the PJM Mid-Atlantic Region.<sup>33</sup> The ability to import power into ACE's system is somewhat limited by upstream transmission capacity shortages.<sup>34</sup>
- PHI has supported transmission expansion projects that could potentially reduce ACE's power supply costs, including PHI's Mid-Atlantic Power Pathways (MAPP)

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<sup>27</sup> Schuab interview.

<sup>28</sup> Schuab interview.

<sup>29</sup> Schuab interview.

<sup>30</sup> Schuab interview.

<sup>31</sup> Overland interview with Tsion Messick, PD Vice President Transmission.

<sup>32</sup> Messick interview.

<sup>33</sup> PJM 2007 State of the Market Report, page 323.

<sup>34</sup> Messick interview.

project. The FERC approved an incentive return on equity of 12.8 percent for the MAPP project.<sup>35</sup>

- ACE's policy is to support the New Jersey Energy Master Plan.<sup>36</sup>
- PHI enthusiastically supports the demand response programs proposed in ACE's blue print for the future filing at the BPU, including advanced meter reading, critical peak pricing and direct air conditioning load control.<sup>37</sup> PHI supports PJM's demand response programs but has concerns about unintended subsidies for program participants.
- ACE's policy with regard to new generation entrants in its service territory is to comply with the interconnection procedures required by PJM. PHI is working to streamline its new generation interconnection process and to address interconnection issues raised by renewable generation.<sup>38</sup>
- Currently, there is only 1,813 MW of generating capacity in ACE's control zone. As of December 2007, the capacity in PJM new generation queues in ACE's control zone totaled 1,579 MW, including 225 MW combined cycle, 695 MW combustion turbine, and 650 MW steam capacity.<sup>39</sup> Historically, a high percentage of the capacity additions included in the queues are eventually cancelled.
- BGS suppliers are responsible for complying with New Jersey's renewable portfolio standards. The DRMI NUG project is a municipal solid waste to energy renewable project. ACE provides the renewable energy certificates generated by the DRMI plant to its BGS suppliers at no charge.<sup>40</sup> ACE views that as the most efficient way to pass the value of the certificates on to BGS customers.

## **Power Supply Plans**

**ACE does not have a documented power supply plan.** ACE has not documented the basis for its power supply strategies. ACE has not prepared power supply plans or energy resource plans for at least the past four years.<sup>41</sup> The only documentation of ACE's power supply plans are its filings in the annual BGS auction proceeding at the BPU.

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<sup>35</sup> PHI web site, November 3, 2008 new item, PHI's Mid Atlantic Power Project Granted FERC Approval.

<sup>36</sup> Schuab interview.

<sup>37</sup> Overland interview with Steve Sunderhauf, PHI Manager of Program Design and Evaluation. Also, ACE's August 1, 2008 Petition and Testimony in BPU Docket Nos. EO08050326 and EO07110881.

<sup>38</sup> Messick interview.

<sup>39</sup> PJM 2007 State of the Market Report, page 150.

<sup>40</sup> Response to Discovery, OC-62.

<sup>41</sup> Response to Discovery, OC-21. The data request asked for all power supply plans prepared after December 2004. It is not clear when ACE prepared its last power supply plan.

ACE has not studied the level of BGS price volatility its customers are willing to accept or the costs its customers are willing to pay for increased price stability. ACE has not studied the market price of contract terms that shift price risk to suppliers.

ACE has not documented its assessment of the power supply environment and associated risks. ACE has not studied alternatives to the three-year contract term used in the BGS auctions. ACE has not documented its strategies concerning PJM market design. ACE has not documented its strategies concerning encouraging new generation plant construction.

PHI prepares annual load forecasts for ACE. However, ACE has not prepared any estimates of the impact of demand side management programs in its service territory.<sup>42</sup>

**The Pepco and Delmarva plans provide PHI's assessment of power supply alternatives.**

ACE's utility affiliates, Potomac Electric Power Company (Pepco) and Delmarva Power & Light Company (Delmarva), filed a joint power supply plan with the Maryland Public Service Commission in October 2008.<sup>43</sup> Delmarva also filed a power supply plan with the Delaware Public Service Commission. The most recent update to the Delaware plan was filed in November 2008.<sup>44</sup> The plans address power supply for the standard offer service (SOS) customers. SOS is the default service for customers that do not select a competitive third party retail supplier and is comparable to BGS-FP service in New Jersey.

ACE, Delmarva and Pepco operate within the same regional PJM power supply market. The Pepco and Delmarva power supply plans are informative as to PHI's views of the market and power supply strategies.

In Maryland, utilities obtain SOS power requirements through a standardized annual RFP process. PHI recommended continuing the current method of procuring energy supply "through a time-laddered series of full requirements services contracts." The only change PHI recommended was to change the current term of the contracts from two years to three years.<sup>45</sup> Some additional quotes from the Maryland plan are shown below.

- "If the Commission orders utilities to undertake long-term generation commitments, it should consider the long-term benefits to consumers of utility-owned generation because if the utility owns the generation, the benefits accrue to customers for the life of the plant, not the life of the contract."

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<sup>42</sup> Sunderhauf interview.

<sup>43</sup> The plan is contained in the October 1, 2008 Response of Pepco Holdings, Inc. to Maryland Public Service Commission Order No. 8215. Formal Case No. 9117. The plan is available on the Maryland PSC web site.

<sup>44</sup> Delmarva Power & Light Company's Third Update To Its Integrated Resource Plan, filed November 5, 2008, Delaware Public Service Commission Docket No. 07-20. The plan is available on the Delaware PSC web site.

<sup>45</sup> Maryland Plan, October 1, 2008, page 2.

- “Intermittent resources, such as wind generation units, create special risks and challenges for active portfolio management...One way to manage an intermittent asset is to incorporate the resource as a “hedge” within the portfolio. Under this strategy the portfolio purchases the intermittent resources energy output...[and] resells it at market prices every hour.”<sup>46</sup>
- “Regulated generation resources may be a more appropriate alternative than long-term contracts...[Placing] operations, maintenance and modifications ...under direct control of the utility and its regulators allows maximum flexibility to changing market conditions.”<sup>47</sup>
- “In general, the total risk of the SOS supply problem cannot be reduced or eliminated. However it is possible to control who incurs certain risks along the supply chain - albeit at some expense...Alternatively, some risks...can be passed downstream fully and rapidly to customers. This is a matter of risk tolerances and of ancillary consequences to the parties from being exposed to risk. This means that portfolio management objectives and resulting preferred portfolio cannot be chosen solely on its face, but must be sorted out among a utility and its regulators and customers. A supply strategy should be selected that conforms as closely as possible to the risk tolerances, financial capabilities, and administrative abilities of these parties...”<sup>48</sup>
- “Experience in other SOS settings suggests that a typical goal is to achieve reasonable rate stability while staying roughly in line with wholesale market prices over a two or three year horizon. It appears to be generally the case that customers and regulators want to manage both “risk” and “regret.” Risk is the ex ante exposure to future uncertainty. It is reduced through hedging and transfer of risks to suppliers, so that future prices are more certain...Regret is the ex post exposure to disappointment from having a higher price compared to some alternative strategy, known only in hindsight to be attractive, that might otherwise have been pursued.”<sup>49</sup>
- It is impossible to minimize both risk and regret. The best one can do is to balance them against each other, so as to not be unduly vulnerable to either future risk or to the hindsight possibility of unfortunate market timing. For those reasons, the Companies recommend continuing the current RFP process.”<sup>50</sup>

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<sup>46</sup> Maryland Plan, October 1, 2008, page 43.

<sup>47</sup> Maryland Plan, October 1, 2008, page 44.

<sup>48</sup> Maryland Plan, October 1, 2008, page 55.

<sup>49</sup> Maryland Plan, October 1, 2008, page 56.

<sup>50</sup> Maryland Plan, October 1, 2008, page 57.

The Maryland plan identifies cost-base pricing as another advantage of regulated generation. Rates are based on depreciated original cost over the entire 40 year plus life of a utility owned power plant. When a 10 year power contract expires, replacement power must be obtained at current market prices, which may be much higher than the prices under the expiring contract.<sup>51</sup>

The May 2008 update to the Delaware plan examined six alternative portfolios and recommended a managed portfolio with land-based wind. The major supply components of the recommended portfolio include:<sup>52</sup>

- Demand response
- Energy efficiency
- Full service requirements 3-year rolling market contracts
- Firm contracts (24X7 annual firm)
- Long-term wind contracts
- Monthly blocks of 50 MW contracts for peak energy
- Spot Market Purchases, and
- Potentially utility owned generation if required by the Commission.

The November 2008 Delaware update modified the recommended portfolio to include several wind contracts awarded in 2008.<sup>53</sup> The November 2008 update indicates:

- “Recent events make it more difficult to be confident of the expected value of forecasts in general. Load growth, commodity prices, capacity expansion, risk premiums, and the costs of financing (or collateralizing long term contracts) may well be affected. The net impact will not necessarily be to make future power less expensive than the projections herein, even though recent energy forward prices have declined. Risk management goals and policies may now become even more important.”<sup>54</sup>
- “Very recently, commodity and financial market conditions have shifted rapidly due to the international credit crises. While this has caused gas and electric futures prices to drop by about 25%, it is not yet clear whether this is an over-reaction or a fundamental shift. It is also unclear whether supply or demand for power will be more affected over the next few years. The most likely implication for resource and portfolio planning is that risk ranges based on historical evidence may prove to be under-estimates.”<sup>55</sup>

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<sup>51</sup> Maryland Plan, October 1, 2008, page 46.

<sup>52</sup> Delaware Plan, May 15, 2008 Update, page 8.

<sup>53</sup> Delaware Plan, November 5, 2008 Update, page 18.

<sup>54</sup> Delaware Plan, November 5, 2008 Update, page 7.

<sup>55</sup> Delaware Plan, November 5, 2008 Update, page 21.

The November 2008 Delaware update contains the following forecasts of PJM energy and capacity costs in constant 2007 dollars.

Year	Energy-All Hours Average (\$ per MWH)	Capacity (\$ per Kw/Year)
2009	95.0	66.5
2010	90.9	59.1
2011	87.0	36.4
2012	91.6	112.6
2013	96.4	151.6
2014	92.8	95.1
2015	89.4	59.7
2016	89.2	66.3
Source: DPL Third Update To Its Integrated Resource Plan, November 5, 2008, Appendix C.		

The November 2008 Delaware update forecasts that nominal gas prices will stay within a range of \$10 to \$12 through 2020. Coal prices are projected to decline significantly in real terms through 2016. Oil prices in constant 2007 dollars are projected to steadily decrease from \$138 in 2009 to \$75 in 2030.<sup>56</sup>

**ACE should prepare biennial power supply plans.** PHI prepares extensive power supply plans for Delmarva and Pepco. Delmarva is required to file future plans in two year intervals. The Pepco and Delmarva plans require a detailed analysis and forecast of the PJM markets. The PJM modeling and forecasting required for the Pepco and Delmarva plans is also applicable to ACE.

PHI retained two consulting firms, ICF Incorporated and the Brattle Group, to assist in preparing the Maryland and Delaware power supply plans. ICF provided the regional power supply model and forecasts. The Brattle Group provided assistance in developing market assumptions and portfolio modeling. The Pepco and Delmarva plans demonstrate that PHI already has significant utility power supply planning capabilities and resources. Delmarva estimates that the cost of preparing and filing its 2010 Delaware plan will be about \$3.8 million.<sup>57</sup> The incremental effort and cost required to prepare a power supply plan for ACE should be relatively modest.

ACE's power supply costs are impacted by complex interactions of a large number of external factors and strategic alternatives. Those interactions and alternatives must be analyzed on an integrated basis to competently assess ACE's power supply issues and alternatives. ACE should prepare power supply plans for its BGS firm requirements load on a two year cycle. The timing of the plans should correspond with the two-year cycle in Delaware to minimize the incremental cost of preparing the ACE plans.

<sup>56</sup> Delaware Plan Update, November 5, 2008, Appendix C, page 22.

<sup>57</sup> PHI comments on Overland's draft audit report. It is unclear whether Delmarva's estimate includes litigation costs.



The power supply plans should provide the following base forecasts for a 10 to 15 year period:

- PJM capacity and energy market prices.
- Natural gas and coal prices.
- ACE total distribution load and BGS-FP load.
- ACE penetration levels for demand response and energy efficiency
- ACE BGS power supply costs, including NUG resale revenues.

The power supply plans should describe and explain the significant assumptions and uncertainties impacting the PJM and ACE forecasts. The plans should also compare the current forecasts to prior forecasts and actual results and explain significant variances.

The power supply plans should explain ACE's power supply objectives and the risk tolerances assumed for BGS customers. The plans should explain ACE's power supply strategies and plans, including its portfolio, hedging and other risk management strategies.

The plans should also describe:

- Trends in utility SOS power supply plans in the PJM region and their applicability to ACE.
- The actions taken by ACE/PHI in the two years to reduce power supply costs and increase price stability.
- The actions planned for the next two years reduce power supply costs and increase price stability.
- Capacity and energy market conditions in PJM-East, including expected reserve margins and significant planned generating capacity additions and retirements.
- Trends impacting the generation cost of new entrants, including construction costs, financing costs, renewables incentives, operating efficiency and technology.
- Generation projects proposed for ACE's service territory and the steps taken by ACE to promote new generation entry in its service territory, including renewables.

- PJM market design issues potentially impacting BGS customers, including the Reliability Pricing Model (RPM).
- BGS auction issues including auction design and supplier performance.
- NUG supplier issues including contract restructuring efforts and supplier performance and credit risk.
- Future transmission projects potentially impacting power market prices in ACE's region.
- The implications of ACE's power supply plans and strategies for system reliability.
- The state of demand response and energy efficiency programs in ACE's service territory and ACE's actions to promote those programs.
- Environmental regulations and other regulatory developments potentially impacting ACE's power supply costs.
- Regional supply concentration risks including fuel mix, supplier credit risks and fuel transportation.

Examples of the types of issues that should be addressed in the plan are shown below.

- Should ACE hedge the risk of PJM energy price increases by entering into power supply contracts with off-shore wind generation projects and selling the output into the PJM market?
- Would adding utility owned generation to ACE's supply portfolio produce benefits for ratepayers?
- Will the October 2010 decrease in the Logan capacity charges and the inability to pass through CO<sub>2</sub> emissions permit costs create a significant risk of supplier default on the Logan NUG contract? What steps is ACE taking to manage that risk?

### **NUG Power Resale Strategy**

**ACE's BGS and NUG power supply contracts provide a significant hedge against power market price volatility.** The three vintage laddering of BGS supply contracts and the reselling of NUG power into the PJM markets creates a significant hedge against power market price volatility.

Reselling the NUG power creates a significant hedge against the risk of increases in natural gas prices. In 2008, ACE purchased 4.05 million MWH under its NUG contracts and 8.54 million MWH from its BGS suppliers. The NUG purchases equal about 47 percent of the BGS purchases.

The NUG energy price escalations are based 85% on coal prices and 15% on general inflation indices. If natural gas prices increase at a faster rate than coal prices, the NUG energy resale margins increase, offsetting a portion of the increase in BGS prices caused by increased gas prices.<sup>58</sup>

The NUG contracts also may partially hedge the risk of energy price increases resulting from greenhouse gas environmental regulations. The NUG contracts do not include any provision for the pass through of the costs of environmental permits.<sup>59</sup> The inability to pass through those costs will increase NUG contract credit default risk.

The capacity prices paid to the NUG suppliers escalate at a very low rate. In 2008, ACE received \$31.3 million from reselling the NUG capacity into the PJM RPM capacity markets.<sup>60</sup> Increases in PJM capacity prices directly increase the margins earned by the NUG contracts. Those increased margins offset part of the increase in BGS prices caused by PJM capacity price increases.

Overland constructed a simple annual model to illustrate the hedging benefits of the NUG contracts. The following table shows the results of three cases prepared to illustrate the sensitivity of the results to increases in the rate of increase in NUG energy prices and PJM prices. Each of the cases assumes a four percent annual increase in NUG energy prices.

*Table 14-9*

<b>Illustration of Price Hedging Benefit of NUG Contracts Three Cases With 1% Differences In PJM and BGS Price Escalation</b>			
<b>PJM/BGS Price Escalation Rate Annual Percent</b>	<b>Percent Price Increase with NUGs</b>	<b>Percent Price Increase without NUGs</b>	<b>Increase / (Decrease) Caused by NUGs</b>
5.0	4.5	5.0	(0.5)
6.0	5.2	6.0	(0.8)
7.0	5.9	7.0	(1.1)

All cases assume NUG energy price escalation rate of 4%

Overland prepared another case to illustrate the hedging benefit in the event of a one time price spike in PJM prices. The following table shows the results of that case.

<sup>58</sup> BGS prices reflect PJM energy and capacity prices over time, because bidders have the option of selling their power into the PJM markets.

<sup>59</sup> Zibinski interview.

<sup>60</sup> Response to Discovery, OC-807.

**Table 14-10**  
**Illustration of Price Hedging Benefit of NUG Contracts**  
**One Time Price Spike in Year Two**

Year	Percent Price Increase with NUGs	Percent Price Increase without NUGs	Increase / (Decrease) Caused by NUG
1	5.1	6.0	(0.9)
2	5.6	10.9	(5.3)
3	10.5	10.4	0.1
4	10.1	10.0	0.1
5	5.5	6.0	(0.5)

Assumes 6 percent PJM and 4 percent NUG energy price escalation in all years except year 2.  
Assumes 20 percent PJM and 8 percent NUG energy price escalation in year 2.

The NUG contracts significantly reduces the retail price increase in the year of the price spike because the NUG resale revenues increase immediately while the BGS cost increases are delayed by the 3 year contract laddering. The NUGs produce a greater overall benefit over the five year period compared to non-price spike cases because the price spike increases NUG resale revenues in all years following the spike.

### **NUG Power Resale Results**

**With one exception, the revenues obtained by ACE from reselling NUG power are reasonable. The exception is reactive power.** ACE sells the output of its NUG contracts and retained generation into the PJM markets. The following table shows the revenues for 2006, 2007 and 2008.

**Table 14-11**  
**NUG and Retained Generation Resale Revenues**  
**2006 - 2008 In Thousands of Dollars**

Description	2006	2007	2008
Spot Market Energy	315,037	249,523	306,495
Capacity Credit Market	971	88	0
RPM Capacity Market	0	21,400	31,322
Operating Reserves	3,556	535	413
Reactive Supply and Voltage Control	2,626	273	0
Peak Hour Availability Incentive	0	0	117
PJM Scheduling and System Control	(363)	(208)	(117)
PJM Customer Default Charges	0	(14)	(247)
Regulation	(56)	(57)	0
Miscellaneous Small Items	(34)	(39)	8
<b>Total Revenue</b>	<b>321,737</b>	<b>271,501</b>	<b>337,991</b>

Source: Response to Discovery, OC-478 and OC-807.

ACE cannot separate the revenues by plant. The 2006 and 2007 revenues also include revenues for ACE's retained generation. ACE's retained generation included shares of the

Keystone and Conemaugh coal plants totaling 108 MW. And the 447 MW BL England coal and oil plant. ACE sold Keystone and Conemaugh in September 2006 and BL England in February 2007.

Overland tested the reasonableness of the revenues by comparing them to the net revenue analysis contained in the 2007 PJM State of the Market Report.<sup>61</sup> Net revenue is a measure of generating plant profitability.<sup>62</sup> Net revenue is the difference between the plant's PJM revenues and its variable production costs. PJM compares net revenues to the levelized fixed costs of new entrants to assess the incentives to invest in new generating capacity. PJM calculates net revenues for three types of plants: combustion turbines, combined cycle and coal.

Spot market energy accounted for about 90 percent of the 2008 NUG resale revenues. PJM's net revenue analysis includes estimated net revenues from the day ahead energy markets for a coal plant in ACE's zone.<sup>63</sup> Overland calculated total day ahead energy market revenues for the plant by adding back marginal production costs.<sup>64</sup> Overland calculated average spot market energy revenues of \$56 per MWH in 2006 and \$61 per MWH in 2007. Those estimates match, almost exactly, the prices obtained by ACE.

The NUG units are base load units with high capacity factors. Therefore, its is reasonable to expect the spot market energy revenues to approximate the simple average LMP for the ACE zone.<sup>65</sup> The simple average day-ahead LMP for the ACE zone was \$55 in 2006 and \$63 in 2007.<sup>66</sup>

PJM implemented a new capacity pricing system on June 1, 2007, when the Reliability Pricing Model (RPM) replaced the Capacity Credit Market (CCM).<sup>67</sup> The RPM produced a very large increase in NUG capacity revenue.<sup>68</sup>

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<sup>61</sup> The report is dated March 11, 2008 and was prepared by PJM's independent market monitoring unit.

<sup>62</sup> 2007 PJM State of the Market Report, page 113.

<sup>63</sup> 2007 State of the Market Report, page 132.

<sup>64</sup> Overland used a marginal production cost of \$27 and a capacity factor of 85 percent. The marginal cost is per page 123 of the 2007 PJM State of the Market Report. The capacity factor is an Overland estimate.

<sup>65</sup> LMP is the Locational Marginal Price. LMP is the hourly integrated market clearing marginal price at the location the energy is delivered or received. PJM Operating Agreement, Section 1.19 (Tariff Sheet 21). Generators are paid the LMP for energy sold in PJM's day-ahead and real time energy markets.

<sup>66</sup> 2007 PJM State of the Market Report, page 66.

<sup>67</sup> 2007 PJM State of the Market Report, page 23.

<sup>68</sup> CCM prices averaged \$1,958 per MW/year in 2006. The RPM price for the Eastern Mid-Atlantic Region (ACE's region), were \$72,150 per MW/year for the year ended May 2008. Pages 257 and 121 of the 2007 PJM State of the Market Report.

Overland calculated expected CCM and RPM revenues for the NUG plants and retained generation<sup>69</sup> for 2006, 2007 and 2008 based on prices reported by PJM.<sup>70</sup> The actual RMP revenues obtained by ACE in 2007 and 2008 matched the expected levels exactly. The 2006 actual CCM revenues were \$4,462 below the expected level. The 2007 actual CCM revenues were \$175,580 below the expected level. ACE indicated 2007 CCM revenues were lower than expected because it could not commit BL England capacity for some periods because of uncertainty concerning the plant's final sale date.<sup>71</sup> Overland concluded that the capacity revenues obtained by the NUG plants were reasonable in 2006, 2007 and 2008.

Operating reserve payments are made to generators that operate at PJM's request during periods when the spot market price is less than the generator's offer price.<sup>72</sup> The operating reserve payments reflect the difference between the actual price and the offer price. The BL England plant is located about 15 miles south of Atlantic City and produced substantial operating reserve revenues.

PJM's net revenue analysis is based on perfect dispatch and does not include an estimate of operating reserve revenue. In 2007, 78 percent of operating reserve revenues went to combustion turbine and combined cycle plants.<sup>73</sup> Steam units received an average of approximately \$815 per MW/year of operating reserves revenues in 2007.<sup>74</sup> At that rate, the NUG's would be expected to produce \$412,811 in operating reserve revenues. That matches, almost exactly, the operating reserve revenues obtained by the NUGs in 2008.<sup>75</sup>

The PJM net revenue analysis includes regulation revenues of \$1,172 per MW/year for a new coal plant.<sup>76</sup> At that rate, the NUG contracts would produce \$592,915 in annual regulation revenues.<sup>77</sup> The NUG contracts did not produce any revenues for regulation during 2006, 2007 and 2008.

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<sup>69</sup> ACE transferred 500 MW of retained generation capacity credits to BGS-FP suppliers at no charge in 2005 pursuant to its BPU approved BGS committed supply plan. The transfers phased out as the retained generation was sold. The CCM revenues for the transferred capacity went to the BGS suppliers, not ACE. In 2006 the average transferred capacity was 460 MW. Response to Discovery, OC-490 and OC-802.

<sup>70</sup> 2007 PJM State of the Market Report, page 121 reports an average price of \$1,958 per MW/year in 2006. Page 119 reports an average price of \$485 per MW for the combined first five months of 2007.

<sup>71</sup> Response to Discovery, OC-490. The CCM included daily, monthly and bi-monthly markets. The daily markets produce lower prices. The NUG's should have produced 2007 CCM revenues of \$245,362 on a stand alone basis. Actual 2007 CCM revenues were only \$88,260. BL England appears to only account for a small part of the overall \$175,580 short-fall. Given the relatively small dollar amounts, Overland did not investigate the difference further.

<sup>72</sup> 2007 PJM State of the Market Report, page 171.

<sup>73</sup> 2007 PJM State of the Market Report, page 176.

<sup>74</sup> Total 2007 balancing reserve revenues were \$362 million. At 19.4 percent that produces steam plant balancing revenues of \$70.256 million. Dividing that amount by 86,099 MW of Steam capacity produces an average of \$815. 2007 PJM State of the Market Report, pages 173, 176 and 151.

<sup>75</sup> 2008 is the first full calendar year after the sale of BL England.

<sup>76</sup> 2007 PJM State of the Market Report, page 130.

<sup>77</sup> Using a capacity of 505.9 from the 2008 PRM auction (Response to Discovery, OC-119).

Regulation matches generation with very short-term changes in load by moving the output of selected generation units up and down via automatic control signal. Regulation is provided by generators with short-term response capabilities of less than five minutes.<sup>78</sup> The Logan and Chambers plants do not have the automatic generation controls required to provide regulation service.<sup>79</sup>

The costs attributed to the NUG contracts for PJM customer defaults and PJM Scheduling, System Control and Dispatch are reasonable. PJM allocates customer default costs to members largely based on gross activity.<sup>80</sup> The resale of NUG power draws PJM customer default costs to ACE. PJM uses a variety of factors to allocate scheduling, system control and dispatch costs to its members. Two of those factors allocate costs to generators.<sup>81</sup> The charges allocated to the NUGs are consistent with PJM's tariff rates.

### **NUG Reactive Power Credits**

**ACE's reactive power generator credits have a long history.** Reactive power supply is essential for reliably operating electric transmission systems.<sup>82</sup> Generators provide reactive supply and voltage control services (reactive power) to PJM. PJM pays the generators for the reactive power and passes those costs on to transmission customers in the applicable zone.<sup>83</sup>

The reactive power is generated by equipment installed when the plant was constructed. The marginal cost of supplying reactive power is minimal when the plant is operating within its normal operating limits.<sup>84</sup>

The generation owners are paid a fixed annual amount for each plant ("the reactive power credit"). The credits reflect reactive power revenue requirements approved by the FERC. The revenue requirements were initially established in a series of FERC cases in 1998. The FERC approved a comprehensive restructuring of PJM's rates consistent with the requirements of

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<sup>78</sup> 2007 PJM State of the Market Report, page 31.

<sup>79</sup> Response to Discovery, OC-491.

<sup>80</sup> PJM Operating Agreement Section 15.2.2. Gross activity is the absolute value of all of the members charges and credits.

<sup>81</sup> PJM has nine separate charges for administrative services falling under this category. The charges for Market Support and Capacity Resource and Obligation Management allocate costs to generation owners. Customer Guide to PJM Billing, PJM Open Access Transmission Tariff Billing, Billing Line Item PJM Scheduling, System Control & Dispatch Service.

<sup>82</sup> Principles for Efficient and Reliable Reactive Power Supply and Consumption, FERC Staff Report, February 4, 2005, page 3. Reactive power is necessary to maintain acceptable transmission voltage levels.

<sup>83</sup> The transmission customers are charged for reactive services under PJM's OATT. The charges equal the amounts paid to the generators. The charges are allocated to individual transmission customers based on their monthly transmission use. PJM Open Access Transmission Tariff, Schedule 2, Reactive Supply and Voltage Control from Generation Source Services (Tariff sheet 228).

<sup>84</sup> Principles for Efficient and Reliable Reactive Power Supply and Consumption, FERC Staff Report, February 4, 2005, page 96. Most of the costs of producing reactive power are capital investment costs associated with the plant's generator and generator exciter. Plants can vary their output of reactive power by changing generator settings (page 26).

FERC Order 888. The FERC directed each of the PJM transmission owners to file separate proceedings to address transmission rate issues including reactive power rates. The FERC approved reactive power revenue requirements for each transmission owner. At that time, the transmission owners were vertically integrated electric utilities who owned most, if not all, of the generation located in their service territories.<sup>85</sup>

The reactive power credits were not allocated to individual plants in the 1998 proceedings because there was no need to make payments to individual generation plant owners. Instead the transmission owner received all of the credits.

The transmission owners began to divest their generating plants in 1999 and 2000. This resulted in the transmission owners receiving reactive power credits for plants that they no longer owned. In July 2000, PJM proposed allocating a portion of the credits to generation owners who purchased their plants from the transmission owners.<sup>86</sup>

The proposal did not include a detailed methodology for allocating the credits to individual plants. Instead, it provided that when a transmission owner sold a plant, the allocation for that plant should be negotiated among the generation owners in the transmission zone. If the generation owners could not agree, the new owner could file an application with the FERC to decide the allocation. The proposal was adopted and incorporated into PJM's Open Access Transmission Tariff and remains in place today.<sup>87</sup>

Generation owners have the option of submitting applications to the FERC for changes in their reactive power credits. However, such filings are rare. The reactive power credits for most plants continue to reflect allocations of the revenue requirements approved by FERC in 1998.<sup>88</sup>

ACE's 1998 application requested a reactive power revenue requirement of \$7.8 million. ACE included the Logan, Chambers and DRMI NUG contracts in its requested revenue requirement. ACE's testimony noted that the NUG contracts required the plants to be designed with reactive capabilities and that the plants provided reactive power to the ACE transmission zone.<sup>89</sup>

The case was settled.<sup>90</sup> The settlement reflected a reactive power revenue requirement of \$5.1 million.<sup>91</sup> The settlement does not contain any discussion of how that amount was determined.

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<sup>85</sup> Response to Discovery, OC-919, Attachment page 2.

<sup>86</sup> Response to Discovery, OC-919, Attachment page 2.

<sup>87</sup> Reactive power is addressed in PJM's OATT, Schedule 2, titled Reactive Supply and Voltage Control from Generation Source Services (Tariff sheet 228).

<sup>88</sup> Owners of newly completed plants submit applications to the FERC for approval of reactive power revenue requirements for those new plants.

<sup>89</sup> Direct Testimony of TSION Messick, March 11, 1998, page 5, Atlantic City Electric Company, FERC Docket No. ER97-3189-001.

<sup>90</sup> Response to Discovery, OC-803. ACE and the Vineland Municipal Electric Utility were the only parties to the settlement.

<sup>91</sup> Response to Discovery, OC-919.



ACE transferred power plants with a capacity of 502 MW to CESI in July 2000. That required the allocation of the reactive power credits. ACE allocated the credits based on generation capacity, including the NUG contracts. That allocation is shown below.

Category	MW	Percent	Amount
Plants Transferred to CESI	502	22.3	1,140
ACE Owned Generation, ACE NUG Contracts and Pedrickstown	1,750	77.7	3,976
<b>Total</b>	<b>2,252</b>	<b>100.0</b>	<b>5,116</b>

Source: Response to Discovery, OC-984 and OC-804

The following table shows the plants and contracts included in the calculation of the allocation factors.

Plant/Contract	MW
CESI Plants (7 plants)	502
BL England	452
Deepwater	239
Keystone and Conemaugh (ACE share only)	107
Nuclear Plants (ACE share only)	373
Pedricktown (Independent)	116
NUG Contract - Logan	200
NUG Contract - Chambers	188
NUG Contract - DRMI	75
<b>Total</b>	<b>2,252</b>

Source: Response to Discovery, OC-984

The Keystone, Conemaugh and DRMI plants are all located in Pennsylvania. None of the nuclear plants are located within ACE's transmission zone.<sup>92</sup> Including ACE's ownership share of those plants in the allocation factor is questionable.<sup>93</sup>

ACE bought out its NUG contract with Pedricktown in 1999. Sometime after July 2000, Pedricktown requested an allocation of ACE's reactive power credits.<sup>94</sup> ACE agreed and allocated \$263,565 to Pedricktown. The allocation reflected the ratio of Pedricktown capacity (116 MW) to the total capacity used in the July 2000 allocation (2,252 MW).

<sup>92</sup> 2007 PJM State of the Market Report, page 151. Nuclear capacity within the ACE zone is zero. The three nuclear plants are Peach Bottom, Salem and Hope Creek. Peach Bottom is located in Pennsylvania.

<sup>93</sup> Principles for Efficient and Reliable Reactive Power Supply and Consumption, FERC Staff Report, February 4, 1005, page 18. Reactive power is difficult to transport over transmission lines. At high loadings, relative losses of reactive power on transmission lines are often significantly greater than real power losses. Reactive power losses increase significantly with the distance transported. Losses in transmission lead to the expression that reactive power does not travel well. When there is not enough reactive power supplied locally, it must be supplied remotely, causing larger currents and voltage drops along the path. The value of reactive power is highly locational (page 105).

<sup>94</sup> Response to Discovery, OC-985

ACE sold its interests in the Peach Bottom, Salem, and Hope Creek plants in October 2001.<sup>95</sup> ACE did not allocate any of its reactive power credits to the new owners of those interests.

ACE retained the BL England, Deepwater, Keystone and Conemaugh plants and the NUG contracts. The NUG surcharge was implemented in August 2003 to recover the costs of the NUG contracts and retained generation, net of resale revenues. ACE credited the remaining reactive power credits to the NUG surcharge.

ACE transferred the Deepwater plant to CESI in February 2004. That required a further allocation of the remaining reactive power credits. ACE allocated the entire remaining reactive power credits to the Deepwater and BL England Plants based on their respective capacity. The following table shows that allocation.

Plant	MW	Percent	Amount
BL England	447	70.7	2,626
Deepwater	185	29.3	1,087
<b>Total</b>	<b>632</b>	<b>100.0</b>	<b>3,713</b>
Source: Response to Discovery, OC-918			

ACE did not allocate any of the reactive power credits to its NUG contracts or to the Keystone and Conemaugh plants. ACE sold its interests in the Keystone and Conemaugh plants in September 2006. ACE sold the BL England plant in February 2007.

The FERC has not reviewed or approved any of the allocations. The ACE transmission zone only has, in substance, three generation owners.<sup>96</sup> All of the allocations were implemented by agreement of the generation owners, pursuant to Schedule 2 of the PJM OATT. The allocations are included in ACE's FERC accepted OATT.

**ACE's NUG contracts provide reactive power.** The Chambers, Logan and DRMI plants were designed to generate reactive power. The NUG plants currently supply reactive power to ACE's transmission system. ACE included the NUG plants in its 1998 FERC application.

The FERC has determined that several similar NUG contracts should receive reactive power credits.<sup>97</sup> ACE allocated a portion of its reactive power credits to the Pedricktown co-generation

<sup>95</sup> ACE 2001 10-K Report, page I-2

<sup>96</sup> Response to Discovery, OC-804. The three owners are PHI, Pedricktown Plant Holdings, LLC and RC Cape May Holdings LLC (BL England). PHI owns CESI and ACE. The economic consequences of changes in reactive power credits for the Logan and Chambers plants are allocated to ACE during the duration of its NUG contracts. As a result, for reactive power credit purposes, ACE is, in substance, the generation owner for those plants.

<sup>97</sup> See Virginia Electric and Power Company, 114 FERC ¶ 61,318 at page 25 (2006). See also, Potomac Edison Company, FERC Docket No. ER08-900-000. In May 2008, Potomac Edison filed an application with the FERC for approval of a reactive power revenue requirement for the Warrior Run Cogeneration plant. The Maryland Public

facility. ACE made that allocation because Pedricktown requested it. ACE did not allocate its reactive power credits to the other NUG plants because they did not request an allocation.<sup>98</sup>

ACE bought out its NUG contract with Pedricktown in 1999. As a result, Pedricktown retained any reactive power credits it generated. That gave Pedricktown a strong motive to request an allocation. The other NUGs had long-term power sales contracts with ACE. Any reactive power credits allocated to those plants would be retained by ACE and credited to ratepayers through the NUG surcharge. As a result, the other NUGs did not have any incentive to request an allocation. The fact that they did not request an allocation does not provide a reasonable basis for not allocating any reactive power credits to the other NUG contracts.

The 1998 FERC settlement agreement simply states the amount of the agreed upon rate for reactive power and does not provide any information about how the reactive power revenue requirement was determined.<sup>99</sup> The FERC Staff did not include the NUG plants in the reactive power revenue requirement they recommended in their “top sheets.” ACE states that the reactive power charges approved in the settlement were close to the amount recommended by the FERC Staff.<sup>100</sup> Therefore, “it is reasonable to assume” that the NUGs were not included in the reactive power revenue requirement underlying the settlement.<sup>101</sup> The following table shows the reactive power revenue requirements from the 1998 case.

Description	Amount
Requested by ACE	7,762,180
Recommended in Staff Top Sheet	2,557,144
Adopted in Settlement	5,116,800
Source: Response to Discovery, OC-803, Exhibit A, page 4 of FERC Top Sheet and OC-919.	

The settlement amount is a little more than double the amount recommended in the Staff top sheet.<sup>102</sup> The Staff top sheet does provide a reasonable basis for assuming that none of the reactive power credits should be allocated to the NUGs.

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Service Commission directed Potomac Edison to make the filing in order to obtain reactive power credits from PJM which would flow through to retail standard offers service customers. Potomac Edison purchases the output of Warrior Run under a 30 year contract. Warrior Run is a 200 MW coal-fired cogeneration plant completed in February 2000, located near Cumberland Maryland. The FERC approved a reactive power revenue requirement of \$716,596 for the plant. That equals \$3,583 per MW. At that rate, the reactive power revenue requirement for ACE’s three NUG contracts would be \$1.67 million. Potomac Edison should not be confused with ACE’s affiliate Potomac Electric Power Company. Potomac Edison does business as Allegheny Power Company.

<sup>98</sup> Response to Discovery, OC-985.

<sup>99</sup> Response to Discovery, OC-486.

<sup>100</sup> Response to Discovery, OC-486.

<sup>101</sup> Response to Discovery, OC-486.

<sup>102</sup> Staff increased its recommendation to \$4.41 million in its Comments In Support of Offer of Settlement. Those comments do not contain any discussion of how the FERC Staff developed its revised recommendation. The comments do not discuss the treatment of the NUG contracts. Response to Discovery, OC-803.

**A substantial portion of the ACE zone reactive power generator credits should be allocated to ACE’s NUG contracts.** The following table shows the current allocation of ACE’s reactive power credits.

Category	MW	Credit	Per MW
BL England	447	2,625,948	5,875
CESI - Deepwater <sup>103</sup>	166	1,086,802	6,547
CESI - Other	502	1,140,535	2,272
Pedricktown	116	263,515	2,272
Logan NUG	200	0	0
Chambers NUG	188	0	0
<b>Total</b>	<b>1,619</b>	<b>5,116,800</b>	<b>3,160</b>
Source: Response to Discovery, OC-918, OC-985 and PHI 2007 10-K, page 30			

The average reactive power credits in 2007 on the PJM system are shown below by type of plant.

Plant Type	Per MW
Combustion Turbine	2,154
Combined Cycle	3,094
Coal	2,350
Source: PJM 2007 State of the Market Report, page 124.	

The credit rates for Deepwater and BL England significantly exceed the PJM averages.<sup>104</sup> The high credit rates for Deepwater and BL England are a product of the inconsistent allocation factors used by ACE.<sup>105</sup>

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<sup>103</sup> CESI retired the Deepwater Combustion Turbine unit in 2005. That reduced Deepwater’s capacity by 19 MW. Deepwater’s reactive power credit was not reduced to reflect that retirement.

<sup>104</sup> BL England is a coal plant. Deepwater has 80 MW of coal capacity and 86 MW of oil-fired steam capacity. PHI 2007 10-K page 30.

<sup>105</sup> Response to Discovery, OC-1165.

The following table shows a revised allocation based on installed capacity.

<b>Plant</b>	<b>MW</b>	<b>Percent</b>	<b>Credit</b>
BL England	447	27.6	1,412,730
CESI- Deepwater	166	10.3	524,638
CESI - Other	502	31.0	1,586,556
Pedricktown	116	7.2	366,614
Logan NUG	200	12.3	632,094
Chambers NUG	188	11.6	594,168
<b>Total</b>	<b>1,619</b>	<b>100.0</b>	<b>5,116,800</b>
Source: Overland Analysis			

The revised allocation results in each plant receiving a credit of \$3,160 per MW. The revised allocation results in a total allocation to ACE's NUG contracts of \$1.22 million.

The following table shows the impact of the revised allocation on each plant.

<b>Plant</b>	<b>Credit Increase ( Decrease)</b>
BL England	(1,213,136)
CESI- Deepwater	(562,130)
CESI - Other	445,955
Pedricktown	103,049
Logan NUG	632,094
Chambers NUG	594,168
<b>Total</b>	<b>0</b>
Source: Overland Analysis	

The DRMI plant is located outside of ACE's transmission zone in Chester Pennsylvania. ACE should request a reactive power credit for that plant from the applicable transmission owner.

The BL England plant was sold to an independent party in February 2007. The buyer may have relied upon the current reactive power credit when determining its offer price. Pedricktown also has an independent owner. It might be appropriate to maintain the BL England and Pedricktown credits at their current levels. That can be accomplished by assigning the current credit level to those plants and allocating the residual based on capacity. The following table shows the results of that approach.

Plant	MW	Credit	Per MW
BL England	447	2,625,948	5,875
Pedricktown	116	263,515	2,272
CESI- Deepwater	166	350,131	2,109
CESI - Other	502	1,058,829	2,109
Logan NUG	200	421,844	2,109
Chambers NUG	188	396,533	2,109
<b>Total</b>	<b>1,619</b>	<b>5,116,800</b>	<b>3,160</b>
Source: Overland Analysis			

The alternative revised approach allocates \$818,377 of reactive power credits to ACE's NUG contracts and reduces CESI's allocation by the same amount. PHI could implement the alternative revised approach without FERC approval or the consent of any independent parties.

PHI should review the alternative methods described above and recommend an appropriate allocation in ACE's current NUG surcharge proceeding.

### **NUG Contract Restructuring**

**ACE's NUG contract restructuring efforts have a long history.** The BPU encouraged New Jersey electric utilities to mitigate stranded costs associated with NUG contracts in its April 1997 Report titled "Restructuring the Electric Power Industry in New Jersey."<sup>106</sup>

The 1998 New Jersey Electric Discount and Energy Competition Act (EDECA) provided for including over-market NUG costs in electric industry restructuring stranded costs.<sup>107</sup> EDECA also:

- authorized the BPU to require utilities to mitigate their stranded costs.<sup>108</sup>
- authorized the BPU to approve the restructuring of NUG contracts if the restructuring resulted in a substantial reduction in the utility's total stranded costs;<sup>109</sup> and
- authorized utilities to recover, through the market transition charge, the costs of NUG contract buydowns and buyouts approved by the BPU.<sup>110</sup>

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<sup>106</sup> Audit of Deferred Balances, Atlantic City Electric Company, Phase 1, Page IX-2, Mitchell Titus and Barrington Wellesly Group,

<sup>107</sup> EDECA Section 13 a (3).

<sup>108</sup> EDECA Section 13 f.

<sup>109</sup> EDECA Section 13 l (1).

<sup>110</sup> EDECA Section 13 l (3) (a).

ACE began negotiations with its NUG suppliers in 1998.<sup>111</sup> ACE entered into an agreement to buyout its Pedrickstown NUG contract in December 1999. The buyout price was \$228.5 million.<sup>112</sup> ACE entered into a minor restructuring of its DRMI contact in January 2001.<sup>113</sup>

The BPU directed ACE to use its best efforts to mitigate NUG costs in July 2004. The BPU noted “It is essential that the Company remain diligent in its efforts to further mitigate these costs” and instructed ACE to use its best efforts to mitigate its NUG contract costs.<sup>114</sup>

ACE continued to negotiate with the owners of Logan, Chambers and DRMI through 2008. The negotiations lasted over 10 years. The negotiations were delayed at times by:

- disputes over contract terms;<sup>115</sup>
- financial problems of the plant owners;<sup>116</sup>
- changes in plant ownership;<sup>117</sup> and
- changes in ACE’s strategy.<sup>118</sup>

ACE incurred considerable expense in its restructuring efforts. The following table shows the costs incurred through April 30, 2009.

Description	Recovered	Deferred	Total Cost
McManus & Miles	1,800	2,827	4,627
Other Consultants	24	139	163
Outside Legal Counsel	203	141	344
Restructuring Manager	257	1,252	1,509
Credit Facility Fee	293	0	293
<b>Total</b>	<b>2,577</b>	<b>4,359</b>	<b>6,936</b>
<small>Source: 2007 NGC Proceeding, Janocha Testimony (Response to Discovery OC-53) Schedule JFJ-1 and 2009 Rate Case Proceeding Zibinski Testimony.</small>			

<sup>111</sup> Audit of Deferred Balances, Atlantic City Electric Company, Phase 1, Page IX-5, Mitchell Titus and Barrington Wellesly Group,

<sup>112</sup> Response to Discovery, OC-334.

<sup>113</sup> Response to Discovery, OC-334. ACE paid the owner \$3.5 million to terminate its wheeling agreement with Philadelphia Electric Company and to lower capacity and energy charges. The restructuring resulted in savings of \$1.5 million per year.

<sup>114</sup> BPU Final Order in Docket No. ER02080510, dated July 8, 2004, pages 117 and 118.

<sup>115</sup> The Logan negotiations were suspended for two years in 1999-2000 pending arbitration of contract pricing terms.

<sup>116</sup> A subsidiary of Pacific Gas & Electric Company, the National Energy Group (NEG), owned fifty percent of Logan and Chambers in the 1999. NEG declared bankruptcy in 2002.

<sup>117</sup> In September 2004, Cogentrix Energy, Inc. (Cogentrix) purchased NEG’s 100 % ownership share in Logan and 60% ownership share in Chambers. Cogentrix is an affiliate of Goldman Sachs. During 2007, Energy Investors Fund purchased eighty percent of Cogentrix’s interest in Logan and Chambers. Response to Discovery, OC-60.

<sup>118</sup> ACE investigated and ultimately determined that the buyout and buydown structures for Logan and Chambers were not feasible. Response to Discovery, OC-60. The buydown approach was terminated in February 2006.

The recovered costs related to the 1999 Pedricktown buyout and the 2001 DRMI modification. McManus & Miles was ACE's primary financial and power contracting consultant.<sup>119</sup>

The current owners of DRMI have **[BEGIN CONFIDENTIAL]**  
**[END CONFIDENTIAL]** that contract.<sup>120</sup> The total delivered price of electricity under the 80 MW DRMI contract was \$59 per MWH in 2007. The DRMI contract prices are not above market.

The Logan and Chambers plants are both largely owned by Cogentrix and the Energy Investors Fund.<sup>121</sup> ACE and the owners agreed upon an approach of focusing on Logan restructuring first. The Logan template would then be applied to Chambers.<sup>122</sup>

In September 2007, the ACE and Logan negotiating teams agreed to a modest conditional restructuring of the Logan contract. The restructuring **[BEGIN CONFIDENTIAL]**

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<sup>119</sup> Zibinski interview.

<sup>120</sup> The current owner of DRMI is Covanta Holding Corporation, a publicly traded entity engaged in waste disposal, energy services and speciality insurance. Covanta Energy operates waste-to-energy facilities that convert municipal waste to electricity. In 2007 Covanta had \$1.4 billion in revenue. Value Line.

<sup>121</sup> Cogentrix and EIF own 100% of Logan. Although Cogentrix and EIF own a controlling stake in Chambers, a significant minority interest is owned by an unaffiliated third party. Response to Discovery, OC-334.

<sup>122</sup> Response to Discovery, OC-334.

<sup>123</sup> Under the current agreement, capacity payments are **[BEGIN CONFIDENTIAL]**

**[END CONFIDENTIAL].**

Response to Discovery, OC-334.

<sup>124</sup> Based on a closing date of July 1, 2009 and an 8.14 percent discount rate. Response to Discovery, OC-131 and OC-333 (restricted documents).

<sup>125</sup> Response to Discovery, OC-332, Restricted. October 3, 2007 Presentation. Update on Status of Negotiations with Goldman Sachs/Cogentrix.

<sup>126</sup> Response to Discovery, OC-334 and OC-60.



[END CONFIDENTIAL].<sup>127</sup>

ACE discontinued its NUG contract restructuring efforts in late 2008. ACE's reasons for discontinuing those efforts are listed below.<sup>128</sup>

- Obligating ACE to pay Logan or Chambers CO<sub>2</sub> costs would eliminate all the savings produced by any reasonable restructuring alternatives.
- Restructuring the Logan or Chambers contracts would likely result in substantially higher CO<sub>2</sub> costs for the owners because of New Jersey Department of Environmental Protection regulations.
- ACE does not foresee Cogentrix or EIF agreeing to a restructuring that did not include increasing contract prices to reflect CO<sub>2</sub> costs.
- The DRMI owners have not shown any interest in restructuring.
- The risk adjusted value of the potential savings do not justify continuing to incur restructuring consulting costs.

ACE terminated its relationship with McManus and Miles effective February 28, 2009.<sup>129</sup>

**ACE's decision to suspend NUG contract restructuring efforts was reasonable.** The role of the NUG contracts in ACE's power supply has changed significantly over the past few years. Beginning in October 2010, the contracts will no longer be a significant source of stranded costs. Instead, the contracts will provide a beneficial hedge against capacity and energy price volatility. Buying out the NUG contracts is no longer desirable.

In February 2006, ACE adopted a strategy of negotiating lower capacity prices in exchange for contract terms that would allow the plant owners to refinance their debt at a lower costs.<sup>130</sup> The strategy was consistent with the emerging role of the NUG contracts and was reasonable when adopted.

The Financial markets have experienced unprecedented difficulties in 2008 and 2009. A strategy that depends on the successful refinancing of project debt may not be practical in the current financial environment. ACE's decision to suspend NUG contract restructuring efforts is reasonable in the current environment.

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<sup>127</sup> Response to Discovery, OC-920.

<sup>128</sup> Response to Discovery, OC-920.

<sup>129</sup> Response to Discovery, OC-920.

<sup>130</sup> Response to Discovery, OC-60 and Zibinski Interview. Also OC-332 (restricted), May 9, 2007 Status

Report.

The Logan and Chambers contracts run through 2024. ACE should continue to explore opportunities to reduce costs under those contracts as they arise, particularly when financial market conditions improve. Those opportunities should be reviewed in ACE's annual power supply plan.

**ACE's management of the restructuring process was reasonable during 2006, 2007 and**

**2008.** Overland interviewed the manager of ACE's restructuring efforts and reviewed the presentations made to management concerning those efforts in 2006 and 2007.<sup>131</sup> The restructuring objectives and strategies were reasonable. The restructuring analysis benefitted from adequate management oversight and technical resources. ACE assigned a qualified project manager to the process on a part time basis.<sup>132</sup> ACE also obtained financial and contract negotiation expertise from McManus and Miles. The accounting and tax analysis reviewed by Overland was well prepared.<sup>133</sup> The negotiating team included representatives from PHI regulatory, legal, bulk power procurement and McManus and Miles.<sup>134</sup> The financial models used to evaluate alternatives, while simple, were adequate.<sup>135</sup>

**Logan and Chambers CO<sub>2</sub> allowance costs should not be passed through to ACE.**

Increased CO<sub>2</sub> allowance costs associated with the Regional Greenhouse Gas Initiative are not recoverable under the Logan or Chambers contracts.<sup>136</sup> The costs for the Logan plant are estimated to potentially be **[BEGIN CONFIDENTIAL]** **[END CONFIDENTIAL]**.<sup>137</sup> During its negotiations with Cogentrix, ACE indicated that it would only pay for the CO<sub>2</sub> costs to the extent that the BPU authorized rate recovery.<sup>138</sup>

The prices paid by ACE under the Logan and Chambers contracts greatly exceeded market prices for many years. During periods when the contract prices were extremely high, Cogentrix expected the contract to be honored. The extremely high capacity prices provided the owners with ample compensation for taking the risk that environmental costs might increase. Cogentrix has already been compensated for assuming that risk and should not be allowed to increase its charges to ACE.

**ACE should write-off all deferred restructuring costs.** ACE has deferred \$4.4 million in restructuring costs for future rate recovery. The deferred costs pertain to the Logan and Chambers contracts. ACE is no longer pursuing the restructuring of those contracts.

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<sup>131</sup> Zibinski interview. Response to Discovery, OC-329 (restricted), OC-332 (restricted) and OC-336.

<sup>132</sup> Zibinski devoted about 50 percent of his time to NUG restructuring matters in 2008. Zibinski interview.

<sup>133</sup> Response to Discovery, OC-506.

<sup>134</sup> Response to Discovery, OC-332 (restricted).

<sup>135</sup> Response to Discovery, OC-131 (restricted).

<sup>136</sup> Overland interview with Gary Zibinski and response to Discovery, OC-332 Restricted. October 3, 2007 Presentation Update on Negotiations with Goldman Sachs/Cogentrix.

<sup>137</sup> Response to Discovery, OC-332 Restricted. October 3, 2007 Presentation Update on Negotiations with Goldman Sachs/Cogentrix.

<sup>138</sup> Zibinski interview and response to Discovery, OC-332 Restricted, October 3, 2007 Update on Negotiations with Goldman Sachs/Cogentrix.

Most of the deferred costs are extremely dated. Approximately two thirds of the McManus and Miles charges date back prior to 2003.<sup>139</sup> The restructuring manager charges reflect internal labor costs for a full time employee assigned to managing the NUG restructuring effort.<sup>140</sup> That position was eliminated in 2005. There is no expectation that these dated efforts will produce future economic benefits.

ACE did not obtain authorization from the BPU to defer the restructuring costs as they were being incurred.<sup>141</sup> ACE unsuccessfully sought recovery of the deferred costs in its 2007 NGC proceeding. The settlement in that proceeding includes the following provision.<sup>142</sup>

The Signatory Parties agree that ACE can file for recovery of these NUG restructuring costs...only as part of future filing seeking Board approval of a restructuring...In the event that ACE is unable to restructure the [Chambers] contract or the Logan...contract...the Company may file for recovery of the restructuring costs...in a separate, stand-alone filing...or in the context of a base rate case. The company shall not file for recovery of the restructuring costs...as part of a future SBC/NGC filing. The Signatory parties understand and agree that no determination is being made in this Stipulation as to whether these NUG costs...are ultimately recoverable in rates.

The settlement provision and the factual circumstances do not provide sufficient assurance of future recovery to allow the costs to be deferred as a regulatory asset pursuant to SFAS 71.<sup>143</sup>

The costs of unsuccessful restructuring efforts do not produce any future economic benefits. The deferred restructuring costs do not constitute an asset under Generally Accepted Accounting Principles and should be written off.

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<sup>139</sup> 2007 NGC BPU proceeding, response to RCR-25, with additional \$242,000 in charges for 2007 and 2008 (Response to Discovery, OC-905).

<sup>140</sup> Response to Discovery, OC-96. 2007 NGC BPU proceeding discovery question RCR-28 and RCR-40.

<sup>141</sup> Response to Discovery, OC-96, 2007 NGC BPU proceeding, response to discovery request RCR-11.

<sup>142</sup> BPU Docket No. ER07060356, Order Adopting Stipulation, dated May 1, 2008, Attached Stipulation of Settlement, page 4.

<sup>143</sup> SFAS 71, Accounting for the Effects of Certain Types of Regulation, paragraph 9. A regulatory asset can only be recognized if it is probable that recovery will be allowed in rates.

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## Chapter 15. System Reliability

### Introduction and Summary

The Chapter addresses ACE's electrical system reliability. ACE's reliability performance was inadequate in 2008 and prior years. PHI recognizes the need to improve system reliability. Improving reliability is the top priority for PHI's Utility Operations Department in 2009.

### Summary of Findings

This Chapter contains the following findings and recommendations.<sup>1</sup>

1. ACE's reliability metrics are mediocre compared to other utilities. ACE participates in a number of reliability benchmarking surveys. ACE's outage frequency performance consistently ranks below average in those surveys. ACE ranks about average on outage duration. However, when major event days are excluded, ACE ranks below average for outage duration.
2. ACE's reliability metrics are better than PHI's other two utilities. ACE's outage frequency and duration scores are better than Pepco's and Delmarva's scores.
3. ACE's reliability metrics have not improved over the past five years.
4. Tree Contact and Weather are the predominate causes of outages on ACE's system. Tree contact and weather cause 56 percent of ACE's outage minutes. A relatively few major event days accounted for almost half of ACE's outage minutes during the past five years. Tree contact and weather accounted for 81 percent of the outage minutes on those major event days.
5. The Glassboro District is ACE's worst performing district. Glassboro has the highest outage frequency of ACE's four districts. Glassboro and Cape May have the longest outage durations.
6. ACE's customer satisfaction survey results compare favorably to other utilities. ACE's annual customer satisfaction surveys include a number of questions pertaining to reliability. The survey reports include benchmarking to national and eastern seaboard utilities. ACE consistently ranks above average in that benchmarking.
7. ACE initiated several programs in 2007 and 2008 to reduce outage frequency. ACE increased its vegetation management spending in 2007 and 2008. ACE initiated a

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<sup>1</sup> This Chapter addresses electric system reliability from the perspective of a regulatory auditor. The findings and recommendations contained in this Chapter are not based on engineering judgement.

program in 2008 to replace bare distribution feeder wire with insulated “tree wire.” ACE also initiated a program to replace or refurbish underground residential cable based on failure rates.

8. PHI recognizes the need for additional reliability improvement initiatives. PHI initiated a major review of its reliability performance and processes in August 2008. PHI observed that none of its operating companies compared favorably to their peers in reliability benchmarking surveys. PHI initiated the review because its reliability performance was inadequate and not improving. The cross-functional review included five regional reliability summits. The summit participants expressed “universal recognition of the problem with reliability” and “significant frustration and dissatisfaction with the direction [PHI] was heading” prior to the summits. There was a general sense of optimism that things could improve and wide support for a “back to basics” approach to improving reliability.
9. PHI’s reliability goal is to achieve first quartile performance by 2012. Improving reliability is the primary focus of PHI’s Utility Operations Department in 2009. PHI adopted a goal of achieving first quartile performance in SAIDI and CAIDI benchmarking surveys by the end of 2012. PHI’s new reliability goal is commendable and achievable with focused effort.
10. ACE’s vegetation management program is driven by BPU regulatory requirements. ACE’s vegetation management program is driven by the worst performing feeder program required by the BPU’s reliability standards and the four-year cycle required by the BPU’s vegetation management standards. Those requirements are minimum requirements, not optimum performance targets. ACE’s reliability performance is below average. Significant portions of ACE’s distribution system are overgrown with vegetation. In light of those conditions, ACE should go beyond the BPU’s minimum vegetation management requirements.
11. ACE does not have an effective off right-of-way hazard tree program. Approximately 40 percent of the tree related outages on ACE’s system were attributable to trees located outside of ACE’s right-of-way in 2008. ACE cannot trim those trees without the permission of the property owner. ACE does not offer any incentives to owners to allow access to off ROW trees. ACE does not have any programs to encourage property owners to allow access.
12. ACE’s vegetation management staffing may be inadequate. The two foresters assigned to ACE’s distribution system are responsible for managing ACE’s vegetation management program. Each of the foresters is responsible for approximately 3,650 miles of overhead lines. Increasing the focus on vegetation management may require an increase in forestry headcount.

13. ACE increased its reliability maintenance budget in 2009. ACE increased its reliability maintenance budget by 10 percent in 2009. Excluding vegetation management, the maintenance budget increased by 19 percent.
14. ACE's revised 2009 construction budget includes substantial funding for reliability improvement initiatives. In April 2009, the BPU approved an infrastructure investment program for ACE as an economic stimulus measure. With that program, ACE will have approximately \$40 million in funding for reliability capital improvements in 2009 and 2010 combined. That should be sufficient to produce a substantial improvement in ACE's reliability metrics by the target data of 2012.
15. PHI has identified a large number of ways to improve reliability. The reliability summits generated a large number of ideas for preventing outages, reducing outage duration and improving reliability process management.
16. PHI's reliability goals need improvement. The reliability summits concluded that misaligned goals were negatively impacting reliability. PHI's efforts to properly align reliability goals are focused on its balanced scorecard goals. PHI's 2009 balanced scorecard goals are not adequate to motivate the desired performance improvement. PHI needs to adopt goals that require larger performance improvements and assign a greater weight to those goals in the balanced scorecard process. PHI should also develop additional goals for outage prevention and service restoration outside of the balanced scorecard process. ACE should consider implementing a modest employee recognition and rewards program at a district and supervisor level to encourage improved outage restoration performance.
17. ACE does not track power quality complaints. ACE is unable to provide a list of power quality complaints received or investigated in 2007 and 2008.

## **Recommendations**

1. PHI should prepare a comprehensive reliability improvement plan by March 31, 2010. PHI is using 2009 to analyze and plan reliability improvement initiatives and to make improvements in the reliability management process. PHI should prepare a comprehensive report that explains its reliability improvement strategies, plans and initiatives. The report should explain how the initiatives and improvements relate to ACE and provide sufficient detail to understand the improvement plans for each of ACE's four districts.
2. ACE should increase its vegetation management funding. ACE has not adequately funded vegetation management in the past. As a result, overgrowth conditions exist on parts of its system. ACE's current 2009 budget is not adequate to eliminate the overgrowth conditions. PHI plans to initiate a vegetation management policy review in

2009. That review provides an opportunity to address vegetation management funding in 2010 and beyond.

3. ACE should provide consistent stable funding for reliability initiatives. The reliability summits identified funding fluctuations caused by cost reduction directives as a contributor to poor reliability performance. Cutting reliability programs to meet short-term budget targets sends the wrong message to employees. Frequent funding changes also reduce the cost effectiveness of the programs. ACE should increase the priority given to reliability initiatives so funding does not fluctuate significantly from year-to-year based on temporary cost containment objectives.
4. ACE should improve the metrics it uses to measure reliability. PHI recognizes the need to improve its outage cause tracking categories. PHI also recognizes the need to analyze outage duration statistics by component, location and working conditions.
5. ACE should include more information in its Annual System Performance Report. The BPU's Reliability Standards require ACE to submit an Annual System Performance Report. ACE's reports do not include any discussion of the service restoration process or reliability spending. The most recent report was submitted in May 2009. That report does not mention the reliability summits or discuss the issues identified in the summits. The Annual System Performance Report provides ACE with an opportunity to demonstrate its commitment to improving its reliability performance. ACE should expand the reports beyond the minimum requirements of the Reliability Standards to more effectively communicate and document its reliability improvement strategies, plans and results.

## **Background**

Power system reliability is defined as the degree to which the performance of the elements of the system results in power being delivered to consumers within acceptable standards and in the amounts desired.<sup>2</sup>

Electric system reliability focuses on avoiding power outages at customer premises and quickly restoring power once an outage occurs. Electric system reliability is an attribute that is measured using outage frequency and duration metrics.

Reliability is the result of a number of internal processes and external factors. Internal processes that impact reliability include system design, construction, maintenance, vegetation management, outage notification, crew dispatch and repair. External factors impacting reliability include weather, customer density (rural versus urban) and vegetation growing conditions. Reliability applies to both the transmission and distribution systems. However, most outages originate on the distribution system.

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<sup>2</sup> The Electric Power Engineering Handbook, L.L. Grigsby, CRC Press, 2001, page 13.



Some of the processes impacting reliability have very long lead times. For example, the sizing and routing of distribution lines and the selection of transformers can impact a distribution line's reliability for many years. Other processes, such as outage response and tree trimming, impact reliability with a much shorter lead-time.

Automated meter reading could reduce outage restoration times in the future by providing quicker outage notification and more accurate information about the extent of outages. Distribution automation (smart grid) has the potential to improve reliability through the use of monitors and automated equipment to locate and isolate faults and provide power source redundancy.<sup>3</sup>

The recognized industry standards for developing reliability metrics are issued by the Institute of Electrical and Electronic Engineers (IEEE).<sup>4</sup> The primary reliability metrics are:

- System Average Interruption Frequency Index (SAIFI).<sup>5</sup>
- System Average Interruption Duration Index (SAIDI).<sup>6</sup>
- Customer Average Interruption Duration Index (CAIDI).<sup>7</sup>
- Customers Experience Multiple Interruptions (CEMI).<sup>8</sup>
- Customers Experiencing Long Duration Interruptions (CELID)<sup>9</sup>

SAIFI and CAIDI are the most important metrics from a management perspective. SAIFI indicates the number of outages the average customer experienced during the period. SAIFI addresses the quality of the utility's outage prevention performance. CAIDI indicates the average outage length. CAIDI addresses the quality of the utility's service restoration performance.

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<sup>3</sup> Response to Discovery, OC-360 and OC-367. Automatic Sectionalizing and Restoration Systems are an example of distribution automation.

<sup>4</sup> IEEE Guide For Electric Power Distribution Reliability Indices, IEEE Standard 1366-2003.

<sup>5</sup> SAIFI is the number of times the average customer was interrupted during the year. It is calculated by dividing the number of customer interruptions by the total number of customers.

<sup>6</sup> SAIDI is number of minutes that the average customer was interrupted during the year. It is calculated by dividing total customer outage minutes by the total number of customers.

<sup>7</sup> CAIDI is the length in minutes of the average interruption on the system. It is calculated by dividing total customer outage minutes by the number of customer interruptions during the period.

<sup>8</sup> CEMI is the percentage of customers experiencing greater than a specified number of interruptions during the year. PHI calculates CEMI for five levels – increments of 1 interruption for 4 through 8. CEMI is calculated by dividing the number of customers experiencing the specified number of interruptions during the period by the total number of customers.

<sup>9</sup> CELID is the percentage of customers experiencing an interruption that is longer than a specified number of minutes during the year. PHI calculates CELID for two levels - six or more hours and 24 or more hours. CELID is calculated by dividing the number of customers experiencing an outage of the specified length by the total number of customers.

A few significant bad weather days can account for a significant percentage of a utility's outage minutes during the year. The metrics are calculated including and excluding major event days ("MEDs") to measure the impact of those events on the metrics.

The BPU's Electric Distribution Service Reliability and Quality Standards ("The Reliability Standards") require electric utilities to have reasonable programs and procedures to maintain minimum reliability levels.<sup>10</sup>

The Reliability Standards also require:

- Annual reporting of reliability metrics calculated using a prescribed methodology.
- A power quality program to prevent or resolve power quality problems.
- A program to analyze poor performing circuits and take appropriate action to improve reliability performance.
- An annual inspection and maintenance program for distribution facilities.
- An Annual System Performance Report.
- Major Event Reports for storms and other incidents causing service interruptions for more than 10 percent of the customers in a district.
- An Outage Management System (OMS) to track and manage customer outages.

The OMS system analyzes outages reported by customers and tracks outage minutes and outage causes by distribution feeder line. The outage restoration process starts when the customer calls ACE to report the outage.<sup>11</sup> The OMS processes the incoming outage calls and groups related calls together to create projects. The OMS matches the customer calls to a hierarchy of protective devices to "predict" the device that has operated, resulting in the loss of service to the customer. The predictions are routed to dispatchers who assign the project to a troubleman. The troublemen are the first responders who investigate the outages. Repair crews are dispatched based on the results of the troubleman's investigation. Outage cause classifications are made by the troublemen.<sup>12</sup> The OMS data is used to calculate various reliability metrics.

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<sup>10</sup>New Jersey Electric Service Rules, N.J.A.C 14-5-8.3. The standards were adopted effective January 2001.

<sup>11</sup> Response to Discovery, OC-822, Draft ACE Incident Response Plan, page 13. During widespread outages most outage calls are received by an automated Voice Response Unit (VRU).

<sup>12</sup> Overland Interview with Chester Knapp, PHI Power Delivery, Manager Reliability Group.

ACE implemented GE Smallworld's PowerOn OMS software in 2002. Pepco uses an Oracle/SPL Centricity OMS. ACE migrated to that system in 2009 to standardize OMS across the three PHI utilities.<sup>13</sup>

ACE reports SAIFI, CAIDI, and SAIDI metrics in its BPU Annual System Performance Report. The "excluding major events" metrics in the BPU report vary from those in PHI monthly internal reports because the BPU has a different definition of major events. The BPU defines major events as a sustained interruption beyond the control of the utility which impacts more than 10 percent of the customers in an operating district.<sup>14</sup> For internal reporting, PHI uses the IEEE definition of major event days. IEEE defines MEDs as days in which system SAIFI exceeds a specified threshold.

The Reliability Standards require ACE to include a summary of its reliability programs and compliance plan in its Annual System Performance Report.<sup>15</sup> ACE updated that documentation in January 2009.<sup>16</sup> The updated documentation consists of 43 one page forms. Each form addresses a specified inspection or test.<sup>17</sup> For example, one of the forms addresses substation power transformer oil collection and analysis.

The Reliability Standards require ACE to identify and analyze poor performing circuits and to take appropriate actions to improve the performance of those circuits.<sup>18</sup> ACE's "worst performing feeder" program addresses that requirement. Each year ACE identifies the five worst performing distribution feeders in each of its four districts based on reliability metrics. The program includes enhanced inspection, vegetation management and infrastructure hardening of those 20 feeders during the ensuing year.

Outages are frequently caused by distribution lines coming into contact with trees and other vegetation, particularly during storms. New Jersey electric utilities are required to comply with the BPU's Vegetation Management Standards.<sup>19</sup> Vegetation management includes tree trimming and biological and chemical methods to control vegetation. The standards require ACE to:

- Employ an electric utility arborist as a vegetation manager.
- Perform vegetation management on a four-year cycle.

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<sup>13</sup> PHI Comments on Overland Draft Report and Response to Discovery, OC-223.

<sup>14</sup> New Jersey Electric Service Rules, N.J.A.C 14-5-1.2 (New Jersey electric reliability rules).

<sup>15</sup> New Jersey Electric Service Rules, N.J.A.C 14-5-8.6 and 8.7.

<sup>16</sup> Response to Discovery, OC-971 contains ACE's updated inspection and maintenance plan.

<sup>17</sup> The Forms list the equipment type; inspection/test title; inspection/test trigger or frequency (for example annual); the inspection/test activities; acceptance criteria for passing the inspection or test; and applicable industry standards.

<sup>18</sup> New Jersey Electric Service Rules, N.J.A.C 14-5-8.5 (b)

<sup>19</sup> New Jersey Electric Service Rules, N.J.A.C 14-5-9.1. The vegetation management standards were adopted on December 18, 2006.

- Perform annual inspections of transmission lines.
- Develop vegetation management standards and guidelines that prioritize work based on the potential for vegetation to interfere with an energized conductor and the importance of the conductor in maintaining safety and reliability.

**Reliability Metrics**

**ACE’s reliability metrics are mediocre compared to other utilities.** ACE participates in a number of reliability benchmarking surveys.<sup>20</sup> The largest survey is conducted by EEI. The following tables show ACE’s EEI survey results for the most recent three years.<sup>21</sup>

<p><i>Table 15-1</i>  <b>EEI Reliability Survey Results For ACE                      Including Major Event Days                      Quartile Ranking 2005 - 2007</b></p>			
Metric	2005	2006	2007
SAIFI (Frequency)	3	4	3
CAIDI (Duration)	2	3	2
<p>Source: Response to Discovery, OC-73 and OC-969 Restricted. Note: First Quartile is Best.</p>			

<p><i>Table 15-2</i>  <b>EEI Reliability Survey Results For ACE                      Excluding Major Event Days                      Quartile Ranking 2005 - 2007</b></p>			
Metric	2005	2006	2007
SAIFI (Frequency)	3	3	3
CAIDI (Duration)	2	3	3
<p>Source: Response to Discovery, OC-73 and OC-969 Restricted. Note: First Quartile is Best.</p>			

ACE’s benchmarking results are mediocre. ACE consistently ranks below average for outage frequency. ACE ranks about average for outage duration including major event days. When MEDs are excluded, ACE ranks below average for outage duration.

**ACE’s reliability metrics are better than PHI’s other two utilities.** The following tables compare the three PHI utilities, including MEDs.

<sup>20</sup> Response to Discovery, OC-73 and OC-658. In addition to the EEI survey, ACE participates in IEEE, PSEG, PA Consulting and Southeastern Electric Exchange (SEE) Surveys. The EEI survey results are representative of the results of the other surveys. The SEE, PA Consulting and PSEG surveys have less than 30 participants. In comparison the 2007 EEI survey had 70 participants.

<sup>21</sup> The survey results are based on the data for the year indicated. For example the rankings for 2007 were taken from the EEI survey report issued in October 2008. That survey reflects outage data for the 2007 calendar year.

<b>Table 15-3</b> <b>SAIFI (Frequency)</b> <b>Including Major Event Days</b> <b>PHI Utilities 2006 - 2008</b>			
Utility	2006	2007	2008
ACE	2.27	1.60	1.97
PEPCO	2.13	1.86	2.32
Delmarva	2.46	2.08	2.14
Source: Response to Discovery, OC-507 and 813. Note: Lower score is better.			

<b>Table 15-4</b> <b>CAIDI (Duration)</b> <b>Including Major Event Days</b> <b>PHI Utilities 2006 - 2008</b>			
Utility	2006	2007	2008
ACE	219	123	176
PEPCO	239	170	245
Delmarva	226	169	170
Source: Response to Discovery, OC-507 and 813. Note: Lower score is better.			

ACE's scores compare favorably to those of Pepco and Delmarva.

**ACE's reliability metrics have not improved over the past five years.** ACE's 2002 reliability metrics were impacted by the initiation of the OMS. ACE's 2003 reliability metrics were impacted by hurricane Isabel.<sup>22</sup> ACE's 2004 through 2008 metrics provide a valid basis for assessing trends in ACE's reliability performance.

The following table shows the five year trend in ACE's reliability metrics, including MEDs.

<b>Table 15-5</b> <b>ACE Reliability Metrics</b> <b>Including Major Event Days</b> <b>2004 - 2008</b>					
Metric	2004	2005	2006	2007	2008
SAIFI (Frequency)	1.14	1.48	2.27	1.60	1.97
SAIDI (Duration)	109	175	496	196	346
CAIDI (Duration)	95	118	219	123	176
CEMI (8 outages)	na	0.80	2.65	.47	1.08
Source: PHI Monthly Reports. Response to Discovery, OC-833, 507 and 509. Lower score is better.					

The 2008 SAIFI score of 1.97 means that, on average, ACE customers experienced 2 power outages during that year. The 2008 CAIDI score of 176 means that the average outage lasted for close to three hours. The 2008 SAIDI score of 346 means that the average customer experienced a total of 346 outage minutes in 2008 (5.8 hours). The CEMI score of 1.08 means that about 1 percent of ACE's customers experienced eight or more outages in 2008.

<sup>22</sup> Hurricane Isabel struck the Eastern Coast of the United States on September 18, 2003. Response to Discovery, OC-239.

The following table shows ACE’s reliability metrics excluding MEDs.<sup>23</sup>

Metric	2004	2005	2006	2007	2008
SAIFI (Frequency)	1.06	1.30	1.37	1.46	1.28
SAIDI (Duration)	93	135	169	155	140
CAIDI (Duration)	88	104	124	106	110
CEMI (8 outages)	na	0.59	0.32	0.39	0.18
CELID (6 hours) <sup>24</sup>	na	2.69	6.81	4.30	4.17

Source: PHI Monthly Reports - Response to Discovery, OC-833 and 507. Lower score is better.

The 2008 CELID score of 4.17 means that slightly more than 4 percent of ACE’s customers experienced at least one outage exceeding 6 hours in 2008.

The following table shows the 2008 metrics as a percentage of the average for the preceding four years.<sup>25</sup>

Metric	Including MED	Excluding MED
SAIFI (Frequency)	121	99
SAIDI (Duration)	142	101
CAIDI (Duration)	127	104
CEMI (8 outages)	83	42
CELID (6 hours)	na	91

Note: CEMI and CELID percentage of average for three years because 2004 data is not available.

With the exception of CEMI, ACE’s reliability metrics have not shown any significant improvement over the past five years.

**Tree contact and weather are the predominate causes of outages on ACE’s system.** The following table shows ACE’s outage minutes by cause over the past five years.

<sup>23</sup> Using the IEEE definition of major event days.

<sup>24</sup> CELID is only available excluding major event days.

<sup>25</sup> The CEMI and CELID values are 2008 as a percentage of 2005 through 2007. CEMI and CELID metrics are not available for 2004.

<b>Table 15-8</b> <b>Percentage of Outage Minutes by Cause</b> <b>Including Major Event Days</b> <b>2004 to 2008</b>	
Description	Percent
Damage caused by animals <sup>26</sup>	6
Damage caused by Third Parties <sup>27</sup>	9
Equipment failure <sup>28</sup>	16
Overloads	1
Tree contact <sup>29</sup>	28
Weather	28
Unknown & other causes	12
<b>Total</b>	<b>100</b>
Source: Response to Discovery, OC-194 BPU Annual System Performance Reports	

The weather and tree contact outage categories are related, as weather frequently causes broken tree limbs to come into contact with distribution lines.

A relatively few major event days account for a large percentage of ACE’s outage minutes. During the five year period ending in 2008, almost half of ACE’s outage minutes occurred during major event days.<sup>30</sup> The following table shows the number of MEDs in 2005 through 2008 as defined by the IEEE.<sup>31</sup>

<b>Table 15-9</b> <b>ACE Major Event Days</b> <b>IEEE Definition 2005 - 2007</b>		
Year	Days	Percent of Outage Minutes
2005	4	23
2006	15	66
2007	3	21
2008	11	60
Source: Response to Discovery, OC-234, 813 and 1039		

<sup>26</sup> Bird and other animals cause distribution line faults by simultaneously contacting two energized overhead conductors.

<sup>27</sup> When an automobile strikes a distribution pole, it can cause a fault by bringing two conductors into contact even if the pole itself is not completely knocked down.

<sup>28</sup> Overhead distributions lines have a wide variety of equipment that can fail including transformers, breakers, insulators, conductor brackets, conductor wire, etc. Many of these items are more prone to failure in extreme weather conditions.

<sup>29</sup> When a broken tree limb makes contact with two or more energized conductors on an overhead line, the lines are faulted and an outage occurs. If the limb falls off the lines the outage will be temporary because the circuit recloser will successfully re-energize the line. Reclosers are typically programmed to attempt to re-energize the line three times. If the limb remains on the lines, those attempts will fail and the outage will continue until crews resolve the fault.

<sup>30</sup>Major event days as defined by IEEE, not the BPU. During the five year period ending in 2008, 47 percent of ACE’s outage minutes occurred during major events.

<sup>31</sup> Response to Discovery, OC-507.

Tree contact and weather accounted for 81 percent of the outage minutes during major event days for the most recent five year period.<sup>32</sup>

ACE's outage causes on non-major event days are relatively stable over time. The following table shows ACE's outage causes excluding MEDs.<sup>33</sup>

<b>Table 15-10</b> <b>Percentage of Outage Minutes by Cause</b> <b>Excluding Major Event Days</b> <b>2004 to 2008</b>	
Description	Percent
Damage caused by animals	10
Damage caused by third parties	16
Equipment failure	23
Overloads	1
Tree contact	21
Weather	13
Unknown & other causes	16
<b>Total</b>	<b>100</b>
Source: Response to Discovery, OC-507 and OC-813. 2004 is per BPU Annual System Performance Report and reflects BPU MED standard.	

**The Glassboro District is ACE's worst performing district.** The following tables show ACE's SAIFI metrics by district including MEDs.<sup>34</sup>

<b>Table 15-11</b> <b>ACE SAIFI (Frequency) by District</b> <b>Including Major Event Days</b> <b>2004 - 2008</b>					
Metric	2004	2005	2006	2007	2008
Cape May	0.95	1.06	1.84	1.01	1.30
Glassboro	1.43	1.99	2.83	2.11	2.87
Pleasantville	0.92	1.29	2.08	1.24	1.59
Winslow	1.26	1.47	2.19	2.11	1.92
ACE Total System	1.14	1.48	2.27	1.60	1.97
Source: Annual System Performance Reports (Response to Discovery, OC-197 and OC-813).					

The Glassboro District had the worst score in every year except 2007 when it tied Winslow for the worst score. The SAIFI metric excluding MEDs is shown below.

<sup>32</sup> Five year period 2004 through 2008 under the IEEE definition of major event days except that 2004 reflects the BPU standard (IEEE data was not available for 2004).

<sup>33</sup> Reflecting IEEE MED standard except for 2004.

<sup>34</sup> Using the BPU standard for identifying major event days.



**Table 15-12**  
**ACE SAIFI (Frequency) by District**  
**Excluding Major Event Days**  
**2004 - 2008**

Metric	2004	2005	2006	2007	2008
Cape May	.95	1.02	1.29	.78	.94
Glassboro	1.43	1.79	2.21	1.97	2.41
Pleasantville	.92	1.25	1.54	1.24	1.37
Winslow	1.26	1.40	1.68	1.99	1.64
ACE Total System	1.14	1.39	1.71	1.49	1.64

Source: Annual System Performance Reports (Responses to Discovery, OC-197 and OC-1168).

The Glassboro has the highest outage frequency of the four districts. Glassboro contains 30 percent of ACE’s customers but has 42 percent of the overhead distribution feeder miles.<sup>35</sup> Glassboro has an average of 39 customers per circuit mile compared to 89 in Cape May, 65 in Pleasantville, and 46 in Winslow. Glassboro customers are more exposed to tree and other outage causes because they are served, on average, by more circuit miles per customer.

The following tables show ACE’s CAIDI metric by district, including MEDs.

**Table 15-13**  
**ACE CAIDI (Duration) by District**  
**Including Major Event Days**  
**2004 - 2008**

Metric	2004	2005	2006	2007	2008
Cape May	73	142	295	145	184
Glassboro	116	128	228	146	202
Pleasantville	77	91	180	87	150
Winslow	100	121	192	111	145
ACE Total System	95	118	219	123	176

Source: Annual System Performance Reports (Response to Discovery, OC-197 and OC-813)

The Glassboro District has the worst score in four of the five years. The following table shows CAIDI excluding MEDs.

**Table 15-14**  
**ACE CAIDI (Duration) by District**  
**Excluding Major Event Days**  
**2004 - 2008**

Metric	2004	2005	2006	2007	2008
Cape May	73	144	157	121	121
Glassboro	116	115	185	125	159
Pleasantville	77	90	105	87	97
Winslow	100	120	127	110	120
ACE Total System	95	113	148	111	131

Source: Annual System Performance Reports (Responses to Discovery, OC-197 and OC-1168)

Glassboro and Cape May have the longest outage durations.

<sup>35</sup> Response to Discovery, OC-518 and OC-1040.

**ACE’s customer satisfaction survey results compare favorably to other utilities.** ACE’s annual customer satisfaction surveys include a number of questions pertaining to reliability.<sup>36</sup> The questions ask the participant to grade ACE on a scale of 1 through 10 on a variety of topics, with 10 being excellent and 5 being neutral. The following table shows the percentage of positive responses for reliability areas.

Subject	2004	2005	2006	2007	2008
Providing Reliable Service	88	89	86	89	91
Restoring Power in a Timely Manner	77	71	75	82	83
Accurate Estimates of Restoration Time	65	60	60	68	69
Keeping Customers Informed During Outages	45	40	47	49	50
Being Prepared for Outages During Storms	71	67	69	71	75
Tree Trimming to Protect Lines & Prevent Outages	61	59	62	63	63
Keeping Longer Outages to a Minimum	83	81	78	83	84
Being Able to Get Through to Report Outage	63	60	66	72	70

Source: Response to Discovery, OC-68 and OC-968

The survey reports provide benchmarking to national and eastern seaboard utility comparison groups. The following tables show the results of that benchmarking for 2007.

Subject	ACE Rank	Total Ranked	ACE Quartile
Providing Reliable Service	24	99	1
Restoring Power in a Timely Manner	15	86	1
Accurate Estimates of Restoration Time	18	80	1
Being Able to Get Through to Report Outage	5	77	1

Source: Response to Discovery, OC-68

Subject	ACE Rank	Total Ranked	ACE Quartile
Providing Reliable Service	6	23	2
Restoring Power in a Timely Manner	2	23	1
Accurate Estimates of Restoration Time	6	23	2
Being Able to Get Through to Report Outage	3	21	1

Source: Response to Discovery, OC-68

<sup>36</sup> Response to Discovery, OC-68. The surveys are conducted annually by Market Strategies International. The annual surveys reflect approximately 350 ACE residential customer telephone interviews conducted in September or October each year.

## **2007 and 2008 Reliability Improvement Programs**

**ACE initiated several programs in 2007 and 2008 to reduce outage frequency.** ACE had several initiatives for preventing outages in 2007 and 2008.

- ACE increased its vegetation management spending by 23 percent in 2007 and 19 percent in 2008. ACE's 2008 actual vegetation management expenditures were 47 percent higher than its 2006 expenditures.<sup>37</sup>
- ACE initiated a program in 2008 to replace bare distribution feeder wire with insulated "tree wire."<sup>38</sup> The insulated wire provides greater mechanical strength and is more resistant to ground and phase faults commonly caused by tree and animal contact. ACE replaced approximately 150,000 linear feet of bare conductors with tree wire on five distribution feeders in 2008.<sup>39</sup>
- ACE initiated a program to replace or refurbish underground residential distribution (URD) cable systems based on failure rates.<sup>40</sup> ACE installed a lot of URD in the 1960s and 1970s and that cable is experiencing high failure rates as the cable reaches the end of its useful life.<sup>41</sup> ACE planned to replace 36,350 feet (7 miles) of URD and refurbish an additional 28,000 feet in 2008 in fourteen subdivisions.
- ACE initiated planning for the installation of automatic sectionalizing and restoration (ASR) systems at three substations in ACE's service territory.<sup>42</sup> The ASR systems isolate faulted sections on distribution feeders and restores power to the other sections of the feeders. The ASR systems significantly reduce outage duration for the customers on the non-faulted sections of the feeders. The initial ASR systems are expected to be operational in 2010.
- ACE continued its BPU mandated worst performing distribution circuit program. ACE budgeted maintenance costs of \$394 thousand and construction costs of \$942 thousand in 2008 for the program.<sup>43</sup> The budgeted costs do not include tree trimming.
- ACE implemented a "CEMI" program in 2008 to address feeders experiencing a high number of outages. The 2008 program addresses eight distribution feeders

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<sup>37</sup> Response to Discovery, OC-814.

<sup>38</sup> Response to Discovery, OC-197 and OC-1168. 2007 and 2008 ACE Annual System Performance Reports, Section C3.

<sup>39</sup> Response to Discovery, OC-1168, 2008 ACE Annual System Performance Report, Section C3.

<sup>40</sup> Response to Discovery, OC-197. 2007 ACE Annual System Performance Report, Section C3.

<sup>41</sup> Overland interview with Chester Knapp, PHI Manager Reliability Group.

<sup>42</sup> Response to Discovery, OC-226.

<sup>43</sup> Response to Discovery, OC-65 (restricted) and OC-515.

that experienced a high number of service interruptions in 2007.<sup>44</sup> The program reviews repeated protective device operations (such as fuses) to determine the root cause and implement solutions. Customers experiencing a high CEMI tend to be at the end of a distribution feeder in a rural area.<sup>45</sup>

- ACE initiated a replacement program for poor performing substation oil filled circuit breakers.<sup>46</sup>
- ACE expanded the use of telemetric devices for the remote monitoring and control of distribution system equipment.<sup>47</sup> ACE's distribution automation programs will reduce outage duration by identifying outages faster and reducing restoration times.

PHI is replacing its existing maintenance management systems with SAP-PM in 2009.<sup>48</sup> SAP-PM will be the primary system for transmission, substation and distribution asset maintenance management. SAP PM standardize business processes across the three PHI utilities and will more fully integrate ACE's maintenance management processes. PHI considers SAP-PM to be a state-of-the-art maintenance management system.<sup>49</sup>

## **2008 Reliability Summits**

**PHI recognizes the need for additional reliability improvement initiatives.** PHI initiated a major review of its reliability performance and processes in August 2008.<sup>50</sup> PHI observed that none of its three operating companies compared favorably to their peers in industry benchmarking studies of reliability.<sup>51</sup> PHI initiated the review because its reliability performance was inadequate and was not improving.

The cross-functional review included five regional "reliability summits." A total of 160 people from nine PHI departments participated in the summits.<sup>52</sup> The participants expressed "universal recognition of the problem with reliability" and "significant frustration and dissatisfaction with the direction [PHI was] heading" prior to the summits.<sup>53</sup> There was a general sense of optimism that

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<sup>44</sup>Response to Discovery, OC-197. 2007 ACE Annual System Performance Report, Section C3. The study period for identifying the feeders was October 2006 through September 2007.

<sup>45</sup> Overland interview with Chester Knapp, PHI Manager Reliability Group.

<sup>46</sup> Response to Discovery, OC-1168, 2008 ACE Annual System Performance Report, Section C3. The oil is used as a coolant in the circuit breaker.

<sup>47</sup> Response to Discovery, OC-1168, 2008 ACE Annual System Performance Report, Section C3.

<sup>48</sup> Response to Discovery, OC-224

<sup>49</sup> Response to Discovery, OC-224 and Overland Interview with Chester Knapp, PHI Power Delivery, Manager Reliability Group.

<sup>50</sup>Response to Discovery, OC-964

<sup>51</sup> Response to Discovery, OC-964, Reliability Summit Update, October 30, 2008, page 5.

<sup>52</sup> Response to Discovery, OC-964, 2008 PHI Reliability Summit Summary, October 27, 2008, page 3.

<sup>53</sup> Response to Discovery, OC-964, 2008 PHI Reliability Summit Summary, October 27, 2008, page 3.

things could improve and wide support for a direct “back to basics” approach to improving reliability.

PHI identified the following “five recurring themes” that emerged from the summits.<sup>54</sup>

- Effective vegetation management is the key to reducing the number of outages.
- The need for greater coordination and communication between departments on reliability issues.
- The need to properly align goals and metrics between departments.
- The need for “end-to-end management” of the processes that impact reliability improvement.
- The need to allocate existing funding in a way that optimized reliability.

The participants concluded that vegetation management was very important – “it was clear to all that we would get the biggest lift from more frequent and aggressive tree trimming, removal, replacement, etc.”<sup>55</sup>

PHI identified the following factors that hindered efforts to improve reliability performance.<sup>56</sup>

- Lack of centralized oversight of cross-departmental processes.
- Inadequate communications between the Asset Management and Operations Departments.
- Outage data integrity problems that masked opportunities for improvement.
- Inconsistent application of equipment and design standards across PHI.
- Misaligned goals creating conflicts and conflicting priorities between Asset Management and Operations.
- Inadequate sharing of routine information by Customer Care (the call centers) concerning locations with recurring outage problems.

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<sup>54</sup> Response to Discovery, OC-964, 2009 System Load & Reliability Summary, February 26, 2009, page 11.

<sup>55</sup> Response to Discovery, OC-964, 2008 PHI Reliability Summit Summary, October 27, 2008, page 4.

<sup>56</sup> Response to Discovery, OC-964, 2008 PHI Reliability Summit Summary, October 27, 2008, page 4.

The consensus was that significant improvements in PHI's reliability performance would require an increase in PHI's operating and construction budgets as well as innovative approaches for using existing resources more effectively.<sup>57</sup>

The Reliability Summit Summary indicates:<sup>58</sup>

- Current Vegetation management funding was not sufficient to produce significant reliability improvements.
- Funding for outage response activities was not perceived to be an overwhelming problem. Instead the issue was ineffective utilization of existing resources.
- Constantly changing financial pressures and a focus on cost controls had overwhelmed past efforts to improve reliability.
- PHI did not have processes to ensure budgeted dollars were actually spent in accordance with its plans or spent on the most effective activities.

The summits were a significant cross-organizational collaborative process. The summit documents demonstrate a thorough candid approach that encouraged wide participation and brainstorming. PHI should be commended for recognizing the need to improve reliability performance and for convening the reliability summits to identify opportunities for improvement.

The summits resulted in over 100 recommendations in the following broad categories.<sup>59</sup>

- Budget
- Customer Care
- Data
- Crew Dispatch
- Equipment/Standards
- Field Resources
- Materials
- Operating Procedures
- Reliability Analysis
- Inspection & Maintenance
- Design
- Vegetation Management
- Management

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<sup>57</sup>Response to Discovery, OC-964, 2008 PHI Reliability Summit Summary, October 27, 2008, page 5.

<sup>58</sup>Response to Discovery, OC-964, 2008 PHI Reliability Summit Summary, October 27, 2008, page 7.

<sup>59</sup> Response to Discovery, OC-964, Reliability Summit Update, October 20, 2008, page 7.

Some of the recommendations did not apply to ACE. <sup>60</sup>The Reliability Summit Summary contains the following initial recommendations to be implemented within 90 days.<sup>61</sup>

- Create and staff a new Reliability Process Manager position.
- Initiate regular periodic reliability performance review meetings between the Asset Management and Operations Department.
- Re-evaluate the role and structure of the Asset Management Reliability Group to support the new process.<sup>62</sup>
- Re-evaluate the vegetation management program and adjust funding based on the results.
- Initiate “worst effected customer” communication and remediation programs aimed at customers experiencing large numbers of outages.
- Review all existing reliability programs to determine their effectiveness and adjust funding based on the results.
- Create a project team to address the recommendations in each of the 13 issue areas.

PHI Power Delivery presented an infrastructure improvement plan to the PHI Board of Directors in late September 2008. That plan focused on reliability and included the following:<sup>63</sup>

- Replace or refurbish 400,000 feet of underground cable annually
- Selective undergrounding or re-routing of the worst performing distribution feeders.
- Increase inventory of spare transformers.
- Proactive replacement program for oil filled circuit breakers.

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<sup>60</sup> Some of the recommendations only applied to Pepco or Delmarva.

<sup>61</sup> Response to Discovery, OC-964, 2008 PHI Reliability Summit Summary, October 27, 2008, page 8.

<sup>62</sup> The Reliability Group is an organization within PHI Asset Management. The Reliability Group analyzes outage data and prepares PHI's Monthly Reliability Reports. The Reliability group also prepares the maintenance budget for distribution and transmission equipment and is responsible for reliability engineering standards. The headcount in the reliability group was 54 as of July 2008. Overland interview with Chester Knapp, PHI Power Delivery, Manager Reliability Group.

<sup>63</sup> Response to Discovery, OC-274, Restricted, 2008 Utility Operations Strategic Review, September 25, 2008, page 24.

- Implement outage restoration mobile data process improvements with a goal to reduce dispatch component of CAIDI by 20 percent.
- Increase utilization of distribution automation and future Blueprint technology.
- Increase application of reliability best practices across the entire life-cycle of equipment (planning, design, construction, operation and maintenance).

The infrastructure plan included a three year construction budget of \$75 million for reliability enhancements. ACE's portion of the three year budget was \$12 million. The \$75 million three year budget was subsequently reduced to \$31.5 million and ACE's share was reduced to \$4 million.<sup>64</sup> The reliability enhancement initiatives did not require any significant changes to the 2009 operating budget.

PHI filled the new Reliability Process Manager position in early 2009 and established quarterly reliability improvement review meetings at the district level. PHI established the following projects during the first quarter of 2009.

<i>Table 15-18</i> <b>Reliability Projects</b> <b>Established in First Quarter 2009</b>	
<b>Title</b>	<b>Subject Matter</b>
CEMI Investigation	Repeat device operations
CELID Investigation	Long duration outages
Breaker Lockout Investigation	Feeder breaker lockouts caused by faults
Outage Data Validation	OMS data problems
Reliability Complaints Process	Processing customer reliability complaints
OMS Outage Causes	Refining outage cause categories
Granular CAIDI Review	Restoration process performance and resource allocation
Source: Response to Discovery, OC-964, March 27, 2009 Update to Reliability Summit Action Plans	

Other projects currently scheduled for 2009 include:

- Vegetation management policy review
- 2010 project budget allocation
- Momentaries tracking metric (MAIFI)
- Fault detector review
- Lightning strike data review
- Lightning protection standards review
- Exacter trials

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<sup>64</sup> Response to Discovery, OC-965. The budgets were decreased as part of PHI's cash conservation efforts that were implemented in 2009 in response to the economic recession.



Exacter is a vendor supplied outage avoidance system that uses a vehicle mounted device to identify failing energized equipment on overhead distribution lines by analyzing the radio frequencies emitted by the equipment.

PHI's plan is to use 2009 for analysis, planning and process design, with implementation in 2010. The maintenance phase of the reliability improvements will be implemented in 2010 following the roll out of the reliability process improvements.<sup>65</sup>

**PHI's reliability goal is to achieve first quartile performance by 2012.** Reliability is the primary focus of PHI's utility operations in 2009. PHI's 2009 System Load and Reliability Summary indicates:<sup>66</sup>

- “The biggest operational performance gap facing utility operations is reliability performance and the risk associated with failing to improve.”
- “We have to focus our attention and make reliability a part of our culture - the way we do business.”
- “Turning our reliability performance around will take time and is contingent on some key areas of focus:
  - Adequate funding for the right projects/initiatives
  - Significant process improvement and goal/metric alignment
  - Successful implementation of distribution automation and Smart Grid projects.
- “We are refocusing the entire Utility Operations Department on reliability improvements....Once we focus, we execute - Reliability improvement is our focus.”

PHI adopted a goal of achieving top quartile performance in reliability benchmarking studies by the end of 2012. The goal focuses on the SAIDI and CAIDI metrics.<sup>67</sup> PHI's new reliability goal is commendable and achievable with focused effort.

## **Vegetation Management**

**ACE's Vegetation Management Program is driven by BPU regulatory requirements.** The reliability summits stressed the importance of vegetation management (VM) to preventing

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<sup>65</sup> Response to Discovery, OC-964, Reliability Summit Action Plans, March 27, 2009 Update.

<sup>66</sup> Response to Discovery, OC-964, 2009 System Load & Reliability Summary, February 26, 2009, pages 6 and 14.

<sup>67</sup> Response to Discovery, OC-964, 2009 System Load & Reliability Summary, February 26, 2009, page 9.

outages. ACE has increased VM funding over the past few years. The following table shows the actual spending for the past three years and the 2009 budget.

Year	Transmission	Distribution	Total
2006 - Actual	1,132	4,022	5,154
2007 - Actual	1,399	4,952	6,351
2008 - Actual	1,829	5,742	7,571
2009 - Budget <sup>68</sup>	1,920	4,815	6,735

Source: Response to Discovery, OC-814 and OC-972

The 2009 total budget is 31 percent higher than the 2006 actual spending. The 2009 budget is 11 percent lower than 2008 actual spending.

Actual distribution spending is shown below by district.

District	2006	2007	2008
Cape May	621	779	1,117
Glassboro	1,224	1,273	1,856
Pleasantville	1,032	1,294	1,173
Winslow	998	1,233	1,427
Unassigned	147	373	169
<b>Total</b>	<b>4,022</b>	<b>4,952</b>	<b>5,742</b>

Source: Response to Discovery, OC-814

The following table shows the details of the 2009 distribution VM budget.<sup>69</sup>

Category	Amount
Pruning (Tree Trimming)	4,272
Herbicides	452
Substations (mowing)	91
<b>Total</b>	<b>4,815</b>

Source: Response to Discovery, OC-972

The distribution tree trimming budget has the following two components:

<sup>68</sup> Contract tree trimming (Asplundh) represents about [BEGIN CONFIDENTIAL] [END CONFIDENTIAL] percent of PHI's total VM costs (Response to Discovery, OC-519, restricted). The remainder of the budget is for herbicides, mowing and administrative costs.

<sup>69</sup> Includes Administrative costs of \$485,020. The costs shown in the table include the administrative costs.

- Planned trimming<sup>70</sup> performed on pre-determined schedules for feeders selected during the annual planning process: and
- Reactive trimming<sup>71</sup> of problem trees identified during the year by ACE's operations department or customers.

Planned trimming accounts for 90 percent of the distribution tree trimming budget. The VM budget does not include the cost of contract tree crews used to restore service after outages.<sup>72</sup>

ACE had 544,000 customers as of December 2007. The 2009 distribution VM budget equals \$8.85 per customer. ACE participated in a benchmarking study that shows 2007 distribution VM spending per customer for 12 utilities.<sup>73</sup> The average for those utilities was \$13.34 per customer. For ACE, that equates to spending \$7.3 million per year on distribution VM, an increase of 51 percent over the amount budgeted for 2009.

The following table shows the actual miles of distribution overhead tree trimming in 2007 and 2008 and the planned miles for 2009.

Year	Miles Trimmed	Percent of Total Miles	Cost per Mile
2007 Actual	1,089	15	\$3,715
2008 Actual <sup>74</sup>	1,752	24	\$2,450
2009 Plan	1,919	26	\$1,991
Source: Response to Discovery, OC-816, OC-972 and OC-1040			

The average cost per mile was lower in 2008 than in 2007 because the feeders selected for trimming in 2008 had less vegetation per mile.<sup>75</sup> The 2007 budget was targeted at a level consistent with prior years. The high average cost per mile in 2007 necessitated a reduction in the number of miles trimmed to meet the budget target.

The New Jersey Vegetation Management Standards were adopted effective December 18, 2006. Those rules require a 4-year tree trimming cycle. The Standards indicate:<sup>76</sup>

<sup>70</sup> PHI refers to this as condition-based maintenance.

<sup>71</sup> PHI refers to this as reactive maintenance.

<sup>72</sup> Response to Discovery, OC-972.

<sup>73</sup> Response to Discovery, OC-658, PA Consulting Polaris 2008 T&D Final Report, page 147. There were 11 participants other than ACE. 8 out of those 11 had a better SAIFI score than ACE (page 204).

<sup>74</sup> ACE's 2008 Annual System Performance Report shows VM feeder miles of 1,352 in 2008 (Response to Discovery, OC-1168, Section C9). ACE's internal reports (OC-816) show 1,752 miles trimmed in 2008. The table uses the higher mileage figure from the internal reports.

<sup>75</sup> Response to Discovery, OC-975.

<sup>76</sup> New Jersey Electric Service Rules, N.J.A.C 14-5-9.4 (b).

“Each [Electric Distribution Company] shall perform vegetation management on vegetation that is close enough to pose a threat to its energized conductors at least once every four years.

The rules require the vegetation management to be performed “on a pro-rata basis over the four year cycle...to achieve full compliance by December 18, 2010.”<sup>77</sup>

The BPU has described the four year cycle as follows: <sup>78</sup>

A four year cycle means that within four years, all vegetation in the service territory will be inspected and appropriate cutting or trimming will occur as needed. The rules require the EDCs to schedule trimming and cutting activities on a pro rata basis to assure that one quarter of their service territory is maintained each year. This ensures that problem areas will not be ignored.

ACE’s 2008 and 2009 Vegetation Management distribution planned miles were calculated by dividing ACE’s total overhead distribution miles by 4 years. The miles were assigned to districts in a two step process. First, the feeders in ACE’s worst performing feeder program were selected for tree trimming. Second the remaining available miles were divided evenly among the four districts.<sup>79</sup> The allocation of the remaining available miles is adjusted slightly to accommodate the lengths of the selected feeders.

The distribution of 2008 actual costs between the districts closely followed the 2008 planned miles.

ACE describes its approach as a four-year cycle. That terminology does not mean all feeders are trimmed once every four years. Some feeders have not been trimmed in 19 years.<sup>80</sup> Other feeders are trimmed at intervals shorter than four years. ACE’s approach is to trim 25 percent of its overhead distribution miles annually and inspect each feeder at least once every four years.<sup>81</sup>

The following table shows the total miles of overhead distribution feeders in ACE’s system as of December 2008.

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<sup>77</sup>New Jersey Electric Service Rules, N.J.A.C 14-5-9.3 (I).

<sup>78</sup> BPU Notice of Solicitation of Informal Public Input, Review of the Regulatory Standards at NJAC 14.5-9 Applicable to Vegetation Management Within Wire and Boarder Zones of a Transmission Right of Way, issued June 4, 2008.

<sup>79</sup> In 2009, the remaining available miles was 1,058. PHI allocated 250 miles to each district (25 percent of 1,000) and assigned the other 58 miles to Winslow.

<sup>80</sup> Response to Discovery, OC-972, 2009 VM Plan, page 7.

<sup>81</sup> Response to Discovery, OC-975 and OC-971, page 22.

<b>Table 15-23 ACE Overhead Lines Distribution -Total Miles</b>	
<b>District</b>	<b>Total Miles</b>
Cape May	931
Glassboro	3,085
Pleasantville	1,916
Winslow	1,339
<b>Total</b>	<b>7,272</b>
Source: Response to Discovery, OC-1040	

The following table shows the planned miles in each district as a percentage of the total miles located in the district.

<b>Table 15-24 ACE Distribution Overhead Lines Miles Planned for Tree Trimming Percentage - 2008 and 2009</b>		
<b>District</b>	<b>Planned 2008</b>	<b>Planned 2009</b>
Cape May	49	43
Glassboro	17	20
Pleasantville	21	20
Winslow	41	33
System Average	26	25
Source: Response to Discovery, OC-1040		

In 2009, 43 percent of the feeder miles in the Cape May District were planned for trimming while only 20 percent of the miles in the Glassboro District were planned for trimming. That disparity is a product of ACE’s two step process for distributing total planned miles to its four districts.

The following table shows the miles in each district that have not been trimmed in the past 10 years.

<b>Table 15-25 ACE Overhead Distribution Miles Not Trimmed Since 1999 - By District</b>		
<b>District</b>	<b>Miles</b>	<b>Percent</b>
Cape May	125	13
Glassboro	658	21
Pleasantville	172	9
Winslow	75	6
<b>Total</b>	<b>1,030</b>	<b>14</b>
Source: Response to Discovery, OC-1040		

Each district is allocated one fourth of the total miles remaining after the worst performing feeders are accounted for. Those miles are divided between high tree SAIFI and low tree SAIFI categories within each district. High tree SAIFI feeders are selected for trimming as part of the condition based maintenance approach. Low tree SAIFI feeders are selected to provide coverage to feeders that have not been trimmed in many years. In 2009, 13 of the 31 selected Low Tree SAIFI feeders had not been trimmed in the prior 10 years.

The following table shows the 2009 planned miles by district and category.

Category	Cape May	Glassboro	Pleasantville	Winslow	Total
Worst Performing Feeder Program	205	266	143	247	861
High SAIFI	137	123	81	134	475
Low SAIFI	111	122	175	175	583
<b>Total</b>	<b>453</b>	<b>511</b>	<b>399</b>	<b>556</b>	<b>1,919</b>

The worst performing feeder program represents 52 percent of the 2009 planned miles for the Glassboro district.

Tree SAIFI is much higher in the Glassboro district than the other districts. The following table shows the miles in each district with a tree SAIFI exceeding one.<sup>82</sup>

District	Miles	Percent
Cape May	58	6
Glassboro	1,152	37
Pleasantville	204	11
Winslow	333	25
<b>Total</b>	<b>1,747</b>	<b>24</b>
Source: Response to Discovery, OC-1040		

A November 2007 PHI Internal Audit noted that “[**BEGIN CONFIDENTIAL**]

[**END CONFIDENTIAL**].”<sup>83</sup> The

audit report indicates giving high priority to selected feeders based on regulatory mandates has resulted in some low priority feeders going several years without tree trimming. The result was overgrowth conditions in those low priority areas. The audit report concludes “ [**BEGIN CONFIDENTIAL**]

[**END**

**CONFIDENTIAL**].”

ACE’s VM program is driven by two regulatory requirements:

<sup>82</sup> Tree SAIFI represents the number of outages in a year caused by tree contact.

<sup>83</sup> Response to Discovery, OC-519. Restricted. November 20, 2007 Vegetation Management Internal Audit Report, pages 2 and 3. The audit scope included all three PHI utility service territories. However, most of the audit field inspections were done in Pepco’s service territory.

- The worst performing feeder program required by the BPU's reliability standards, and
- The four-year cycle required by the BPU's vegetation management standards.

Those requirements are minimum requirements, not optimum performance targets. ACE's reliability performance is below average. Significant portions of its system are overgrown with vegetation. In light of those conditions, ACE should go beyond the BPU's minimum vegetation management requirements.

**ACE does not have an effective off right-of-way hazard tree program.** Approximately 40 percent of the tree related outages on ACE's system were attributable to trees located outside of ACE's right-of-way in 2008.<sup>84</sup> Trees located outside of the right-of-way that potentially threaten overhead lines are referred to as hazard trees. Hazard trees can fall onto power lines during strong storms, causing significant delays in outage restoration.

ACE cannot trim hazard trees without the permission of the property owner. ACE identifies hazard trees in its inspection processes. Where permission is granted, ACE trims or removes those trees.<sup>85</sup> ACE does not offer any incentives to property owners to allow access to hazard trees. ACE does not have any initiatives directly aimed at encouraging property owners to allow access.<sup>86</sup> ACE should review industry best practices for off right-of-way tree management and develop an effective strategy for managing off row hazard trees.

**ACE's vegetation management staffing may be inadequate.** ACE's VM activities are managed by the PHI Vegetation Management Department. The department is staffed by eleven foresters.<sup>87</sup> Two of the foresters are assigned to transmission lines. The remaining nine are assigned to distribution lines in specific geographical areas. Two foresters are assigned to ACE.<sup>88</sup>

The foresters perform the following activities:

- Develop the plan for their districts and schedule the work with the contractor.
- Oversee the performance of the Contractor, approve the invoices, and inspect the work.

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<sup>84</sup> Response to Discovery, OC-1068.

<sup>85</sup> Response to Discovery, OC-1068.

<sup>86</sup> Response to Discovery, OC-1068. ACE encourages owners to utilize the "right tree - right place" program to select compatible trees when planting adjacent to its ROWs on its web site and in occasional bill stuffers. That program does not address tree trimming access for existing hazard trees.

<sup>87</sup> Response to Discovery, OC-519, restricted.

<sup>88</sup> Response to Discovery, OC-816. One is assigned to the Cape May and Glassboro districts. The other forester is assigned to the Pleasantville and Winslow districts.

- Follow-up on tree trimming complaints from customers and regulators.<sup>89</sup>

During 2007 and 2008 ACE received a total of 4,003 complaints and 1,652 resulted in work being performed. All of the complaints were investigated within 30 days.<sup>90</sup>

The PHI tree trimming contract is a units-based contract with Asplundh, a national contractor.<sup>91</sup> Prior to 2008, the foresters used a variety of personal computer based spreadsheets to track VM conditions and activities. The department implemented SAP-PM in September 2008.<sup>92</sup> SAP-PM provides a centralized data base to track VM costs, completion dates and schedules for every circuit on the PHI system.<sup>93</sup>

Currently two foresters manage distribution VM for ACE. Each of those foresters is responsible for approximately 3,650 miles of overhead lines.<sup>94</sup> Increasing the focus on vegetation management may require an increase in forestry headcount.

## **2009 Reliability Budgets**

**ACE increased its reliability maintenance budget in 2009.** The PHI Asset Reliability Planning group prepares an annual reliability maintenance budget for ACE. The budget represents ACE's reliability plan for the upcoming year.<sup>95</sup>

The reliability maintenance budget includes all maintenance for equipment included in ACE's transmission and distribution systems, including activities that are not focused on improving reliability.<sup>96</sup> ACE uses reliability centered maintenance (RCM) as a guide for preparing the annual maintenance budget.<sup>97</sup> RCM focuses on substation equipment and consists of a series of books for specific equipment types.<sup>98</sup> The books outline the maintenance strategy and assessment and maintenance plans for the equipment. RCM includes guidelines for preventative maintenance cycles, equipment failure modes and effects, and equipment

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<sup>89</sup> Response to Discovery, OC-519, restricted. When landowners/customers submit non-emergency complaints, the forester contacts the customer within five days (OC-815). ACE's initial response normally occurs within one day of receiving the complaint. Asplundh provides investigators to determine the work that needs to be done to resolve the complaint.

<sup>90</sup> Response to Discovery, OC-815.

<sup>91</sup> Response to Discovery, OC-815.

<sup>92</sup> Response to Discovery, OC-816. SAP-PM is a preventative maintenance management system.

<sup>93</sup> SAP-PM provides the ability to generate dashboard reports on VM for executive management. Response to Discovery, OC-816.

<sup>94</sup> Response to Discovery, OC-1040. ACE has 7,272 total overhead feeder miles.

<sup>95</sup> Response to Discovery, OC-65 (restricted).

<sup>96</sup> Overland Interview with Chester Knapp, PHI Power Delivery, Manager Reliability Group. For example, the Street Light Group Replacement project is not related to reliability according to Mr. Knapp.

<sup>97</sup> Reliability Centered Maintenance was initially developed by the airline industry and was subsequently adopted by the nuclear power industry. Under RCM, maintenance intervals are based on the condition of the equipment rather than the passage of time.

<sup>98</sup> Overland Interview with Chester Knapp, PHI Power Delivery, Manager Reliability Group.



condition assessment guidelines.<sup>99</sup> Under RCM, maintenance cycles are based on equipment condition instead of manufacturer's guidelines.

The budget lists planned expenditures by activity and operating district. The 2007 plan includes approximately 170 line items.<sup>100</sup> The following table summarizes the budgets for 2005 through 2009.

Description	2005	2006	2007	2008	2009
Circuit Breakers <sup>101</sup>	654	619	771	532	604
Line Capacitors <sup>102</sup>	479	516	270	171	399
Communications Systems	812	810	985	959	1,103
Infrared Inspections	117	143	67	60	83
Line Patrols	84	85	105	109	199
Pole Inspection & Treatment	408	493	396	494	659
Reclosers & Sectionalizers	420	437	555	674	270
Worst Performing Feeder Program & Customer Satisfaction Goals <sup>103</sup>	284	342	394	394	400
Relays	511	485	420	436	648
Street Light Group Replacement <sup>104</sup>	413	510	500	325	621
Other Substation	661	681	463	482	616
Switching	105	74	211	194	222
Transformers	597	794	678	969	1,385
Buried Distribution Lines	30	42	96	50	84
Vegetation Management	4,407	5,460	5,898	6,502	6,637
Miscellaneous	275	310	335	411	167
<b>Total</b>	<b>10,257</b>	<b>11,801</b>	<b>12,144</b>	<b>12,762</b>	<b>14,097</b>

Source: Response to Discovery, OC-65 (restricted) & OC-1033. Overland Classification of activities.

Vegetation management is almost half of the budget. Vegetation management funding is discussed in a separate section of this Chapter.

The following table shows the budget totals excluding vegetation management.

<sup>99</sup> Response to Discovery, OC-37, Orientation Presentation, page 28.

<sup>100</sup> Response to Discovery, OC-65 (restricted). A single activity budgeted for each of ACE's four districts is shown as four line items (one for each district).

<sup>101</sup> Circuit breaker maintenance decreased in 2008 due to anticipated equipment replacements and the completion of a comprehensive oil sampling program in 2007. Response to Discovery, OC-514.

<sup>102</sup> Capacitor maintenance decreased in 2007 due to anticipated equipment replacements included in the construction budget. Response to Discovery, OC-514.

<sup>103</sup> Customer Satisfaction Goals refers to activities undertaken to improve ACE's scores on reliability questions included in the annual customer satisfaction survey.

<sup>104</sup> This is a program to replace mercury vapor lamps in street lights. The replacements are required by federal legislation.

Year	Amount	Percent Increase
2005	5,850	NA
2006	6,341	8.4
2007	6,246	(1.5)
2008	6,260	0.2
2009	7,460	19.2
Source: Response to Discovery, OC-65 (restricted) and OC-1033		

The 19 percent increase in 2009 was spread broadly across the maintenance categories. The categories with the largest dollar increases were transformers, street light group replacement and line capacitors. The only categories that decreased in 2009 were reclosers & sectionalizers and miscellaneous maintenance. Excluding vegetation management, the 2009 budget is 28 percent higher than the 2005 budget.

**ACE's revised 2009 construction budget includes substantial funding for reliability improvement initiatives.** ACE reduced its original construction budget in February 2009 to reflect cash conservation measures. ACE reduced the budgets for distribution feeder reliability improvements and residential underground line replacements by \$4.4 million.<sup>105</sup>

After the reductions, the capital budgets for ACE's reliability initiatives were approximately \$3.0 million lower than the 2008 budgets for those items.<sup>106</sup> On an overall basis, the reduced reliability construction budget was \$10 million lower than the 2008 budget.<sup>107</sup>

On April 28, 2009, the BPU approved an infrastructure investment program for ACE as an economic stimulus measure.<sup>108</sup> That program increased ACE's 2009 reliability construction budget by \$11.5 million over the previously reduced amount. The following table shows those increases by category.

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<sup>105</sup> Response to Discovery, OC-1034. ACE reduced residential URD replacement by \$1.4 million. ACE reduced the miscellaneous reliability improvements budget item by \$3.0 million.

<sup>106</sup> Response to Discovery, OC-515 and OC-1034. Initiative categories include tree wire and reconductoring, replacing underground cable, the worst performing feeder program, 4 kv conversion, distribution automation and miscellaneous reliability improvements.

<sup>107</sup> Response to Discovery, OC-515 and OC-1034. ACE classifies the projects included in its construction budget into the following categories: customer driven, load growth, PJM required, reliability and other.

<sup>108</sup> Response to Discovery, OC-1089.

<b>Table 15-30</b> <b>ACE Infrastructure Investment Program</b> <b>Increases to the Reliability Construction Budget</b> <b>Year 2009</b> <b>Dollars in Thousands</b>	
Category	Amount
Tree Wire and Line Reconductoring	4,500
Distribution Automation	3,000
Replace Underground Cable	1,475
Substation Spill Prevention Control Plans	1,000
Replace 4 kV lines	500
Motor Operated Switches	500
Other	481
<b>Total</b>	<b>11,456</b>
Source: Response to Discovery, OC-1090	

The infrastructure investment program also includes \$15.2 million in reliability capital spending in 2010 in the same general categories.<sup>109</sup>

The following table shows the 2007 through 2009 reliability construction budgets, including the infrastructure investment program.

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<sup>109</sup> Response to Discovery, OC-1089.

**Table 15-31**  
**ACE Reliability Construction Budget**  
**2007 through 2009**  
**Dollars in Thousands**

Description	2007	2008	2009
Failed Equipment Emergency Replacement <sup>110</sup>	24,217	24,584	31,063
Other Projects Under \$500,000 <sup>111</sup>	2,314	6,391	4,029
Misc. Distribution Improvements <sup>112</sup>	4,090	4,283	3,731
Substation Spill Prevention Control Plans	587	3,125	4,951
Tree Wire and Re-conductor Lines	0	4,353	7,297
Replace or Restore Buried Cable	611	3,127	3,848
Replace Transformers at Monroe Substation	0	5,005	0
Spare Transformers	448	3,389	27
Worst Performing Feeder Program	798	942	1,032
Pole Inspection and Replacement	305	999	1,452
Replace Capacitor Bank Switches & Controllers <sup>113</sup>	0	2,742	0
Convert 4kV lines to 12kV	0	2,271	913
Distribution Automation	0	1,153	3,910
Motor Operated Switch Upgrades - Pleasantville	0	0	500
Telemetry on Capacitor Banks	0	1,233	498
Misc. Reliability Improvements <sup>114</sup>	0	0	1,296
Distribution Relays	0	1,147	0
Rebuild Deepwater to Laurel 69kv Line	0	0	1,108
Cyber Security	112	106	756
SCADA System	0	272	581
Stickler T1 Replacement	0	586	0
Positron Replacement	0	536	0
Install Optical Overhead Ground Wire <sup>115</sup>	0	0	509
<b>Total</b>	<b>33,482</b>	<b>66,244</b>	<b>67,501</b>

Source: Response to Discovery, OC-515, OC-1034, OC-1090 and Overland classification of projects.

The revised 2009 budget includes increases compared to 2008 of approximately \$8 million for tree wire, line reconductoring, replacement of underground cable, distribution automation and other reliability improvement initiatives. On an overall basis, the current 2009 reliability construction budget is \$1.3 million higher than the 2008 budget.

With the infrastructure investment program, ACE will have approximately \$40 million in capital funding for its reliability improvement initiatives in 2009 and 2010 combined.<sup>116</sup> That funding

<sup>110</sup> This budget line item is a blanket work order for the replacement of equipment that fails during the budget year. The annual budget amount is based on historical failure rates. OC-516.

<sup>111</sup> This category includes small projects under \$500,000. The category includes 20 projects in 2007, 38 projects in 2008 and 29 projects in 2009.

<sup>112</sup> This is a "blanket" budget item based on past expenditure levels to cover numerous small projects.

<sup>113</sup> Replacement of capacitor bank oil-filled disconnect switches in Pleasantville district that were failing because of salt contamination. OC-517.

<sup>114</sup> This is a "blanket" budget item to cover unspecified reliability projects. The incremental funding in the infrastructure improvement plan for this budget item consists of money for tree wire installation and line reconductoring.

<sup>115</sup> Optical Fiber Composite Overhead Ground Wire (OPGW) consists of fiber optic cable with metallic tubing that provides both communication and grounding capabilities. OPGW is used on high voltage transmission lines.

<sup>116</sup> Response to Discovery, OC-1040 and OC-1090. Initiative categories include tree wire and reconductoring, replacing underground cable, the worst performing feeder program, 4 kv conversion, distribution automation and miscellaneous reliability improvements.

should be sufficient to produce a substantial improvement in ACE's reliability metrics by its target date of 2012.

### **Opportunities for Improvement**

**PHI has identified a large number of ways to improve reliability.** The reliability summits generated a large number of ideas for preventing outages, reducing outage duration and improving the reliability management process.

The reliability summits identified or implied the following initiatives for improving the reliability management process.

- Establishing a reliability process manager to provide centralized authority and responsibility for reliability processes.
- Establishing clear and consistent reliability goals and aligning those goals across organizational lines.
- Implementing quarterly reliability meetings that bring together all of the organizations involved in the reliability processes.
- Creating an organization within each district focused on service restoration.
- Improving reliability metrics to enhance root cause analysis.
- Analyzing alternative reliability improvement initiatives with "business case rigor."
- Preparing an annual plan to accomplish the reliability goals and communicate the reliability strategies and plans to various organizations.
- Improving the operating and capital budget processes to provide stable funding for reliability improvement initiatives.
- Tracking actual spending to ensure that planned initiatives are implemented as planned.

Some potential initiatives for preventing outages are listed below. PHI identified most of the listed items in the reliability summit process.

- Expanding and improving vegetation management.
- Replacing existing distribution conductors with tree wire.

- Replacing or refurbishing underground residential distribution lines.
- Selective under-grounding or re-rerouting of problem feeders.
- Using Exactor's outage avoidance system to identify failing equipment on overhead distribution lines before the equipment causes an outage.
- Focusing vegetation management and feeder hardening efforts on feeders experiencing high outage levels through the worst performing feeder program.
- Replacing aging 4kV distribution lines with 12kV lines.
- Enhancing preventative maintenance, including a proactive replacement program for oil-filled circuit breakers.
- Applying reliability best practices across the life cycle of equipment from planning, design, construction, operation, and maintenance to repair.
- Reconfiguring the system to enhance reliability, including additional loop feeds.
- Improving lightning protection, including installing additional lightning arresters.
- Improving animal guards.

Some alternatives for reducing outage duration are listed below. PHI identified most of the listed items in the reliability summit process.

- Improving the process used to dispatch troublemen and repair crews.
  - Changing work rules to allow the job to be assigned to the nearest troubleman or crew.
  - Providing the dispatchers with GPS capability so they know the location of the troublemen and crews.
  - Developing a process for dispatching troublemen and repair crews simultaneously. Currently repair crews are not dispatched until the troubleman has diagnosed the problem.
  - Dispatching tree crews to remove fallen trees earlier so that repair crews do not have to wait for the arrival of the tree crew.
  - Improving the mobile dispatch process
- Increasing crew staffing on nights and weekends.
  - Providing 24 hour coverage for troublemen
  - Overlapping shifts to avoid the delay in assigning tickets that occurs during shift changes.

- Increase repair crew staffing on weekends.
- Focusing more attention on bad weather days. Automatically elevating outage information to higher levels of management so resources can be called in sooner.
- Increasing materials inventory, including increasing the inventory of spare transformers.
- Installing automatic sectionalizer and restoration systems to enable faster restoration.
- Installing fault finding devices on distribution feeders to speed the process of finding the fault location and reduce damage assessment patrolling time.
- Enhancing tree trimming to reduce the number of outages during major events that would otherwise overwhelm the system.
- Providing communications between the call centers and the repair crews to identify customers who continue to report outages after their main feeder has been restored (to determine if there is another fault on their service line).
- Using temporary repair methods (such as jumper cables, pad-mounted transformers and portable generators) to restore service quickly. Implementing subsequent permanent repairs on a planned basis.
- Enhancing data integrity in the OMS to reduce the number of inaccurate outage cause predictions during major events.
- Increasing staffing for the wires down safety-stand function so that troublemen and patrollers are not diverted to that function.
- Enhancing outage reporting through distribution automation and the installation of automated metering (AMI).

Outage duration tends to be event driven. A relatively small number of bad weather days produce a high percentage of long duration outages. Increasing resource allocation and efficiency during those days has the greatest potential for improving CAIDI.

The reliability summits identified significant opportunities for improvement in ACE's service restoration process. Some of those improvements require the consent of IBEW local 210. <sup>117</sup>

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<sup>117</sup> IBEW Local 210 represents ACE's troublemen and repair crews.

ACE has a constructive relationship with IBEW Local 210.<sup>118</sup> ACE's should use its CAIDI benchmarking results as a tool to encourage the incorporation of service restoration best practices into its union work rules.

**PHI's reliability goals need improvement.** ACE's incentive pay plan provides annual payouts of 5 to 15 percent of base pay for achieving performance targets.<sup>119</sup> The performance targets for the Power Delivery business unit are set at two levels. The two levels are given equal weight. The first level is referred to as Tier 1 and consists of goals that apply to the entire Power Delivery business unit. The second level, referred to as Tier 2, consists of executive level goals for six organizations within power delivery.<sup>120</sup> The goals are listed on each organization's balanced scorecard.<sup>121</sup>

The Reliability Summits concluded that misaligned goals negatively impacted reliability by creating conflicts in the priorities of the Asset Management and Operations organizations. PHI's efforts to properly align reliability goals in 2009 are focused on the balanced scorecard goals.<sup>122</sup>

The Power Delivery 2009 Tier 1 goals are shown below.

Goal	Threshold <sup>123</sup>	Target	Stretch	Weight
Customer Survey - Residential Reliability	72%	74%	77%	5%
SAIFI - MED exclusive	1.55	1.46	1.38	10%
CAIDI - MED inclusive	138	131	115	10%
Source: Response to Discovery, OC-1035				

The 2009 target goals reflect mediocre performance. The SAIFI target goal would have ranked 43rd out of 67 in the 2007 EEI survey.<sup>124</sup> The CAIDI target would have ranked 30th.

The Tier 2 goals for PHI's Asset Management and Operations Departments contain reliability goals. Asset Management includes the PHI Reliability Group, Distribution Engineering, System Planning and Transmission and Substation Engineering.<sup>125</sup> The following table shows the reliability goals for PHI Asset Management.

<sup>118</sup> See Chapter 22 and Response to Discovery, OC-458.

<sup>119</sup> The target payout levels vary by pay grade with higher payout targets for higher pay grades. The incentive pay plan is described in more detail in the Human Resources Chapter. Response to Discovery, OC-75.

<sup>120</sup> Response to Discovery, OC-416

<sup>121</sup> The Balanced scorecards are one or two page tables for each area with five columns. The first column lists the title of each goal. The next three columns list the threshold, target and stretch values for each goal. The fifth column lists the percentage weight given to the goal in the annual incentive plan calculations.

<sup>122</sup> Response to Discovery, OC-1035

<sup>123</sup> The incentive pay plan assigns a score of zero to goals that do not meet the threshold. Goals that meet the target are assigned a score of 100 percent. Goals that meet or exceed the stretch goal are assigned a score of 150%.

<sup>124</sup> Response to Discovery, OC-969 Restricted.

<sup>125</sup> Response to Discovery, OC-18



<b>Table 15-33</b> <b>PHI Power Delivery 2009 Tier 2 Reliability Goals</b> <b>PHI Asset Management</b>				
Goal	Threshold	Target	Stretch	Weight
Customer Survey - Reliability & Restoration Score	79	81	84	5%
CEMI (8 outages) - MED inclusive	7,500	6,800	6,100	10%
Source: Response to Discovery, OC-1035				

The customer survey reliability & restoration score reflects the responses to a combination of questions from the annual customer satisfaction survey.<sup>126</sup> The target is based on survey results for all three PHI utilities. The 2008 actual customer survey reliability & restoration score was 79.<sup>127</sup> The actual 2008 CEMI score was 7,554.<sup>128</sup>

The Asset Management goals place insufficient weight on reliability. The 15% total weighting for reliability is only half the weight given to containing operations, maintenance and capital costs.<sup>129</sup> The Asset Management organization's functions impact outage frequency much more than they restoration process duration. Asset Management's goals need a stronger focus on outage prevention. Asset Management should adopt a SAIFI goal.

The PHI Operations Department includes system operations and district operations. System operations is responsible for dispatching work crews in response to trouble calls. District operations is responsible for restoring service after an outage occurs.

The following table shows the 2009 reliability goals for PHI Operations.

<b>Table 15-34</b> <b>PHI Power Delivery 2009 Tier 2 Reliability Goals</b> <b>PHI Operations</b>				
Goal	Threshold	Target	Stretch	Weight
Customer Survey - Outage Performance	68	70	73	5
Customer Survey - Reliability & Restoration	79	81	84	5
CELID (6 hour) - Med exclusive	154,000	146,000	138,000	5
ETR Accuracy (percentage)	75	80	85	5
Source: Response to Discovery, OC-1035				

The 2008 actual outage performance score was 68 and the actual reliability & restoration score was 79.<sup>130</sup> The CELID (6 hour) goal reflects the number of PHI customers experiencing an outage of over 6 hours during the year. The 2008 actual CELID score was 153,746.<sup>131</sup>

<sup>126</sup> The Corporate Communication Department and the Operations Department have the same Tier 2 goal for the Reliability & Restoration Score. The goal is given a 10 percent weight in the Corporate Communications balanced scorecard.

<sup>127</sup> Response to Discovery, OC-970.

<sup>128</sup> Response to Discovery, OC-813.

<sup>129</sup> Response to Discovery, OC-1035.

<sup>130</sup> Response to Discovery, OC-970.

<sup>131</sup> Response to Discovery, OC-1035.

The estimated restoration time (ETR) accuracy target reflects the percentage of customers whose power is restored within 2 hours of the time estimate that ACE provided to the customer.<sup>132</sup>

The 2009 PHI Operations Department goals reflect very modest improvements over 2008 actual results. The Operations Department has an important role in the outage restoration process. CAIDI is the best measure of outage restoration performance.<sup>133</sup> The PHI Operations Department goals should be more focused on CAIDI.

PHI adopted additional 2009 reliability goals for its regional operations outside of the balanced scorecard process. The following table compares the additional reliability goals for the ACE Region to actual 2008 results.

<b>Table 15-35</b> <b>ACE Region Operations</b> <b>Additional 2009 Reliability Goals</b>		
Goal	2009 Goal	2008 Actual
CELID (6 hours) - MED exclusive	21,000	22,112
CAIDI - MED exclusive	105	110
CAIDI - MED only	283	298
Source: Response to Discovery, OC-1035		

The following table shows the number of ACE customers experiencing an outage of 6 or more hours for 2004 through 2008 (MED exclusive).

<b>Table 15-36</b> <b>ACE Region CELID</b> <b>Outage Duration of 6 or More Hours</b> <b>Excluding Major Event Days</b> <b>2004 - 2008</b>	
Year	Customers
2004	14,682
2005	13,955
2006	35,710
2007	22,795
2008	22,112
Source: Response to Discovery, OC-507 and OC-813	

The 2009 CELID target represents a modest improvement over 2007 and 2008.

The following table shows ACE's CAIDI metric for the past five years excluding major event days.

<sup>132</sup> Response to Discovery, OC-221.

<sup>133</sup> Response to Discovery, OC-1036.

Year	Minutes
2004	88
2005	104
2006	124
2007	106
2008	110
Source: Response to Discovery, OC-507 and OC-813	

ACE's 2009 goal of 110 minutes is worse than its actual performance in 2004 and 2005 and only slightly better than its 2007 performance.

The purpose of the reliability goals is to motivate performance. PHI's balanced scorecards have included reliability goals for several years. Those goals have not been sufficient to motivate the desired level of performance. PHI needs to adopt goals that require larger performance improvements and assign a greater weight to those goals in the balanced scorecard process.

PHI should also develop additional goals for outage prevention and service restoration outside of the balanced scorecard process. The additional goals in the operations department should extend down to the district and supervisor level. PHI should consider implementing a modest employee recognition and rewards program at a district and supervisor level to encourage improved outage restoration performance. PHI should also consider incorporating some modest incentives in the Asplundh tree trimming contract to encourage a greater focus on decreasing tree related outage frequency.

## **Power Quality**

**ACE does not track power quality complaints.** The BPU's Reliability Standards require ACE to have a program to maintain acceptable power quality.<sup>134</sup> Power quality is defined as:<sup>135</sup>

...the characteristics of electric power received by the customer, with the exception of sustained and momentary event interruptions.

Characteristics of electric power that detract from its quality include waveform irregularities and voltage variations - either prolonged or transient. Power quality problems shall include, but are not limited to, disturbances such as high or low voltage, voltage spikes or transients, flickers and voltage sags, surges and short-time overvoltages, as well as harmonics and noise.

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<sup>134</sup>New Jersey Electric Service Rules, N.J.A.C 14-5-8.4.

<sup>135</sup>New Jersey Electric Service Rules, N.J.A.C 14-5-1.2. Momentary event interruptions are defined as interruptions limited in duration to the time required to restore service by an interrupting device such as a line recloser. Momentary event interruptions are generally 5 minutes or less. PHI uses a different definition of momentary interruptions internally. PHI defines momentary interruptions as interruptions lasting less than 3 second. (Response to Discovery, OC-230).

The Power Quality section of ACE's Engineering Standards provides guidance on incorporating power quality into design standards and investigating customer complaints about power quality. ACE's power quality standards were adopted in 1997 and have not changed materially since that time.<sup>136</sup>

The Manager of PHI's Reliability Group indicated that power quality has not been a significant problem for ACE. ACE's power quality performance is comparable to that of other utilities.<sup>137</sup>

ACE has installed power quality monitoring devices at certain large customer locations.<sup>138</sup> ACE plans on installing 4,000 power quality monitors on its system as part of its smart grid initiatives. In addition, ACE's advanced metering infrastructure (AMI) initiatives will include some form of power quality monitoring at each meter.<sup>139</sup>

ACE does not track momentary interruptions because large parts of its system do not have the necessary monitors and communications capability. Currently, ACE can only capture momentary interruption data at substations equipped with SCADA.<sup>140</sup> Momentary interruptions caused by the operation of line equipment, such as circuit reclosers, are not monitored. PHI is implementing the Momentary Average Interruption Frequency Index (MAIFI) in 2009 to track momentary interruptions.<sup>141</sup> The metric will be limited to areas with monitoring capability.

ACE does not currently track customer power quality complaints. ACE is unable to provide a list of the power quality complaints received or investigated in 2007 and 2008.<sup>142</sup> ACE should establish a system for tracking and analyzing power quality complaints.

## **Recommendations**

**PHI should prepare a comprehensive reliability improvement plan by March 31, 2010.** PHI is using 2009 to analyze and plan reliability improvement initiatives and to make improvements in the reliability management process. PHI should prepare a comprehensive report by March 31, 2010 that explains its reliability improvement strategies, plans and initiatives. The report should explain how the initiatives and improvements relate to ACE and provide sufficient detail to understand the improvement plans for each of ACE's four districts.

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<sup>136</sup> Response to Discovery, OC-230.

<sup>137</sup> Overland Interview with Chester Knapp, PHI Power Delivery, Manager Reliability Group.

<sup>138</sup> Response to Discovery, OC-230.

<sup>139</sup> Response to Discovery, OC-230.

<sup>140</sup> Response to Discovery, OC-1037.

<sup>141</sup> Response to Discovery, OC-1037. MAIFI represents the number of momentary interruptions experienced by the average customer. It is calculated by dividing the number of momentary interruptions by the total number of customers on ACE's system.

<sup>142</sup> Response to Discovery, OC-231 and OC-232.

The reliability plan should describe PHI's approach to centralizing, integrating and coordinating the management of reliability processes. The plan should explain how the strategy of centralizing oversight and accountability for reliability is being extended into ACE's district organizations. The plan should also address.

- Industry best practices pertaining to reliability and a comparison of the best practices to PHI's practices.
- PHI's outage prevention strategies and initiatives.
- PHI's service restoration strategies and initiatives.
- The results of PHI's 2009 vegetation management policy review.
- Benchmarking of ACE's vegetation management spending to other utilities.
- Estimated costs and impacts for each initiative.
- Business case analysis for each initiative.
- Alternative initiatives that were considered but not ultimately selected.
- The justification for the proposed plan.
- Proposed funding and implementation schedules for each initiative.

**ACE should increase its vegetation management funding.** ACE has not adequately funded vegetation management in the past. As a result, overgrowth conditions exist on parts of its system. ACE's 2009 budget reflects a plan to trim 25 percent of the overhead lines in its system in 2009. That budget is not adequate to eliminate the overgrowth conditions on its system.

ACE's 2009 budget for VM equals \$8.85 cents per customer. That is significantly lower than the average reported in a 2007 benchmarking study. One problem is the method ACE uses to select feeders for trimming. ACE gives the highest priority to the lines included in its worst performing feeder program. Those lines account for 45 percent of the miles scheduled for trimming in 2009. The worst performing feeder program should supplement ACE's normal efforts. Under ACE's approach, the worst performing feeder program diverts tree trimming resources away from its normal efforts.

The BPU VM rules require a four year cycle. The BPU requirements are minimum standards. Basing ACE's plans on the minimum regulatory requirements is not appropriate. ACE should adopt a more objectives based VM policy that reflects its new reliability goal.

PHI plans to initiate a VM policy review in 2009. That review provides an opportunity to address ACE's VM funding in 2010 and beyond. The 2009 VM policy review should address VM strategies for off right-of-way trees. The 2009 VM policy review should also address VM staffing adequacy.

**ACE should provide consistent stable funding for reliability initiatives.** The reliability summits identified funding fluctuations caused by cost reduction directives as a contributor to poor reliability performance. In the past, PHI's "focus on cost controls and changing financial

pressures overwhelmed performance.”<sup>143</sup> The Reliability Summit Recommendations Summary identifies the following budget issues.

- O&M budget cuts adversely impact reliability initiatives.
- Due to the low priority of reliability projects, and the current budget cycle timing, large amounts of reliability capital dollars are not released until the 4<sup>th</sup> quarter of each year. This is too late to complete the jobs before year-end. As a result, the funding is not spent.
- Projects that are assigned as “reliability projects” in the budget allocation process are not truly reliability related.

PHI has adopted a commendable goal of achieving first quartile reliability performance by the end of 2012. Accomplishing that goal will require consistent stable funding. Treating reliability initiatives as discretionary funding that can be reduced to meet short-term budget targets sends the wrong message to employees. Frequent funding changes also reduce the cost-effectiveness of the programs.<sup>144</sup>

ACE reduced the capital budgets for its reliability initiatives as part of its 2009 cash conservation measures. ACE’s 2009 vegetation management budget is 11 percent lower than actual 2008 spending. ACE should increase the priority given to reliability initiatives so funding does not fluctuate significantly from year-to-year based on temporary cost containment objectives.

ACE should limit its reliability maintenance and capital budgets to items that are primarily intended to maintain or increase reliability. Including extraneous items in those budgets sends a confusing message to employees concerning management’s focus on improving reliability.

**ACE should improve the metrics it uses to measure reliability.** Classifying outages by cause is essential to developing cost-effective strategies for improving SAIFI. ACE only has one category for weather. The weather category does not distinguish outages caused by lightning from outages caused by ice, flooding or wind. ACE only has one category for tree related outages. That does not allow ACE to track the damage caused by trees that are located outside of ACE’s right-of-way.<sup>145</sup> ACE only has one category for equipment failure. That does not allow ACE to track the type of equipment that failed.<sup>146</sup> PHI recognizes the need for more detailed

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<sup>143</sup> 2008 PHI Reliability Summit Summary, October 27, 2008, page 7.

<sup>144</sup> 2008 PHI Reliability Summit Summary, October 27, 2008, page 5.

<sup>145</sup> ACE cannot trim trees outside of its right-of-ways without the property owners permission. Tracking outages caused by trees located outside of the right-of-way provides information needed to design an effective program for off right-of-way trees.

<sup>146</sup> One alternative would be a two step pull down menu that requires the troubleman to select from a menu of equipment types after the troubleman selects equipment failure as the general cause category.

outage cause categories and is reviewing the categories this year.<sup>147</sup> ACE should implement more detailed outage cause classifications.

Identifying the reasons for excessive outage durations requires analysis of the durations by component, organizational unit and working conditions. For example, excessive dispatch durations may indicate a need to increase resources in the system control room. Longer durations during weekends may indicate a need to increase weekend staffing levels. Longer durations during storm response efforts may indicate a need to activate resources earlier during the storm response process.

The duration of a service restoration effort includes several components, including outage notification, dispatch, travel, troubleshooting (diagnoses), switching and repair. Analyzing outage duration by those components provides insight into the root cause of excessive outage durations.

Tracking CAIDI at a supervisor level allows the supervisors and crews to be held accountable for their performance.

PHI currently requires district management to review outages exceeding 6 hours to identify contributing factors and opportunities for improvement.<sup>148</sup> ACE should consider tracking the causes of long durations in its OMS. That could be accomplished by requiring the crew supervisor to classify the cause of durations exceeding a specified length using a pre-established menu. Examples of cause classifications include crew availability, site access, weather conditions, tree crew delay, fault locating difficulty, and materials procurement delay. It may be appropriate to provide the option of selecting more than one cause.

PHI is currently reviewing its CAIDI performance under various working conditions.<sup>149</sup> PHI's review may determine that a sampling approach is a more efficient method of analyzing duration components and long-duration causes. If a sampling approach is used, it should be repeated periodically so the initial results can be benchmarked and trends can be analyzed over time. PHI should consider the alternative methods for gathering the data and select the method that makes the most long-term sense for its system.

**ACE should include more information in its Annual System Performance Report.** The BPU's Reliability Standards require ACE to submit an annual system performance report. The reports submitted by ACE include:

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<sup>147</sup> Response to Discovery, OC-1037.

<sup>148</sup> Response to Discovery, OC-1037.

<sup>149</sup> Response to Discovery, OC-1037.

- SAIDI, CAIDI, SAIFI and outage cause metrics.
- General descriptions of ACE's equipment inspection and maintenance policies.
- General descriptions of ACE's outage prevention initiatives.

ACE's Annual System Performance Reports do not include any discussion of the service restoration process or reliability spending. The most recent report was submitted to the BPU in May 2009. That report does not mention the reliability summits. The May 2009 report does not discuss the issues identified in the reliability summits or ACE's plans to address those issues. The vegetation management discussion in the May 2009 report consists of a half page of generic statements and tables showing the feeders trimmed in 2008 in each of ACE's four districts.<sup>150</sup> The May 2009 report does not mention that PHI is conducting a major review of its VM program in 2009.

ACE's reports should be expanded to include the following information:

- A meaningful discussion of reliability improvement goals, strategies and issues.
- Benchmarking of reliability metrics to other utilities.
- Reliability operations and capital budget amounts by category and actual spending levels for three prior years.
- A meaningful description of ACE's vegetation management policy and annual VM plan.
- A description of ACE's service restoration process and initiatives for reducing outage duration.
- Key performance indicators for ACE's major reliability initiatives.
- CEMI and CELID metrics.

The Annual System Performance Report provides ACE with an opportunity to demonstrate its commitment to improving its reliability performance. ACE should expand the reports beyond the minimum requirements of the Reliability Standards to more effectively communicate and document its reliability improvement strategies, plans and results.

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<sup>150</sup> Response to Discovery, OC-1168, ACE 2008 Annual System Performance Report, Sections C1 and C9. ACE did forward its 2009 Vegetation Management Plan to the Staff in January 2009. The 2009 plan does not include any discussion of the VM issues identified in the reliability summits or ACE's plans to address those issues.



## Chapter 16. Emergency Management - Storm Response

This Chapter addresses ACE's strategies and plans for maintaining service and restoring outages in the event of a strong storm.

### Summary of Findings

The findings and recommendations contained in this Chapter are listed below.

1. Hurricane Isabel demonstrated the importance of the storm response function. Hurricane Isabel caused extensive damage to PHI's Utility Operations in 2003. Approximately 75 percent of Pepco's customers and 30 percent of ACE's customers lost power. Lengthy outages in Pepco's service territory resulted in significant customer anger and frustration. PHI retained James Lee Witt Associates to assess its performance. The Witt Report provided a valuable framework for improving PHI's storm response management.
2. The 2008 "Mother's Day" storm provided another stress test for ACE's storm response process. A strong northeastern storm struck the ACE region on May 12, 2008. The storm resulted in ACE's largest restoration effort since Hurricane Isabel. ACE conducted a post-event performance review of its restoration effort. Although the problems identified in the review were relatively minor, they imply that ACE is not as prepared as it should be for a major hurricane.
3. PHI's storm response management has improved since Hurricane Isabel. PHI and ACE have made several improvements since 2003 including adopting the incident command system, developing a second roles data base, expanding the use of mobile data terminals, implementing crew guides and standardizing procedures. The increased use of mobile data terminals and crew guides has significantly increased ACE's storm response capability.
4. ACE is implementing additional storm response improvements in 2009. ACE is currently reviewing its vegetation management program and its outage cause classifications as part of its reliability improvement initiatives. Those initiatives will also improve storm response. ACE is preparing a new Incident Response Plan. The plan is scheduled for completion in December 2009.
5. PHI's 2009 storm response functional exercise identified several opportunities for improvement. PHI identified opportunities for standardizing outage restoration work processes and increasing the depth of experience within its storm response teams. PHI should expand its annual functional exercises to include more of the employees who participate in storm responses.

6. Some additional opportunities for improvement in ACE's storm response process have not been addressed. Areas for improvement include PHI Emergency Preparedness Department staffing, training frequency, mutual assistance process, coordination with public works agencies and off right-of-way tree vegetation management.

### **Recommendations**

1. ACE should prepare an assessment of its capabilities to respond to a hurricane. ACE has not prepared an assessment since the Witt Report. ACE should prepare an assessment of its capabilities to restore service after a hurricane. The assessment should be distributed to the leaders on ACE's Regional and District Incident Management Teams to facilitate communications about storm response plans, capabilities and roles.
2. ACE should complete its Incident Response Plan. ACE's current IMT plan is inadequate. ACE recognized the need for a new plan and issued a draft plan in April 2005. The completion of the new ACE incident response plan has been delayed for far to long. ACE should place a high priority on completing the plan.

### **Background**

Large storms and hurricanes can cause substantial damage to overhead electrical lines. Most of the damage is caused by falling trees and tree limbs. Most utilities are prepared to handle small and medium sized storm events.<sup>1</sup> Large storms, such as hurricanes, are a different matter. In those restoration efforts, the sheer volume of information and work typically overwhelms a utility's outage restoration efforts.

Large storm restoration efforts require much larger communication, analysis and repair capacity than normal operations. The large storms occur infrequently, perhaps once a decade. Sizing the utility's normal outage restoration organizations to meet those requirements internally is not cost effective, since a portion of the resources would sit idle for long time periods. Utilities use the following strategies to address this resource sizing problem.

- Establish a storm response management organization and storm response plans and procedures.
- Temporarily increase capacity by using employees who normally work on other activities, such as internal audit or human resources.

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<sup>1</sup>Response to Discovery, OC-239 (restricted), Hurricane Isabel Response Assessment. James Lee Witt Associates, page 28.

- Automate analysis, communication and work management processes to maximize capacity during large storms.
- Acquire contractor resources during storm events to temporarily increase capacity.
- Enhance annual tree trimming programs to reduce the number of outages caused by a major storm.

ACE uses all of the strategies listed above except for enhanced tree trimming.<sup>2</sup> PHI's Emergency Preparedness Department is responsible for storm response plans and strategies. That department consists of three managers and a staff person.<sup>3</sup> Each manager is assigned to one of PHI's three utilities. The managers are responsible for developing the utility's storm response plan, overseeing training and conducting post-event reviews. The managers report to PHI's Vice President Operations, Stanley Wisniewski. Mr. Wisniewski reports to PHI's Senior Vice President Operations, Michael Sullivan.<sup>4</sup>

PHI utilizes the Incident Command System (ICS) for emergency management. ICS is the industry standard. ICS uses the same plans and procedures for all major events, regardless of cause. Having only one plan reduces confusion and simplifies training.

When a major event occurs, PHI activates incident management teams (IMTs). Each of ACE's four districts have their own IMT. In addition, ACE has a regional IMT that activates when two or more districts activate their IMTs.<sup>5</sup> The IMTs are staffed with employees that normally perform other duties. The IMT assignments are referred to as the employee's "second role."

The PHI Emergency Preparedness Department maintains a second-roles data base.<sup>6</sup> The data base tracks the people assigned to the ACE IMT. The role assignments are reviewed annually to ensure that resource requirements are met.<sup>7</sup>

Each district has an incident command center (storm room) that activates to manage an incident. ACE's storm response plan was activated twice in 2007 and five times in 2008.<sup>8</sup>

ACE's storm response approach includes assessment, analysis, dispatch and repair processes.<sup>9</sup> The assessment process refers to sending one or two person teams of "patrollers"

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<sup>2</sup> See Chapter 15, Reliability.

<sup>3</sup> Response to Discovery, OC-1064, clarified by April 29 e-mail from James Mashas. The manager assigned to ACE is Tom Born.

<sup>4</sup> Response to Discovery, OC-18.

<sup>5</sup> Response to Discovery, OC-238 (restricted).

<sup>6</sup> Response to Discovery, OC-1077.

<sup>7</sup> Response to Discovery, OC-822, Draft Incident Response Plan, page 24.

<sup>8</sup> Response to Discovery, OC-238 (restricted).

<sup>9</sup> Response to Discovery, OC-238 (restricted).



<i>Table 16-1</i> <b>ACE Incident Management Plan IMT Second Roles Staffing by Category</b>	
Category	Headcount

**[END CONFIDENTIAL]**

The IMT headcount shown above does not include the employees who perform their normal roles during the outage. For example, the headcounts do not include:

- The customer service representatives in the call centers who take the customer outage calls.
- The dispatchers in the regional operations center who dispatch the troublemen.
- The troublemen that investigate the outage reports.
- The crews that repair the lines.

**Hurricane Isabel**

**Hurricane Isabel demonstrated the importance of the storm response function.** Hurricane Isabel caused extensive damage to PHI’s utility operations in 2003.<sup>21</sup> Approximately 75 percent of Pepco’s customers lost power. Power was restored to 55 percent of those customers within 48 hours. About 15 percent of Pepco’s customers were without power for five or more days.

ACE’s service territory was spared the heavy rains experienced by Pepco. However, sustained winds of 50 miles per hour<sup>22</sup> caused significant damage to overhead power lines in ACE’s service territory. Approximately 30 percent of ACE’s customers experienced power outages. Power was restored to 88 percent of those customers within 48 hours.<sup>23</sup> The peak number of outages in ACE’s service territory was 96,667.

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<sup>20</sup> Investigates reports of energized electrical lines in roadways or other public areas. Stands-by at site to protect the public until repair crew arrives.

<sup>21</sup>Isabel made landfall near the North Carolina border with Virginia and proceeded through central Virginia into the southwestern corner of Pennsylvania. Isabel was a category 2 hurricane when it made landfall.

<sup>22</sup> With gusts up to 70 mph.

<sup>23</sup>Response to Discovery, OC-239 (restricted), Hurricane Isabel Response Assessment. James Lee Witt Associates, page 15. Mr. Witt is a former director of the federal emergency management agency (FEMA).

PHI made extensive use of outside resources through its mutual assistance agreements with other utilities and contractors. On a combined basis, ACE and Delmarva imported 274 line crews and 315 tree crews from outside sources. The external resources included 1,516 people and 679 vehicles.<sup>24</sup>

The lengthy outages in Pepco's service territory resulted in significant customer anger and frustration.<sup>25</sup> PHI retained James Lee Witt Associates to conduct an assessment of its performance. The consultant's extensive report ("the Witt Report") contains many significant findings and recommendations applicable to ACE. Overland prepared the following distillation of the findings applicable to ACE.

- Emergencies are defining moments for utilities. They are moments of high visibility that have a long-lasting effect in shaping public opinion. Utilities view emergencies as sudden explosive events that resonate in the customer's mind for months. Most utilities view emergency planning as a top priority.<sup>26</sup>
- PHI performed according to generally accepted industry practices. However, that did not meet customer expectations. PHI should use a higher standard than meeting generally accepted utility practices.<sup>27</sup>
- Downed trees and limbs were the single major cause for line damage. Most outages on ACE's system involved tree contact. Very few of the outages were due to wind alone.<sup>28</sup> Downed trees caused the most impact. Trees on roads blocked transportation and falling trees caused power outages.
- ACE did an effective job of mobilizing resources prior to the storm. ACE also did an effective job of establishing staging sites, making logistics preparations, opening command centers and preparing alternative call center capabilities.<sup>29</sup>
- Equipping field crews with mobile data terminals (MDTs) significantly reduces the information overload that occurs in major events when voice communication is used to dispatch crews and report job status. During Isabel, ACE troublemen were equipped with MDTs but its line crews were not.<sup>30</sup>

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<sup>24</sup>Response to Discovery, OC-239 (restricted), page 19.

<sup>25</sup> Response to Discovery, OC-239 (restricted), page 20, quoting an editorial in the Washington Post.

<sup>26</sup>Response to Discovery, OC-239 (restricted), page 45.

<sup>27</sup>Response to Discovery, OC-239 (restricted), page 4.

<sup>28</sup>Response to Discovery, OC-239 (restricted), page 61.

<sup>29</sup>Response to Discovery, OC-239 (restricted), page 29. The response to OC-822 indicates ACE's call center performed well during Hurricane Isabel. The call center handled extremely high call volumes with relatively low abandonment rates and satisfactory service levels. (ACE/Delmarva 2005 Draft IRP, Call Center Plan, Attachment C).

<sup>30</sup>Response to Discovery, OC-239 (restricted), page 54.

- ACE's districts did not have the capability to input data into the OMS system directly. The districts had to send job completion data to the regional operating center before it could be input into OMS. That process created bottlenecks.<sup>31</sup> The resulting backlog degraded the outage evaluation performance of the OMS.
- Damage assessment was a weakness for ACE. ACE used a combination of line workers and auxiliary personnel as damage assessors. ACE did not have documented procedures for conducting damage assessment and training was inadequate.<sup>32</sup>
- Vegetation management must provide adequate clearance in major storms. Overhead lines will be exposed to significant damage during strong storms if vegetation clearance is not adequate.<sup>33</sup>
- Coordination between ACE and public works crews removing trees from roads was poor. When power lines were tangled in the trees, the public works crews had to wait for ACE crews to clear the lines. Public works crews had difficulty contacting ACE and had to wait excessive amounts of time for the ACE crews to arrive. Many public works crews waited hours for ACE crews to show up and during those waits had no idea when the ACE crew would arrive. The public works agencies had difficulty managing their crews efficiently because they could not get information from ACE.<sup>34</sup>
- Communication with emergency services agencies (police, ambulance and fire) was inadequate. The agencies did not know where the utility crews were working. The agencies had to respond in an uncoordinated and unplanned manner when special needs for traffic barriers, traffic control and fire control arose. The emergency services agencies were not adequately notified when utility crews closed roads. This resulted in a need to reroute police, fire and medical vehicles without advance notice.<sup>35</sup>

Selected recommendations from the report are listed below.

- Elevate responsibility for emergency management too a higher level within PHI's organization.<sup>36</sup>

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<sup>31</sup>Response to Discovery, OC-239 (restricted), page 55.

<sup>32</sup>Response to Discovery, OC-239 (restricted), page 43.

<sup>33</sup>Response to Discovery, OC-239 (restricted), page 58.

<sup>34</sup>Response to Discovery, OC-239 (restricted), page 81.

<sup>35</sup>Response to Discovery, OC-239 (restricted), page 72.

<sup>36</sup>Response to Discovery, OC-239 (restricted), page 103.

- Implement an Incident Command System (ICS) for managing storm response.<sup>37</sup>
- Conduct frequent emergency plan training exercises. Include participation by local emergency services agencies.<sup>38</sup>
- Develop a joint response plan with other infrastructure organizations (public works, telephone, cable) to coordinate activities in major regional storms.<sup>39</sup> Improve coordination of tree removal on roads and overhead line repair.
- Develop an improved method for requesting mutual assistance, including a screening method to ensure ACE gets the right resources in terms of types and sizes of crews, correct voltage qualifications and that compatible work rules and equipment are used.<sup>40</sup>
- Provide an MDT to all line and tree crews. Emphasize the need to update the current job status on the MDT as activities occur.<sup>41</sup>
- Consider providing MDTs to mutual assistance crews and assigning a utility employee to the crews to serve as a guide and to operate the MDT.<sup>42</sup>
- Conduct a cost benefit analysis of the current tree trimming program.<sup>43</sup> Consider a one-time tree removal program to remove and/or replace encroaching trees likely to break or be blown over into overhead lines during a major storm.
- Develop a strategy for addressing “off right-of-way tree issues.” Develop a comprehensive tree risk management program in partnership with the community. Consider a program to replace problem trees with slower growing trees at no charge to the property owner.<sup>44</sup>
- Enhance outage cause reporting in the OMS to differentiate different types of tree contact in ACE’s failure analysis.<sup>45</sup>
- Increase the training frequency for damage assessors and wires down inspectors to twice a year.<sup>46</sup>

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<sup>37</sup>Response to Discovery, OC-239 (restricted), page 103.

<sup>38</sup>Response to Discovery, OC-239 (restricted), page 102.

<sup>39</sup>Response to Discovery, OC-239 (restricted), page A-13.

<sup>40</sup>Response to Discovery, OC-239 (restricted), page 106.

<sup>41</sup>Response to Discovery, OC-239 (restricted), pages 104 and 105.

<sup>42</sup>Response to Discovery, OC-239 (restricted), page 105.

<sup>43</sup>Response to Discovery, OC-239 (restricted), page A-1.

<sup>44</sup>Response to Discovery, OC-239 (restricted), page A-1.

<sup>45</sup>Response to Discovery, OC-239 (restricted), pages 61 and 107.

<sup>46</sup>Response to Discovery, OC-239 (restricted), page 108.



- Implement a formal damage assessment procedure at ACE. The procedure should include training requirements, vehicle requirements, roles and responsibilities, information flow and guidelines for assessing damage.<sup>47</sup>
- Identify additional employees to serve as damage assessors. Use smaller storms to train the additional damage assessors so they will be available in large storm events.<sup>48</sup>

Hurricane Isabel provided an important stress test for PHI's storm response function. The Witt Report provided a valuable framework for improving PHI's storm response management.

### **May 2008 "Mother's Day" Storm**

**The 2008 "Mother's Day" storm provided another stress test for ACE's storm response process.** In the early morning hours of May 12, 2008, a strong northeastern storm with heavy rains and strong winds struck the ACE region.<sup>49</sup> The storm included steady winds of 50 miles per hour with gusts up to 75 mph. The storm resulted in the largest restoration effort since Hurricane Isabel.<sup>50</sup>

ACE activated the ACE regional IMT storm room at 8 am. ACE also activated all four of its district IMT storm rooms and PHI activated its corporate IMT. The storm restoration process included 1,715 trouble orders and 1,106 outage orders.<sup>51</sup>

Approximately 20 percent of ACE's customers lost power at some point during or following the storm.<sup>52</sup> Approximately 9 percent of ACE's customers experienced an outage duration exceeding 6 hours. The number of outages peaked at 50,525 between 8 am and noon on May 12<sup>th</sup>. The number of outages declined steadily until the last customer was restored on May 14<sup>th</sup> at 7:39 pm.<sup>53</sup>

High winds prevented the use of bucket trucks to reach overhead lines early in the storm. Flooding issues in Cape May and Atlantic Counties prevented access to some locations.<sup>54</sup>

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<sup>47</sup>Response to Discovery, OC-239 (restricted), page 108.

<sup>48</sup>Response to Discovery, OC-239 (restricted), page 109.

<sup>49</sup> Mother's Day was actually on May 11, 2008. ACE refers to the storm as the Mother's Day storm in its post-event assessment documents.

<sup>50</sup> Response to Discovery, OC-240.

<sup>51</sup> Response to Discovery, OC-240. The term order refers to a package of work to be completed by the troubleman or repair crew.

<sup>52</sup> Response to Discovery, OC-240. The total number of customers affected was 102,064.

<sup>53</sup> Response to Discovery, OC-242, The number of outages between 8 am and noon fell to 9,497 on May 13<sup>th</sup> and 520 on May 14<sup>th</sup>.

<sup>54</sup> Response to Discovery, OC-242.

ACE imported approximately 50 contract line crews from other areas. The contract crews consisted of 109 workers. ACE also requested and received 10 utility mutual assistance crews, consisting of 20 workers, from Duquesne Light Company.<sup>55</sup>

ACE brought in Pepco and Delmarva employees to serve as damage assessment patrollers. In addition, ACE used contract line and tree trimming crews already working for ACE on other projects.<sup>56</sup>

The following table shows staffing for field functions during the morning of May 13<sup>th</sup>.

Description	Headcount
Trouble Shooter	36
Overhead Line Crew	145
Underground Line Crew	27
Digger Crew	13
Tree Crew	56
Crew Guides	36
Damage Assessment Patrollers	41
<b>Total</b>	<b>354</b>
Source: Response to Discovery, OC-242, Major Event Report. Headcount includes contract crews.	

ACE's overall storm restoration performance was satisfactory. For planning purposes, ACE estimates the outage restoration process will take three days for storms with winds exceeding 50 mph. ACE met that target.<sup>57</sup>

ACE conducted a post-event review to identify opportunities for improvement.<sup>58</sup> That review identified several positive observations and some problems. None of the problems were critical.

- Bringing in damage assessment patrollers from Pepco worked well. They arrived at their hotels before the storm began. However, there was no formal process to "activate" them so they could report for work which caused some confusion.

<sup>55</sup> Response to Discovery, OC-242. Duquesne serves the Pittsburgh, Pennsylvania area.

<sup>56</sup> Response to Discovery, OC-242 and OC-1074. These are referred to as "in-house" contractors, and include line construction contractors as well as tree trimming crews from Asplundh. The line construction and tree trimming contract crews used by ACE are members of the IBEW and have completed appropriate training through the union. ACE does not provide any unique storm response training to the in-house contractor crews. ACE's contract with its one call locate and markout contractor, UtiliQuest, requires Utiliquest to make its employees available as damage patroller drivers and wires down safety standby persons during storm events (OC-341).

<sup>57</sup> Response to Discovery, OC-240.

<sup>58</sup> The review consisted of an e-mail from Tom Born soliciting comments and suggestions, a one-hour meeting attended by 15 people and preparing an issue tracking matrix.

- ACE equipped its damage assessment patrollers with GPS devices.<sup>59</sup> The GPS devices were very helpful. The Pepco patrollers did not have GPS devices which reduced their effectiveness.
- During the later stages of the restoration effort, the call centers made calls to “single outage customers” to verify that their power was still out.<sup>60</sup> Those manual call-backs allowed ACE to close out 57 orders without dispatching a crew.
- The OMS system predicts the outage cause based on a hierarchy of the protective devices on the system and the outage calls received from customers. Those predications are used to dispatch troublemen. Too many of those predications were inaccurate.
- The regional operations center (control room) experienced minimal disruptions during the storm.
- The regional operations center normally dispatches line crews. During storm events, those crews are dispatched by the district storm room. The districts were not prepared to dispatch crews for “markouts, spills and environmental issues.”
- An emergency generator failed to start at one of the Company’s facilities.
- The Pleasantville storm room experienced significant difficulty logging onto ACE’s Advantex system. Advantex is ACE’s primary mobile field work dispatch system.
- There was confusion about how the mutual assistance program works. There was confusion about whether some of the mutual assistance crews had qualifications needed by ACE. The process for obtaining meals for mutual assistance crews was slow and cumbersome.
- Damage assessment patrollers needed additional Advantex training. The patrollers experienced difficulty in closing orders in Advantex.
- The Glassboro district needed more damage assessment coordinators. The Glassboro district also experienced personnel shortages in dispatch.

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<sup>59</sup> The GPS devices are mapping devices used to direct the patrollers to the correct streets. They cost about \$200 and are purchased from retail stores.

<sup>60</sup> Single outage customers refers to customers reporting outages who receive service from feeders where most customers have power.

- A shortage of wires down safety stand personnel resulted in the inefficient use of troublemen and damage assessment patrollers.<sup>61</sup>

Hurricane Isabel caused extensive damage to Pepco's system in 2003. Over 75 percent of Pepco's customers lost power at some point in that storm. ACE was on the periphery of Isabel's impact zone. ACE may not be that lucky the next time. Approximately 20 percent of ACE's customers lost power at some point during the May 12, 2008 storm. Although the problems identified in the post-event review were relatively minor, they imply that ACE is not as prepared as it should be for a major hurricane.

### **PHI Improvement Initiatives**

**PHI's storm response management has improved since Hurricane Isabel.** PHI has implemented the following improvements in its storm response function since 2003.

- PHI adopted the incident command system (ICS) in response to the Witt report.<sup>62</sup> PHI implemented corporate level crises management and incident support teams and regional and district level incident management teams.
- ACE provided mobile data terminals to its repair crews and the Asplundh contract tree crews.<sup>63</sup> ACE improved its mobile dispatch capabilities with the implementation of the Advantex system in 2006.<sup>64</sup> The Advantex system is used to dispatch all trouble and repair work but is not used for construction.
- ACE implemented the Power on Remote System to allow the districts to electronically dispatch repair crews through the MDTs. Power on Remote is a distributed module of the core OMS.<sup>65</sup> The OMS, Advantex and Power on Remote systems are integrated and share a common data base across the systems. The crews update job status through the MDTs and the MDTs automatically update the OMS.<sup>66</sup>

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<sup>61</sup> When electric lines are down in a roadway, ACE procedures require a utility employee to stay on site to protect the public until the repair crew arrives. This "safety stand" function can be performed by employees with less electrical system training than troublemen and patrollers. The shortage of personnel resulted in troublemen and patrollers being detained at the sites to perform the safety stand function.

<sup>62</sup> Response to Discovery, OC-822.

<sup>63</sup> Response to Discovery, OC-1072 and OC-815. The MDTs are part of the Advantex mobile dispatch system and are also referred to as Advantex terminals.

<sup>64</sup> Response to Discovery, OC-349.

<sup>65</sup> Response to Discovery, OC-1069.

<sup>66</sup> Response to Discovery, OC-1070.

- PHI established a central data base to track second role assignments.<sup>67</sup> Prior to Isabel, assignment of second roles was not standardized and ACE did not have complete lists of the assignments.<sup>68</sup>
- ACE trained employees in their second role to be crew guides for mutual assistance and contract crews. The crew guides act as a liaison between ACE and the outside crews.<sup>69</sup> The crew guides typically are assigned to 2 or 3 outside crews each. The crew guides are responsible for receiving the work packages, securing materials, guiding the outside crews to the right location and reporting job status. ACE has [BEGIN CONFIDENTIAL] [END CONFIDENTIAL] crew guides.<sup>70</sup> Only 48 of those crew guides that are equipped with MDTs.<sup>71</sup> When the crew guide does not have an MDT, they communicate with the districts by radio.
- PHI is standardizing procedures across its three utilities to facilitate resource sharing during storm events.<sup>72</sup> PHI is standardizing its mobile dispatch system (Advantex) and OMS across its three utilities. PHI has initiated a PHI wide Permit and Tagging Policy and is implementing a single PHI safety policy.
- ACE has improved its damage patroller procedures.<sup>73</sup> ACE has also increased patroller staffing and improved their training.<sup>74</sup>

The increased use of MDTs and crew guides should significantly increase ACE storm response capacity during major storm events.

**ACE is implementing additional storm response improvements in 2009.** The Witt report recommended that ACE conduct a cost-benefit analysis of its vegetation management program to ensure vegetation management properly considered potential storm damage. The Witt report also recommended improving ACE's outage cause categories. ACE is reviewing its vegetation management policies and outage cause categories in 2009 as part of its reliability improvement efforts.<sup>75</sup>

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<sup>67</sup> The second roles data base is maintained by the Emergency Preparedness Department. Response to Discovery, OC-822, December 2008 IRP Draft, page 24. An October 2007 Internal Audit of Pleasantville District Operations identified several inaccuracies in the IMT second roles roster for that district. Response to Discovery, OC-724 (restricted).

<sup>68</sup> Response to Discovery, OC-239 (restricted), page 47.

<sup>69</sup> Response to Discovery, OC-1071.

<sup>70</sup> Response to Discovery, OC-238 (restricted), ACE IMT organization charts.

<sup>71</sup> Response to Discovery, OC-1071. The crew guides have an MDT if one is assigned to them in their normal job.

<sup>72</sup> Response to Discovery, OC-1073.

<sup>73</sup> Response to Discovery, OC-822, 2005 ACE & Delmarva Draft IRP, Page 64.

<sup>74</sup> Response to Discovery, OC-238 (restricted) and OC-1076.

<sup>75</sup> See Chapter 15, Reliability.

All regional IMT's are controlled by PHI's Crises Management Plan (CMP). The PHI CMP was completed in 2008. The PHI CMP is 56 pages long and describes the following:<sup>76</sup>

- General concepts of the Incident Command System
- The PHI Corporate Crises Management Team
- The PHI Corporate Incident Support Team (IST)
- The PHI Corporate Joint Information Center (JIC)<sup>77</sup>
- CMP maintenance
- Training program

ACE's current Incident Management Team Plan consists of a notebook with organization charts, telephone lists and checklists.<sup>78</sup> The current plan is not written in narrative form. PHI completed a first draft of a new combined Incident Response Plan for ACE and Delmarva in April 2005.<sup>79</sup> That draft was never completed or revised.<sup>80</sup>

PHI's Emergency Preparedness Department submitted a very preliminary draft "structure" for an ACE stand-alone Incident Response Plan (IRP) to management in December 2008. The ACE IRP is scheduled for completion in 2009.

**PHI's 2009 annual storm response exercise identified several opportunities for improvement.** PHI conducts one functional storm response exercise each year.<sup>81</sup> The PHI exercises are scenario-based four to six hour exercises in which participants demonstrate individual and team capabilities. The 2007 and 2008 exercises were strategic in nature and emphasized PHI corporate level activities and external communications.<sup>82</sup>

The 2008 functional exercise included 120 participants from the PHI Corporate IST, the PHI JIC, the Pepco, Delmarva and ACE regional IMT's and the call centers.<sup>83</sup> The district IMT's did not

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<sup>76</sup> Response to Discovery, OC-1064. The CMP also has seven appendices.

<sup>77</sup> The PHI JIC focuses on external communications during incidents.

<sup>78</sup> Response to Discovery, OC-238 (restricted).

<sup>79</sup> Response to Discovery, OC-822.

<sup>80</sup> Response to Discovery, OC-238 (restricted) and OC-822. The completion of the combined ACE/Delmarva IRP was delayed for several years by pending revisions to the PHI CMP. The combined plan approach was abandoned in favor of separate ACE and Delmarva plans. PHI began work on the stand alone plans in the third quarter of 2008.

<sup>81</sup> Response to Discovery, OC-1065. In addition to the annual PHI functional exercise, ACE also conducts an annual IMT "tabletop" exercise. The tabletop exercise consists of a facilitated discussion of the restoration process to analyze one or more hypothetical situations. The participants include ACE regional IMT members and the district IMT leaders. Representatives of the PHI Corporate IST and the PHI Corporate JIC also participate.

<sup>82</sup> Response to Discovery, OC-822, Functional Exercise ICE07, After Actions Report and OC-1103, Functional Exercise OKTOBERFEST Final Report.

<sup>83</sup> Response to Discovery, OC-1103, Functional Exercise OKTOBERFEST Final Report, page 10. The participants included 120 Players from the various teams plus 34 controllers/evaluators. The 2007 exercise included a similar number of participants. The ACE Region team has 84 members (OC-238, restricted). Most ACE Region IMT members did not participate.

participate in the 2007 or 2008 exercises. Several participants in the 2008 exercise recommended expanding the exercises to include district IMT's.<sup>84</sup>

The 2009 exercise was more operational in nature and focused on the district level tactical response to a storm event.<sup>85</sup> The six-hour exercise included 160 players selected from twelve district IMT's.<sup>86</sup> All four of ACE's district IMT's participated. The activities of non-participating entities, such as PHI's Corporate IST, the regional IMT's, government agencies and the media, were simulated by designated "simulators."

ACE implemented its new OMS (Web SPL) in April 2009.<sup>87</sup> The 2009 exercise provided an opportunity for hands on practice with the new OMS.<sup>88</sup> The District IMT's assembled in their storm rooms and practiced the dispatching and closing out of orders using the OMS. The 2009 exercise was the first to use the OMS to such a large extent. According to PHI, the participants found the ability to practice with the new OMS to be extremely beneficial.<sup>89</sup>

The 2009 exercise post-event report noted that outage restoration processes were not entirely consistent among the districts. The report recommends.<sup>90</sup>

- Investigating how each District is handling the process work flows.
- Identifying and documenting the best practices.
- Conducting training on restoration process procedures.
- Drilling and exercising selected parts of the process.

The report noted that outage restoration processes were not documented to a level that would allow someone without significant institutional knowledge to step in and function effectively. During exercises and actual storm events there is a tendency to over rely on a few key experienced people. As a result, PHI does not have optimum depth of experience within the storm response teams, leaving the company vulnerable if several key personnel were absent

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<sup>84</sup>Response to Discovery, OC-1103, Functional Exercise OKTOBERFEST Final Report, page 5.

<sup>85</sup> PHI Comments on Overland Draft Audit Report, response to request for additional information.

<sup>86</sup>PHI Comments on Overland Draft Audit Report, response to request for additional information. PHI 2009 Functional Exercise, Summer Slam, Exercise Report, page 8. In addition to the 160 "players", the exercise included 47 controllers, evaluators and simulators.

<sup>87</sup>PHI Comments on Overland Draft Audit Report, response to request for additional information. PHI 2009 Functional Exercise, Summer Slam, Exercise Report, page 4. As noted in Chapter 15, System Reliability, ACE converted its OMS to the system used by Pepco, Oracle's SPL Centricity OMS.

<sup>88</sup> The exercise was held on June 25, 2009.

<sup>89</sup>PHI Comments on Overland Draft Audit Report, response to request for additional information. PHI 2009 Functional Exercise, Summer Slam, Exercise Report, page 9.

<sup>90</sup>PHI Comments on Overland Draft Audit Report, response to request for additional information. PHI 2009 Functional Exercise, Summer Slam, Exercise Report, pages 10 and 11.

during a storm.<sup>91</sup> The report concluded that over reliance on a few key people was not a best practice and recommended developing additional personnel.

The report recommended providing more detailed instructions to the Districts on the use of Web SPL. The report also recommended additional Web SPL training and enhancements to the system training guides.

The 2009 exercise post-event report contains the following discussion of the importance of District level functional exercises.<sup>92</sup>

Decentralization during a major event places significant responsibility on the District Storm Room personnel to perform effectively and efficiently during a highly stressful time. The sporadic nature of District Storm Room mobilization and the use of Web SPL, coupled with the frequent movement of personnel into new positions, can inhibit the development of a depth of skill sets. To become proficient at a given set of responsibilities, personnel must have ample opportunity to practice and apply knowledge and skills...

Effective performance and communication during critical events requires serious commitment to continuous improvement and learning at all organizational levels. Therefore, employees need to be challenged through continued participation in a comprehensive exercise program and by systematically incorporating lessons learned from real events. This is the most powerful way to identify potential opportunities for improvement...

The 2009 functional exercise was commendable because it extended down to the District IMT level and provided hands-on experience in the District storm rooms using OMS data from prior storms. PHI should place a high priority on implementing the recommendations contained in the post-event report.

The Witt report recommended that PHI conduct frequent exercises, including at least one unannounced off-hour mobilization per year.<sup>93</sup> The 2007 and 2008 exercises were limited to the PHI Corporate teams and the regional IMT's. The 2009 exercise was limited to the District IMT's. PHI should consider expanding the annual exercises to include more of the employee groups that participate in storm response. For example, PHI should consider including:

- Field personnel such as patrollers, repair crews, crew guides and wires down inspectors.
- System operators and dispatchers.

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<sup>91</sup>PHI Comments on Overland Draft Audit Report, response to request for additional information. PHI 2009 Functional Exercise, Summer Slam, Exercise Report, pages 11 and 12.

<sup>92</sup>PHI Comments on Overland Draft Audit Report, response to request for additional information. PHI 2009 Functional Exercise, Summer Slam, Exercise Report, page13.

<sup>93</sup> Response to Discovery, OC-239 (restricted), page 102.



- Call center customer service representatives.
- Representatives of local government emergency services and public works agencies.

## **Opportunities for Additional Improvement**

**Some additional opportunities for improvement in ACE's storm response process have not been addressed.** The PHI Emergency Preparedness Department staffing consists of three managers and a staff person. That may not be adequate to manage the IRPs, second roles data bases, training, exercises and post-event assessments for three large electric utilities. The delay in completing ACE's IRP may be indicative of inadequate staffing. PHI should consider adding one or two more positions to its Emergency Preparedness Department.

The Witt report recommended increasing the frequency of training. PHI requires employees to complete an initial classroom training session when they are assigned to their second role. After the initial training, employees are required to complete annual on-line refresher training.<sup>94</sup> The employees are allowed to complete the annual on-line refresher training at their own pace as time permits. The refresher training module for damage patrollers takes approximately 90 minutes to complete.<sup>95</sup> The refresher modules for crew guides and for wires down inspectors take approximately 60 minutes to complete.<sup>96</sup> The Witt Report recommended that PHI should increase the frequency of refresher training for patrollers and wires down inspectors to twice a year.<sup>97</sup> The post-event evaluation for the 2008 Mother's Day storm suggests the need to improve patroller training and Power on Remote training for district personnel.

The Witt report recommended that PHI develop an improved method for requesting mutual assistance "to assure that PHI's requests for resources, types and size of crew, correct voltage qualifications, and compatible work rules, equipment and materials are met."<sup>98</sup> The post-event issue tracking matrix for PHI's 2007 functional exercise indicates that "not everyone is clear how the Mutual Assistance process works."<sup>99</sup> The Mother's Day storm post-event evaluation echoed that finding, indicating "not everyone is clear on how the mutual assistance process works, i.e. who's in charge, etc."<sup>100</sup>

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<sup>94</sup> Response to Discovery, OC-1064 and OC-1074.

<sup>95</sup> Response to Discovery, OC-1076.

<sup>96</sup> Response to Discovery, OC-1074 and OC-1075.

<sup>97</sup> Response to Discovery, OC-239 (restricted), page 108.

<sup>98</sup> Response to Discovery, OC-239 (restricted), page 106.

<sup>99</sup> Response to Discovery, OC-823.

<sup>100</sup> Response to Discovery, OC-240.

During the Mother's Day storm, the qualifications of some of the mutual assistance crews did not match ACE's requirements. One e-mail noted "we need to understand the capabilities of the outside assistance before obtaining their help."<sup>101</sup>

Mutual assistance is crucial to the timely restoration of service after a strong storm, such as a hurricane. PHI and ACE should place a higher priority on improving the process for requesting mutual assistance and reducing the internal confusion about the mutual assistance process.

The Witt report noted that public works agencies responsible for clearing trees from roads had difficulty managing their crews efficiently because they could not get information from ACE.<sup>102</sup> The Witt report recommended that ACE develop a joint response plan with those agencies to coordinate operations.

The District IMTs include external liaisons located in the district storm rooms who are responsible for communicating with government agencies.<sup>103</sup> During storm events, an ACE external liaison is also physically located in the applicable county office of emergency management (OEM).<sup>104</sup>

Municipal public works agencies can contact ACE through the liaison in the county OEM office. That liaison then calls the liaison in the district storm center. Once the liaison in the district storm center receives information about when a crew will be dispatched, that information is communicated back to the liaison in the county OEM who contacts the agency by telephone. The public works agency can also call the liaison in the district storm center directly. Some of the public works agencies have established relationships with District leadership or employees in ACE's regional operations center (the control room) and may call those employees directly. The communications process used by ACE appears to have multiple hand-offs in both directions between the public works crew supervisor and the ACE crew dispatcher. This could potentially result in a recurrence of the problems experienced in Hurricane Isabel. ACE should work with the agencies to formulate a more efficient joint response plan.

The Witt report recommended that ACE develop a strategy for addressing vegetation management for off right-of-way trees. The Witt report recommended that PHI develop a comprehensive tree risk management program and consider offering to replace problem trees with slower growing trees at no charge to the property owner.<sup>105</sup>

Downed off right-of-way trees caused substantial damage in hurricane Isabel. ACE inspects its right-of-ways on a four year cycle. When ACE identifies a problem off right-of-way tree, it

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<sup>101</sup> Response to Discovery, OC-240, Manager of Control Room Operations e-mail to Tom Born, May 19, 2008.

<sup>102</sup> Response to Discovery, OC-239 (restricted), page 81.

<sup>103</sup> Response to Discovery, OC-1067.

<sup>104</sup> ACE serves eight counties.

<sup>105</sup> Response to Discovery, OC-239 (restricted), page A-1.

requests permission to trim the tree from the property owner.<sup>106</sup> ACE does not have any other off right-of-way strategies or programs.<sup>107</sup> ACE estimates that off right-of-way trees caused approximately 40 percent of its tree related outages in 2008. ACE should investigate the strategies used by other utilities and develop and implement a proactive strategy for addressing off right-of-way trees.

## **Recommendations**

**ACE should prepare an assessment of its capabilities to respond to a hurricane.** PHI has not prepared an assessment of its capabilities to respond to a strong storm, such as a hurricane, since the Witt Report.<sup>108</sup> The same is true for ACE.

PHI's Emergency Preparedness Department should prepare an assessment of ACE's ability to restore service in a timely manner after a hurricane level storm. The assessment should include an analysis of ACE's current capabilities, identification of gaps in those capabilities and strategies for closing those gaps.

The scope of the assessment should include all aspects of the response including ACE's call centers, information systems, system operations and field operations. The assessment should include estimates of the resource quantities required to respond to the storm and describe ACE's plan to obtain the required resources. The assessment should also include estimates of expected outages durations and describe the constraints and risks impacting the estimates.

The assessment report should be distributed for comment to the leaders on ACE's Regional and District IMTs to facilitate communications about storm response plans, capabilities and roles.

**ACE should complete its Incident Response Plan.** ACE's current IMT plan is inadequate. PHI recognized the need for a new plan after Hurricane Isabel and issued a draft plan in April 2005. The completion of that draft was delayed for over three years by pending revisions to the PHI CMP and ultimately abandoned. In December 2008, the Emergency Preparedness Department submitted a very preliminary draft "structure" for an ACE stand-alone plan to management for approval. The December 2008 draft is essentially a partial outline that has far less detail than the 2005 draft.

The completion of an updated ACE incident response plan has been delayed for far too long. The ACE IRP is scheduled for completion in 2009. PHI should place a high priority on completing that plan.

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<sup>106</sup> Response to Discovery, OC-1068.

<sup>107</sup> ACE's web site does have a page that encourages property owners to consider certain varieties of trees when they have decided to plant a tree.

<sup>108</sup> Response to Discovery, OC-1103.



## Chapter 17. Lost and Unaccounted For Energy

This Chapter addresses ACE's efforts to manage lost and unaccounted for energy.

### Summary of Findings

The findings and recommendations of this Chapter are listed below.

- ACE uses fixed factors to assign cost responsibility for energy losses to BGS and third party retail suppliers. The fixed factors have not changed since they were approved by the BPU in 1998. The factors assign 88 percent of all energy losses to BGS-FP customers. The fixed factors imply a 7.0 percent overall loss percentage for native load. That overall loss rate leaves substantial room for improvement.
- Energy losses are a significant cost item for ACE. ACE's 2008 energy losses had a value of \$70.4 million based on the winning price in ACE's most recent BGS auction.
- ACE's loss percentages are consistent with the fixed factors. ACE's NUG power purchase and resale transactions significantly reduce its overall loss percentage. Once those transactions are properly accounted for, ACE's overall loss percentages are consistent with the results produced by the fixed factors.
- ACE's loss percentages compare favorably to those reported by other utilities. However, the comparability of the data is compromised by differences in native load characteristics, power supply arrangements and reporting classifications.
- ACE has taken a number of steps that reduce energy losses. Those steps include installing capacitor banks, commissioning an economic conductor sizing study, implementing phase balancing projects, replacing the conductors on some lines and converting lines to higher voltages. Distribution Automation and demand response programs could reduce ACE's loss percentages in the future.

### Recommendations

- ACE should prepare an energy loss study to update the fixed factors. The factors have not been updated in over 10 years. Although the factors appear to track losses reasonable well on a composite basis, they may mis-allocate losses between customer groups.
- ACE should develop the capability to reconcile its energy account on a more detailed basis. ACE does not estimate or analyze its energy losses by cause category. ACE only prepares energy account reconciliations at the total system level. Calculating actual loss percentages at a substation and feeder level would allow ACE to identify and analyze

facilities with unusually high energy losses. Developing a better understanding of the sources of energy losses will help ACE develop cost effective strategies for reducing losses.

## **Background**

Lost and unaccounted for energy is calculated by subtracting sales and other known uses of electricity from total system inputs. That calculation is referred to as the utility's electric energy account reconciliation.<sup>1</sup>

Lost and unaccounted for energy is sometimes referred to as system losses or line losses. This chapter will refer to lost and unaccounted for energy as "energy losses."

Energy losses are frequently expressed as a percentage of total system inputs. Electric distribution utilities typically report loss percentages ranging from five to eight percent.

Lost and unaccounted for energy is caused by the following.

- Resistive losses
- Transformer no-load losses
- Auxiliary equipment energy use
- Meter errors
- Unmetered delivery of electricity to end uses
- Theft of service
- Estimating errors for energy received or delivered but not yet metered.

Resistive losses occur when current is transmitted over a conductor.<sup>2</sup> Resistive losses occur in electric system lines and transformers. Resistive losses vary with load and are by far the largest source of energy losses.

Resistive losses are minimized by reducing current or resistance.<sup>3</sup> Reducing the current produces the largest savings because current is squared in the loss formula.<sup>4</sup> A fully loaded feeder has resistive losses that are twice as large as the combined resistive losses for two half-loaded feeders.

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<sup>1</sup> Electric utilities are required to report their annual energy account reconciliation on page 401a of their FERC Form 1 reports.

<sup>2</sup> Copper wires in distribution lines or transformers are examples of conductors.

<sup>3</sup> Resistive losses are calculated by multiplying two factors. The first factor is the square of the current measured in amperes. The second factor is the conductor's resistance measured in ohms. The current is squared because conductor heating is proportional to the square of the current.

<sup>4</sup> Resistive losses double when current is increased by 41 percent.

Current is reduced by increasing voltage levels or by reducing load. Doubling the voltage level on a line reduces the resistive losses on the line by seventy five percent.<sup>5</sup>

Current includes both real power and reactive power. Reactive power is required to operate large industrial motors.<sup>6</sup> Reactive power can be supplied either by generating stations or by capacitors. Supplying the reactive power from generating stations increases the current flows over the transmission and distribution system. Placing capacitors on the distribution feeders closer to the reactive power load reduces the current flow over the upstream portion of the system.

Conductor resistance is reduced by increasing the size of the conductor. Larger diameter conductors produce smaller line losses.

System load characteristics have a significant impact on resistive losses. Resistive losses increase as load increases.<sup>7</sup> As a result, energy losses are at their highest on summer peak days when energy prices are at their highest levels.<sup>8</sup>

Transformers have both resistive and no-load losses. Transformer resistive losses follow the resistive loss formula. Transformer no-load losses reflect the energy required to magnetize the transformer core and are essentially constant regardless of load.<sup>9</sup>

Current flows are the primary driver of distribution losses. Systems with poor load-factors have higher losses because peak load is higher relative to average load.<sup>10</sup> Raising the load factor reduces resistive losses for a given total energy requirement and system design.

Resistive and no-load losses can be reduced by:

- Installing capacitors.
- Increasing voltage levels.
- Increasing the size of conductors.
- Installing efficient transformers with low no-load loss levels.
- Improving phase balance by reconfiguring lines.<sup>11</sup>

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<sup>5</sup> Reducing Distribution Losses Without Breaking the Bank, Steve Eckles, El Paso Electric Company, Utility Automation and Engineering T&D Magazine, April 2007.

<sup>6</sup> Reactive power is also required for residential and commercial motors, compressors and ballast based lighting.

<sup>7</sup> For a given system design (i.e. if voltage levels and conductor sizes are held constant).

<sup>8</sup> Interview with Basil Allison, PHI Manager of System Planning Group.

<sup>9</sup> Reducing Distribution Losses Without Breaking the Bank, Steve Eckles, El Paso Electric Company, Utility Automation and Engineering T&D Magazine, April 2007.

<sup>10</sup> The load factor is the ratio of the average system load to the peak system load.

<sup>11</sup> Primary distribution feeders are typically three phase circuits. Three phase circuits have three conductors and a neutral cable. In many cases only a single phase is needed to serve residential and small commercial customers. Secondary lateral lines may only be connected to a single phase of the distribution feeder. The current flows should be spread evenly across the three phases to minimize losses. If one phase is more heavily loaded than

- Re-distributing load between feeders to reduce loads on high load feeders.
- Implementing demand response programs to reduce peak load.

Increasing voltage levels, installing capacitors and phase re-balancing can all be cost effective methods of reducing losses. Replacing the conductor on a distribution feeder with a larger sized conductor is rarely economically justified by the reduction in losses.<sup>12</sup>

Electric utilities typically estimate that approximately one to three percent of their annual revenue is lost due to energy theft.<sup>13</sup> ACE does not estimate its energy losses due to theft of service.<sup>14</sup>

### **ACE's Fixed Loss Factors**

**ACE uses fixed factors to assign cost responsibility for energy losses to BGS and third party retail suppliers.** ACE assigns line losses to its BGS and third party retail suppliers (TPRS) on an hourly basis using the following procedure.<sup>15</sup>

- ACE estimates the energy delivered to each of its customers and applies fixed gross-up factors to estimate the customers' input level hourly energy requirements.
- The input level energy requirements are summed by TPRS and BGS supplier to determine each supplier's preliminary hourly energy obligation (HEO).
- The preliminary HEOs are totaled and subtracted from the total zone load to determine the "residual."<sup>16</sup> The residual can be either positive or negative.
- The residual is allocated to the BGS and TPRS suppliers based on their preliminary HEOs. The preliminary HEOs for customers that are metered on an hourly basis are excluded from the allocation factors.
- The supplier's residual allocation is added to their preliminary HEO to determine their final HEO.

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the others, the losses on that phase increase rapidly due to the quadratic nature of losses. The process of distributing the load evenly across the three phases is referred to as phase balancing.

<sup>12</sup> Interview with Basil Allison, PHI Manager of System Planning Group.

<sup>13</sup> ACE Blueprint for the Future, Exhibit B, Advanced Metering Business Case Including Demand Response Benefits, page 25. ACE estimated that AMI could reduce its theft of service losses by 0.5 percent or 55 million kilowatts per year.

<sup>14</sup> Response to Discovery, OC-523.

<sup>15</sup> Response to Discovery, OC-1095 and OC-1096

<sup>16</sup> PJM determines ACE's total zone load.



- PJM charges the TPRS and BGS suppliers for spot-market energy based on their final HEO. ACE pays the BGS suppliers for the energy they sell to ACE based on their final HEO.

The BGS costs are recovered through the BGS-FP rate surcharge on a pass through basis.<sup>17</sup> As a result, ACE does not have any significant economic incentive to make investments to minimize energy losses.<sup>18</sup>

The fixed factors are also used to assign cost responsibility for BGS and NUG costs to rate schedules under ACE's BGS and NGC retail rate surcharges.<sup>19</sup>

The fixed factors have not changed since they were approved by the BPU in 1998.<sup>20</sup> The following table shows the fixed factors.

Customer Type	Voltage (Volts)	Gross-up Factor <sup>21</sup>	Loss Percent <sup>22</sup>
Secondary	120 - 480	1.08544	7.87
Primary	4,000 & 12,000	1.05345	5.07
Sub-transmission	23,000 & 34,500	1.03381	3.27
Transmission	69,000	1.02951	2.87
Source: Response to Discovery, OC-1096			

The factors do not include losses on PJM's high voltage system.<sup>23</sup> Most BGS-FP customers are served at the secondary level. The BGS auction web site provides loss factors for the other New Jersey Utilities. PSEG's secondary voltage loss percentage is 7.54 percent. Jersey Central's secondary voltage loss percentage is 10.54 percent.<sup>24</sup>

The factors produced small residuals in 2007 and 2008.<sup>25</sup> That implies that the factors closely tracked actual losses on a composite basis in those years.

<sup>17</sup> BGS costs are recovered through the BGS-FP Supply Charge included in the Basic Generation Service (BGS) Rider of ACE's retail tariffs. The surcharge is described in more detail in Chapter 14, Power Supply.

<sup>18</sup> Overland interviews with Tsion Messick and Basil Allison.

<sup>19</sup> NUG costs, net of resale revenues, are recovered from ratepayers through the Non-Utility Generation Charge (NGC).

<sup>20</sup> Response to Discovery, OC-1155.

<sup>21</sup> The gross up factor is applied to metered sales to estimate input level energy requirements. The gross up factor equals input level kwh divided by metered kwh.

<sup>22</sup> The loss factor equals kwh losses divided by input level kwh.

<sup>23</sup> BGS auction web site, Additional Data Page, Retail Rates, BGS-FP pricing factors, ACE, table 6.

<sup>24</sup> BGS auction web site, Additional Data Page, Retail Rates, BGS-FP pricing factors. The scope of the Jersey Central loss factor is unclear on the web site. The PSEG factor excludes PJM EHV system losses.

<sup>25</sup> Response to Discovery, OC-1158. The residuals were less than 0.2 percent of native load.

The fixed factors imply a 7.0 percent loss percentage for native load in 2007 and 2008. The following table shows the calculation of the implied loss percentage for 2008.

Voltage Level	Metered Sales MWH	Gross Up Factor	Input Level MWH	Losses	Loss Percent
Secondary	7,842,885	1.08544	8,512,981	670,096	7.87
Primary	603,881	1.05345	636,158	32,277	5.07
Sub-transmission	724,749	1.03381	749,253	24,504	3.27
Transmission	735,552	1.02951	757,258	21,706	2.87
<b>Total</b>	<b>9,907,067</b>		<b>10,655,650</b>	<b>748,583</b>	<b>7.03</b>

*Source: Response to Discovery, OC-1157 and OC-1096.*

A native load loss percentage of 7.0 percent leaves substantial room for improvement. The loss factors were developed in 1998. The small residuals in 2007 and 2008 imply that ACE has not reduced its energy losses over the over the past 10 years.

The fixed factors assign most losses to BGS customers because 98 percent of BGS load is served at the secondary voltage level and 68 percent of the TPRS load is served at the sub-transmission or transmission level.<sup>26</sup>

The following table shows the distribution of losses between BGS and TPRS customers based on the fixed factors and 2008 MWH sales.

Type	Losses	Percent
BGS	659,762	88
TPRS	88,821	12
<b>Total</b>	<b>748,583</b>	<b>100</b>

*Source: Response to Discovery, OC-1157 and OC-1096*

## **Overall Energy Loss Percentages**

**Energy losses are a significant cost item for ACE.** The following table shows ACE's energy account reconciliation for the past four years.

<sup>26</sup> Response to Discovery, OC-1157, 2008 data.

Description	2005	2006	2007	2008
<b>Energy Sources</b>				
Retained Generation	2,248	1,805	142	0
NUG Purchases	4,062	3,839	3,866	4,051
BGS Purchases	8,727	8,513	8,762	8,557
Third Party Retail Suppliers	2,355	2,150	2,117	2,219
<b>Total Sources</b>	<b>17,392</b>	<b>16,307</b>	<b>14,887</b>	<b>14,827</b>
<b>Energy Uses</b>				
ACE Sales	7,799	7,853	8,182	7,928
Third Party Retail Sales	2,281	2,077	2,005	2,160
Wholesale Sales	6,127	5,438	3,907	4,043
Company Use	23	22	27	27
<b>Total Uses</b>	<b>16,230</b>	<b>15,390</b>	<b>14,121</b>	<b>14,158</b>
<b>Lost and Unaccounted For Energy</b>	<b>1,162</b>	<b>917</b>	<b>766</b>	<b>669</b>
<b>Loss Percentage</b>	<b>6.7%</b>	<b>5.6%</b>	<b>5.1%</b>	<b>4.5%</b>
Source: Response to Discovery, OC-1094 and OC-228.				

Losses are a significant cost item. ACE purchases most of its lost and unaccounted for power under its BGS contracts. The winning price in ACE's most recent BGS-FP auction was 10.54 cents per kwh.<sup>27</sup> Based on that price, ACE's 2008 lost and unaccounted for energy had a value of \$70.4 million.

**ACE's overall loss percentages are consistent with the fixed factors.** ACE purchases power from three non-utility generators (NUGs) and resells that power to PJM at transmission voltages.<sup>28</sup> The NUG purchases accounted for 27 percent of ACE's power sources in 2007 and 2008.

The receipt and resale of the NUG power occurs simultaneously at the generating plant interconnection at high voltages. As a result, there are minimal losses associated with those transactions.<sup>29</sup>

The line loss percentage is calculated by dividing losses by total sources of energy. The NUG purchases increase total sources significantly and have minimal impact on total losses. As a result, the NUG transactions significantly reduce ACE's overall loss percentage.<sup>30</sup>

<sup>27</sup> BPU press release, February 6, 2009, New Jersey Board of Public Utilities Approves Electric Auction Results. The BGS price includes a transmission component. While energy needed to supply losses requires transmission, the reduction in losses would not reduce the fixed portion of the overall transmission revenue requirement which is allocated to load-serving entities within ACE's zone.

<sup>28</sup> ACE's NUG contracts and power sales are discussed in Chapter 14, Power Supply.

<sup>29</sup> Response to Discovery, OC-524. The deliveries and sales for each of the three contracts occur at a voltage level of 230 kv.

<sup>30</sup> The PJM markets can be viewed on two alternative levels, the physical world and the contracts model. In the physical world, power flows from the NUG plants to customers, including ACE BGS and TPRS customers, based on the laws of physics. The PJM contracts model settles financial obligations of the market participants. In the contracts model, ACE purchases the NUG power and resells the power to PJM. PJM resells the power to other market participants, including the BGS and TPRS suppliers. Those market participants sell part of the power back to ACE and TPRS customers in ACE's service territory. In the contracts model, some of the power is included in ACE's

ACE sold its last remaining power plants in 2006 and 2007. Prior to that, ACE sold the power generated by those plants to PJM at transmission voltages. Those transactions reduced ACE's loss percentages in 2005 and 2006 in the same manner as the NUG transactions.

ACE's expected loss percentage can be calculated as a weighted average of the expected loss factors for its native load and its NUG power resales. The following table illustrates that calculation based on ACE's fixed factors for native load and an assumed loss factor of 1.0 percent for the NUG transactions.<sup>31</sup>

<b>Table 17-5 ACE Expected Loss Percentage Based on Assumed Loss Factors - 2008</b>			
<b>Category</b>	<b>Energy Input</b>	<b>Expected Loss Factor</b>	<b>Weighted Average</b>
NUG	27.3%	1.0%	0.3%
Native Load	72.7%	7.0%	5.1%
<b>Total</b>	<b>100.0%</b>		<b>5.4%</b>

Source: Table 17-2 and Responses to Discovery, OC-1094 and OC-1096

The following table compares ACE's actual and expected loss percentages for 2005 through 2008.

<b>Table 17-6 ACE Actual Versus Expected Loss Percentages 2005 through 2008</b>		
<b>Year</b>	<b>Actual</b>	<b>Expected</b>
2005	6.7	4.8
2006	5.6	4.9
2007	5.1	5.4
2008	4.5	5.4

Source: Response to Discovery, OC-228, OC-1094 and OC-1096

The 2005 actual loss factor is significantly higher than expected. Losses were higher in 2005 because it was a hot summer.<sup>32</sup>

The expected loss factors are subject to considerable uncertainty. The differences for 2006 and 2007 are not significant given the imprecision of the expected loss percentages.

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energy sources twice, once as a NUG purchase and again as a BGS purchase or TPRS delivery. ACE's energy account reconciliations reflect the contracts model. The contracts model "grosses-up" ACE's energy sources by double counting some of the NUG power. That gross-up reduces ACE's loss percentage because total energy sources is the denominator of the loss percentage calculation.

<sup>31</sup> The NUG assumption does not have a significant impact on the overall result. Assuming a 2.0% NUG loss percentage would only increase the overall loss factor by 0.2 percent (with rounding).

<sup>32</sup> Interview with Basil Allison, PHI Manager of System Planning Group.

According to ACE, the fixed factors produced a small residual in 2008. That implies the actual loss factor should have been very close to the expected factor in 2008. The reason why actual losses were lower than the expected level is unknown.

**ACE's loss percentages compare favorably to those reported by other utilities.** ACE has not participated in any benchmarking studies of lost and unaccounted for energy with other utilities.<sup>33</sup> Electric utilities report their energy account reconciliations in their annual FERC Form 1 Report. The following table compares ACE's loss percentages with four other utilities in the region.

Utility	2006	2007	2008
ACE	5.6	5.1	4.5
Jersey Central Power & Light	5.9	7.9	5.2
Public Service Electric & Gas	6.3	4.9	4.6
Delmarva Power & Light	7.0	6.8	5.0
PPL Electric Utilities	6.9	6.7	6.6
Source: FERC Form 1, page 401a			

The comparability of the data is compromised by differences in native load characteristics, power supply arrangements and reporting classifications. The comparison data indicates that ACE's energy losses compare favorably to those of other utilities.<sup>34</sup>

### **ACE Loss Reduction Initiatives**

**ACE has taken a number of steps that reduce energy losses.** ACE took the following steps to reduce line losses over the past four years.

- ACE installed capacitor banks on its distribution system. ACE installed an average of 47 MVAR of reactive support per year during 2004 through 2008.<sup>35</sup>
- ACE installed two 150 MVAR static var compensators (SVCs) on its transmission system.<sup>36</sup> SVCs are capacitors whose output can be varied depending on load.<sup>37</sup>
- ACE installed 150 MVAR of shunt capacitors on its transmission system.<sup>38</sup>

<sup>33</sup> Response to Discovery, OC-77.

<sup>34</sup> The favorable comparison may be attributable to the impact of the NUG transactions on ACE's overall loss factor.

<sup>35</sup> Response to Discovery, OC-77. The 2008 MVAR amount is a planned figure rather than actual.

<sup>36</sup> Response to Discovery, OC-77. The capacitors are located at Cardiff and Dennis on the 230 kv system.

<sup>37</sup> Interview with Basil Allison, PHI Manager of System Planning Group.

<sup>38</sup> Response to Discovery, OC-77. The output of shunt capacitors cannot be varied. They have a fixed output.

- ACE converted two transmission lines to higher voltages and constructed a new transmission substation at Orchard.<sup>39</sup>
- ACE commissioned an economic conductor sizing study in 2007. The study will establish an economic rating for standardized wire sizes that will limit conductor loadings to minimize losses.<sup>40</sup> The study is scheduled for completion in 2009.<sup>41</sup>
- ACE is installing a centralized capacitor control system that will dispatch distribution line capacitors and identify malfunctioning capacitors automatically.<sup>42</sup>
- ACE completed 57 phase balancing projects in 2007 and 74 phase balancing projects were proposed for 2008.<sup>43</sup>
- ACE increased the voltage level on some distribution lines from 4kv to 12kv. ACE has also replaced the conductors on some transmission and distribution lines. The installation of new feeder lines also reduces losses by reducing the load carried by other feeders.<sup>44</sup>

Distribution automation and demand response programs have the potential to reduce ACE's loss percentage. Distribution automation reduces line losses by redistributing load across feeders. Demand Response programs reduce losses by reducing demand during peak periods when resistive losses are at their highest levels.

## **Recommendations**

**ACE should prepare an energy loss study to update the fixed factors.** ACE's most recent comprehensive system loss study was completed in 1995.<sup>45</sup> That study was prepared to determine the allocation of losses between voltage levels.

The fixed factors impact the distribution of cost responsibility for energy losses between BGS and TPRS customers. The factors have not been updated in over 10 years. Although the factors

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<sup>39</sup> Response to Discovery, OC-77. The Cardiff to Oyster Creek tie line was converted from 69kv to 230kv. The 138kv Cumberland to Corson line was converted to 230kv.

<sup>40</sup> Response to Discovery, OC-216. The economic conductor rating is the maximum amount of current a line can carry before it becomes more economically feasible to install new conductor capacity.

<sup>41</sup> Response to Discovery, OC-77 and OC-1093. The initial study meeting was held in November 2007. Initial results were contrary to what was expected and additional analysis is currently in progress.

<sup>42</sup> Response to Discovery, OC-77 and OC-362. ACE has a pilot program to retrofit 50 capacitors with 2 way communications capability in the on feeders originating at the Absecon substation. As of September 2008, ACE had completed the installations for 12 of the capacitors. .

<sup>43</sup> Response to Discovery, OC-77. Phase balancing projects were also performed in 2005 and 2006 but the number of the projects was not tracked.

<sup>44</sup> Response to Discovery, OC-77.

<sup>45</sup> Response to Discovery, OC-214.

appear to track losses reasonably well on a composite basis, they may mis-allocate losses between customer groups.

Energy price increases have dramatically increased the cost of energy losses since 1998. ACE has responded to that price signal with initiatives to reduce losses. Those initiatives are not reflected in the fixed factors.

ACE's power supply arrangements have changed significantly since 1998. Load has also changed since 1998. ACE's fixed loss factors should be updated to reflect current system conditions.

ACE should prepare a system loss study to update the fixed factors. The study would use ACE's power flow models to estimate losses for each voltage class. The power flow models estimate resistive and no-load losses at a specific point in time based on assumed conditions. The results for representative load conditions are used to develop loss factors for the five voltage levels. The power flow models do not estimate losses due to theft of service, unmetered services, or metering errors.

ACE estimates it would take 750 hours of effort to prepare a system loss study using its power flow models.<sup>46</sup>

**ACE should develop the capability to reconcile its energy account on a more detailed basis.** The system loss study would not include an energy account reconciliation and would not estimate losses due to theft of service, unmetered services, or metering errors.

ACE has not prepared any studies of the causes of its energy losses.<sup>47</sup> ACE does not estimate or analyze its energy losses by cause category. ACE only prepares energy account reconciliations at the total system level. ACE does not prepare energy account reconciliations at a substation or feeder level.<sup>48</sup>

Calculating actual loss percentages at a substation and feeder level would allow ACE to identify and analyze facilities with unusually high energy losses. Developing a better understanding of the sources of energy losses will help ACE develop cost effective strategies for reducing losses.

ACE is a transmission and distribution company with no generation of its own. ACE purchases all of the energy required by its BGS-FP customers from outside suppliers. Calculating loss

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<sup>46</sup> Response to Discovery, OC-227. ACE's power flow models are PSS/E (transmission) and Cymedist (distribution). The models would be used to estimate losses at a point in time based on assumed system conditions and parameters based on a sample of typical feeders and transformers. The results would be extrapolated to cover an annual period.

<sup>47</sup> Interview with Basil Allison, PHI Manager of System Planning Group and Response to Discovery, OC-77.

<sup>48</sup> Response to Discovery, OC-829 and Interview with Basil Allison, PHI Manager of System Planning Group.

percentages at a substation and transmission line level would reduce the risk of paying suppliers for energy that is not actually delivered. The Deepwater meter error illustrates that point.<sup>49</sup> ACE overstated the generation output of the Deepwater generating station for almost four years. The overstatement caused ACE to pay for 34,800 MWH of energy that ACE never received from its BGS suppliers. ACE included the energy overcharges in lost and unaccounted for energy. Calculating loss percentages for individual transmission lines could have prompted ACE to discover that error much earlier.

Approximately 20 percent of the energy delivered to ACE distribution customers is supplied by third party retail suppliers. The substation and feeder level reconciliations would provide an independent basis for evaluating the fixed factors used to assign losses to TPRS suppliers.

Calculating loss percentages at a substation or individual feeder level requires the installation of additional metering devices and communication capability at ACE's substations. That additional investment may or may not be economically justified.

ACE is currently increasing distribution automation (DA) on its system. DA will increase ACE's capability to monitor power flows at its substations. ACE is also planning to install advanced metering infrastructure (AMI) on its system, including automated meter reading for residential customers. AMI will increase ACE's ability to access and analyze customer energy usage. DA and AMI provide an opportunity to significantly improve the analysis of lost and unaccounted for energy.

ACE should develop a strategy for obtaining a better understanding of the causes of energy losses on its system. ACE should investigate the economic feasibility of preparing energy account reconciliations at a substation and feeder level. ACE should incorporate its strategy into its overall plans for DA and AMI.

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<sup>49</sup> The Deepwater station use accounting error is discussed in detail in Chapter 4, Power Supply and Transmission Affiliate Issues.



## **Chapter 18. One Call Damage Prevention Program**

This Chapter addresses ACE's management of its one call program for locating and marking its underground facilities for excavators. ACE uses a contractor, UtiliQuest LLC, to perform its locating and markout function. The BPU Staff cited ACE for violations of the BPU's One Call Rules in May 2007. The matter was settled. As part of the settlement, ACE agreed to develop and implement a remediation plan to improve its performance.

### **Summary of Findings**

The findings and recommendations of this Chapter are listed below.

1. UtiliQuest's daily reports show a small backlog of overdue mark-out requests.
2. UtiliQuest damage incidents are trending downward.
3. UtiliQuest's quality assurance audits show opportunities for improvement.
4. ACE recognizes the need to inspect UtiliQuest's work.
5. ACE needs to improve its compliance with the New Jersey One Call Rules.

### **Recommendation**

1. PHI should consider centralizing the management of the locating and markout function in the service company.

### **Background**

Underground utility facilities are exposed to damage when other parties make excavations. The New Jersey One Call program is designed to prevent that damage by marking the location of the underground utility facilities prior to the excavation.<sup>1</sup>

The excavator is required to notify the one call system operator prior to beginning the excavation.<sup>2</sup> The system operator generates a one call ticket and sends the ticket to the utilities operating in the proposed area of the excavation. The utilities then have three business days to determine if they have any facilities within the perimeter of the excavation area and mark the location of those facilities.

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<sup>1</sup> Locating and markout is a utility service that is included in ACE's overall electric rates. The excavator is not charged for the service.

<sup>2</sup> The excavator can submit the excavation notice by telephone or over the internet.

The New Jersey One Call program is governed by the New Jersey Underground Facilities Act<sup>3</sup> and the BPU's One-Call Damage Prevention System Rules ("the One-Call Rules").<sup>4</sup> The one-call system operator is selected and overseen by the BPU.<sup>5</sup>

ACE uses a contractor, UtiliQuest LLC, to perform its underground facility locating and markout function ("locating" function). UtiliQuest is also the locating contractor for South Jersey Gas Company and Comcast.<sup>6</sup> Verizon uses a different locating contractor.<sup>7</sup> UtiliQuest is a large national underground facility locating contractor.<sup>8</sup>

ACE provides UtiliQuest with an updated download of its GIS facilities data base four times a year. UtiliQuest receives the one call tickets directly from the system operator, determines if ACE facilities are implicated, and dispatches a technician to locate and mark the ACE facilities.

When an excavator damages an ACE facility, they are required to notify ACE and the One Call Operator. The ACE regional system operations center dispatches a troubleman to the site. UtiliQuest and ACE both prepare an investigation report. The ACE investigation report is prepared by the troubleman.<sup>9</sup>

If the damage is the result of a mistake by UtiliQuest, ACE recovers the costs of repairing the damage from UtiliQuest. If UtiliQuest correctly marked the location of the facilities, ACE recovers the damages from the excavator.<sup>10</sup>

ACE is responsible for maintaining markout records under the One Call Rules. ACE has delegated that responsibility to UtiliQuest. UtiliQuest photographs every markout. The ACE contract administrator has on-line access to the records. UtiliQuest has demonstrated a good capability of retrieving the records when required for damages claims.<sup>11</sup>

Prior to 2007, each of the three PHI utilities contracted separately for locating services.<sup>12</sup> PHI made the business decision to centralize the locating contract procurement process and issued

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<sup>3</sup>N.J.S.A 48:2-73

<sup>4</sup> N.J.A.C 14:2

<sup>5</sup> The One Call System Operators' duties are set forth in a tariff approved by the BPU.

<sup>6</sup> Within ACE's service territory, South Jersey Gas is the gas utility and Comcast is the incumbent cable TV provider.

<sup>7</sup> Verizon used ECSM Utility Contractors, Inc. ECSM has seven offices in the Northeastern United States. ECSM's New Jersey office is located in mid-New Jersey near the coast in Englishtown. ECSM web site.

<sup>8</sup> Utiliquest's web site indicated it provides locating services to over 200 utilities and telecommunications providers.

<sup>9</sup> The first responder (troubleman) interviews the excavator. The troubleman can call in a supervisor if necessary. Interview with Paula James, Contracts Administrator and Jeff Mittler, Atlantic Region Resource Manager.

<sup>10</sup> ACE also recovers damages from excavators that fail to submit excavation notices to the one call system operator.

<sup>11</sup> Interview with Paula James, Contracts Administrator and Jeff Mittler, Atlantic Region Resource Manager.

<sup>12</sup> Utiliquest was ACE's locate and markout contractor in 2005, 2006 and 2007.

a request for proposals for a single contract covering all three utilities in 2007. UtiliQuest was the successful bidder for that contract.<sup>13</sup> The contract is a unit price contract with flat rates for each one call ticket. Each of the utilities is covered under a separate purchase order with separate unit prices.<sup>14</sup>

ACE has approximately 130,000 one call tickets per year.<sup>15</sup> ACE's annual charges under the UtiliQuest contract are approximately \$1.3 million. UtiliQuest's total charges to PHI are approximately \$5.3 million per year.<sup>16</sup>

ACE's portion of the Utiliquest contract is managed by a contract administrator located in ACE's Mays Landing offices. The contract administrator also manages several other contracts.<sup>17</sup> The contract administrator does not have a technical background in locating services.

### **Remediation Plan**

The One Call Rules require the markout to be completed within three business days after receiving the one-call ticket from the system operator. ACE did not monitor Utiliquest's compliance with that requirement prior to May 2007.

On May 8, 2007, the BPU Staff notified ACE that UtiliQuest had an excessive backlog of markout requests in ACE service territory and was not complying with the three business day requirement.<sup>18</sup> ACE had no prior knowledge of the excessive backlog.<sup>19</sup> The root cause of the problem was insufficient staffing by UtiliQuest to support work for newly acquired clients.<sup>20</sup> Utiliquest committed to clearing the backlog by May 11, 2007. UtiliQuest committed to increasing staffing, improving communications with ACE and providing performance documentation.<sup>21</sup>

The Staff issued a notice of violation of the One Call Rules and entered into a settlement with ACE. The settlement required ACE to pay a \$25,000 fine and implement a remediation plan. The BPU approved the settlement in December 2007.<sup>22</sup> The order approving the settlement required ACE to develop and implement a remediation plan that includes:

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<sup>13</sup> Response to Discovery, OC-821. The new contract was effective January 1, 2008.

<sup>14</sup> Response to Discovery, OC-341. ACE has one unit price for all locates. DPL and Pepco have different rates that vary depending on the type of markout.

<sup>15</sup> Response to Discovery, OC-345. Average for 2006 and 2007 for tickets received was 130,228.

<sup>16</sup> Response to Discovery, OC-341, Bid Evaluation.

<sup>17</sup> Interview with Paula James, Contract Administrator.

<sup>18</sup> Response to Discovery, OC-337.

<sup>19</sup> Response to Discovery, OC-337. Utiliquest provides markout services for several New Jersey utilities. The Staff may have been aware of the backlog situation through its work with other utilities. Interview with Paula James, Contracts Administrator and Jeff Mittler, Atlantic Region Resource Manager.

<sup>20</sup> Response to Discovery, OC-338.

<sup>21</sup> Response to Discovery, OC-338.

<sup>22</sup> Response to Discovery, OC-337, BPU Decision and Order, Docket No. ES07110865K, OC #23-07, dated December 21, 2007.

- Creating a backup system that utilizes employees or additional contracted resources to complete daily mark-outs if the primary contractor fails to do so.
- Creating an in-house daily monitoring process that ensures the quality and timeliness of work performed by the contractor.
- Deploying the backup resources on an immediate basis to complete mark-outs on a timely basis if the primary contractor develops a backlog of overdue requests.
- Distributing and installing promotional items to increase damage prevention awareness.

ACE took the following actions in response to the problems.

- ACE increased its monitoring of Utiliquest's performance by requiring daily status reports to be submitted to the contract administrator.<sup>23</sup>
- ACE identified six employees who have the requisite training and equipment to complete backlogged locating requests on an emergency basis.<sup>24</sup>
- ACE required UtiliQuest to submit its quarterly internal quality assurance audit reports. ACE meets with UtiliQuest quarterly to discuss the audit reports.<sup>25</sup>
- ACE is currently negotiating with a local electrical contractor to obtain backup locating capability and periodic audits of UtiliQuest's compliance with the One Call rules.<sup>26</sup>

The negotiations with the secondary locating contractor were delayed for over a year by issues concerning the wording of the liability clause of the standard PHI contract.<sup>27</sup> Those issues were recently resolved. The secondary contractor submitted a revised proposal on May 20, 2009.<sup>28</sup>

The revised proposal requires the secondary contractor to maintain two locating technicians on staff. ACE will pay the contractor fixed monthly amounts totaling \$40,456 per year. The fixed payments include the first 64 hours of services for each month. Additional hours are billed at \$45 per hour.<sup>29</sup>

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<sup>23</sup> Response to Discovery, OC-244.

<sup>24</sup> Response to Discovery, OC-817.

<sup>25</sup> Response to Discovery, OC-346 and OC-820

<sup>26</sup> Response to Discovery, OC-342 and OC-819.

<sup>27</sup> Response to Discovery, OC-819.

<sup>28</sup> Response to Discovery, OC-1098.

<sup>29</sup> Response to Discovery, OC-1098. In addition to the fixed monthly amounts and hourly rates, ACE also pays mileage.

The secondary contractor is a local electrical contracting firm owned by a former ACE employee. The owner gained direct hands-on experience in the locating function while at ACE. ACE did not want to contract with an established locating contractor because of the competitive and proprietary nature of the locating business and the highly contingent nature of any required back-up locating services.<sup>30</sup> ACE did not have any discussions with other potential contractors.<sup>31</sup>

ACE must develop and implement an internal capability to receive and dispatch mark-out and audit requests before the secondary contractor can begin work. The date when the secondary contractor will begin work is uncertain.<sup>32</sup>

ACE has not included any additional costs in its 2009 budget for the secondary locating contract because it expects to be able to accommodate the contract within its current budget.<sup>33</sup>

UtiliQuest's contract requires it to engage in sufficient contingency planning to ensure that weather or resource availability will not affect its ability to perform the services required under the contract.<sup>34</sup> If the secondary contractor provides services to clear a UtiliQuest backlog, UtiliQuest would presumably be liable for the incremental costs of those services.<sup>35</sup>

The BPU's December 2007 Order required ACE to submit a revised remediation plan. That revised plan will be submitted after ACE retains the secondary locating contractor.<sup>36</sup>

ACE is currently participating in focus group discussions through the New Jersey Common Ground Alliance to develop best practices concerning public education and the distribution of promotional materials. ACE will develop and implement the required enhancements to its public education efforts after the BPU staff reviews the focus group's recommendations.<sup>37</sup>

## **Findings**

**UtiliQuest's daily reports show a small backlog of overdue mark-out requests.** UtiliQuest processes approximately 130,000 ACE one call tickets per year. Overland reviewed the daily

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<sup>30</sup> Response to Discovery, OC-1169.

<sup>31</sup> Response to Discovery, OC-1169. ECSM works provides locating services to Verizon in ACE's service territory. ACE did not have any discussions with ECSM about the secondary contract because of the competitive and proprietary nature of the locating business. UtiliQuest also provides locating services to South Jersey Gas and Comcast within ACE's service territory. ACE did not have any discussions with South Jersey Gas or Comcast about sharing the cost of the secondary contract.

<sup>32</sup> Response to Discovery, OC-1098.

<sup>33</sup> Response to Discovery, OC-819.

<sup>34</sup> Response to Discovery, OC-341, UtiliQuest Contract, Scope of Work, Section 1.A.4.

<sup>35</sup> The incremental costs would be the excess of the secondary contractor's charges over the amount that UtiliQuest would have charged for the same markouts.

<sup>36</sup> Response to Discovery, OC-817.

<sup>37</sup> Response to Discovery, OC-817 and OC-1099. The BPU Staff is scheduled to make a presentation on the focus group results at a New Jersey Common Ground Alliance meeting in June 2009.

status reports for the last business day in each month of 2008. Those twelve dates had an average of six overdue mark-outs, as shown below.

<b>Table 18-1</b> <b>ACE Overdue Markouts</b> <b>As of the Last Business Day</b> <b>of the Month</b> <b>Year 2008</b>	
Month	Number
January	6
February	9
March	0
April	4
May	3
June	3
July	6
August	19
September	4
October	4
November	5
December	5
Source: Response to Discovery, OC-818	

ACE does not have the capability to audit the daily status reports.<sup>38</sup>

**UtiliQuest damage incidents are trending downward.** UtiliQuest is liable for damages when a mis-mark causes an excavator to damage ACE facilities. The following table shows those damage incidents by year.

<b>Table 18-2</b> <b>ACE One Call Damage Incidents</b> <b>Where UtiliQuest Was Liable</b> <b>2004 to 2007</b>		
Year	Number	Amount
2004	35	\$50,410
2005	29	\$52,981
2006	20	\$33,398
2007	22	\$46,636
Source: Response to Discovery, OC-245		

Total damage incidents are also trending downward. ACE reports the following total number of one call incidents, without regard to the party who is liable.

<sup>38</sup> Interview with Paula James, Contracts Administrator and Jeff Mittler, Atlantic Region Resource Manager.

<b>Table 18-3</b> <b>ACE Total One Call Incidents</b> <b>Regardless of Liability</b> <b>2004 to 2007</b>	
Year	Incidents
2004	155
2005	169
2006	119
2007	134
Source: Response to Discovery, OC-345 and OC-1100	

**UtiliQuest’s quality assurance audits show opportunities for improvement.** UtiliQuest inspects between two and three percent of its mark-outs as part of its quality assurance program.<sup>39</sup> The following table shows the inspection scores for 2008.

<b>Table 18-4</b> <b>UtiliQuest Quality Assurance Program</b> <b>Inspection Results - 2008</b>	
Metric	Score
Ticket Completed on Time	100
Billing Accurate Based on Documentation	97
Marks Accurate	89
Scope of Markout Completed Per One Call Request	80
Markout Standards In Compliance with BPU Regulations	72
Manifest / Photos Accurate	86
Documentation Understandable and Accurate	80
Source: Response to Discovery, OC-820 and OC-346. Perfect score is 100.	

The scores represent the percentage of jobs complying with the inspection criteria. ACE meets with UtiliQuest on a quarterly basis to review the inspection results and planned corrective actions. ACE considers a score of 90 to be a reasonable target for the markout scope and markout standards compliance metrics.<sup>40</sup> That target is inconsistent with the One Call Rules.

UtiliQuest’s inspection results showed improvement in the fourth quarter of 2008. The markout scope and standards compliance metrics improved to 85 percent and 81 percent in that quarter respectively.<sup>41</sup>

The 2008 scores were below ninety percent in five of the seven categories. ACE should encourage UtiliQuest to improve its service quality.

<sup>39</sup> Response to Discovery, OC-346. The ticket completed on time metric for 2008 has a total possible score of 2,965. That represents about 2.3% of the total tickets (estimated to be 130,000).

<sup>40</sup> Response to Discovery, OC-820.

<sup>41</sup> Response to Discovery, OC-820.

**ACE recognizes the need to inspect UtiliQuest's work.** ACE does not inspect UtiliQuest's work due to a lack of available resources.<sup>42</sup> ACE recognizes the need to inspect UtiliQuest's markouts and has included those inspections within the proposed scope of work for the secondary locating contractor.

The scope of proposed inspections is shown below.<sup>43</sup>

- Proper Identification of facility
- Site adequately marked (paint/flags/offsets/spacing of marks)
- Accurate marks supplied
- Entire requested area located
- Locate completed on time
- Documentation supplied by locator adequate and correct
- Positive response provided in circumstance of no conflict
- ACE specific markout policies followed.

ACE does not verify the qualifications or training of UtiliQuest's technicians.<sup>44</sup>

**ACE needs to improve its compliance with the New Jersey One Call Rules.** ACE continues to experience overdue markouts and UtiliQuest's quality assurance reports indicate a inadequate compliance rates. The lengthy delay in retaining a secondary locating contractor and submitting a revised remediation plan may indicate a lack of understanding of the importance of one call rule compliance. The proposed secondary contractor qualifications and resources are questionable. ACE needs to increase its focus on one call program management.

## **Recommendation**

**PHI should consider centralizing the management of the locating and markout function in the service company.** The UtiliQuest contract covers all three PHI utilities. The PHI UtiliQuest contract has a total annual value of approximately \$5.3 million and covers approximately 530,000 locates per year.<sup>45</sup> ACE represents approximately 24 percent of the total contract.

Management of the UtiliQuest contract is currently decentralized. At ACE, the contract is managed by a single contract administrator on a part time basis. The delays in submitting the revised remediation plan may be indicative of staffing shortages for one call related activities.

A centralized group could provide PHI with the technical expertise and backup capabilities needed by ACE. The centralized group could provide the following functions.

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<sup>42</sup> Interview with Paula James, Contracts Administrator and Jeff Mittler, Atlantic Region Resource Manager.

<sup>43</sup> Response to Discovery, OC-342.

<sup>44</sup> Interview with Paula James, Contracts Administrator and Jeff Mittler, Atlantic Region Resource Manager.

<sup>45</sup> Response to Discovery, OC-341.



- Contract administration
- Inspection
- Backup capability
- Training PHI employee to provide additional backup capability in a second role and managing the second role process.
- Incident investigation and analysis
- Audit accuracy of daily status reports, re: compliance with BPU three business day rule
- UtiliQuest quality assurance and training program review
- Industry and regulatory group participation
- Public Education and outreach to contractors
- Claims management for claims against UtiliQuest and excavators.

Centralizing the locating and markout function in the service company would produce the following benefits:

- Provide PHI with in-house underground facility locating and markout expertise.
- Reduce costs through economies of scale, resource sharing and standardized procedures.
- Enhance UtiliQuest contract administration and PHI's ability assess UtiliQuest's performance and direct corrective actions.
- Promote excavator communications and education.

UtiliQuest has a workforce of 180 technicians working for the three PHI utilities.<sup>46</sup> UtiliQuest has its own quality assurance program. A centralized PHI group of six employees might be adequate to oversee UtiliQuest's work, while providing backup capability. ACE would be allocated approximately 24 percent of the group's costs.

ACE is currently negotiating with a secondary contractor to obtain part-time audit and backup locating services from two locating technicians. A PHI service company group could provide more depth for the backup services with the added benefits of improved management of the UtiliQuest contract and increased internal understanding of one call program issues.

One member of the centralized group should be assigned immediate responsibility for ensuring One Call Rule compliance in New Jersey. The primary work location for that member should be ACE's Mays Landing complex. ACE should also implement an internal backup function. The backup function should be staffed by ACE employees located at Mays Landing.<sup>47</sup> At least two backup locating and markout technicians should be available each day, on an as-needed basis, to complete markouts within the three business day requirement.

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<sup>46</sup> Response to Discovery, OC-1101.

<sup>47</sup> The backup technicians can be ACE employees with other duties who are qualified to perform locating and markout services as a second role.

A detailed analysis of the advantages and disadvantages of the centralized approach is beyond the scope of this audit. The centralized approach may or may not be the optimum approach. PHI should assess the advantages and disadvantages of the centralized approach and document its findings in a report. The report should be submitted to the BPU Staff as a supplement to ACE's one call program remediation plan.

## Chapter 19. Construction Contract Management - Inspection

This Chapter addresses ACE's procedures for inspecting the work performed by transmission and distribution construction contractors.

### Summary of Findings

The findings and recommendations of this Chapter are listed below.

1. ACE spends about \$1.7 million per year on the Temporary Construction Representatives. ACE retains contractors through a temporary labor agency to serve as the owner's representative on most of its construction contracts. All of the temporary agency contractors are former ACE field operations supervisors who have retired from ACE. During a recent 27 month period, they billed hours equivalent to 15 full time employees. Ten of the retirees are essentially working for ACE on a full time basis.
2. ACE's level of change order spending was reasonable in 2007 and 2008. Change orders compensate contractors for work added to the contract scope after the project is awarded. During 2007 and 2008, ACE's change orders averaged 12 percent of the original bid amount.
3. ACE's contractor inspection process is informal. ACE does not prepare inspection reports or forms for any of its construction contracts. ACE's philosophy is to focus on remedying problems rather than issuing inspection reports.
4. ACE does not have any formal inspection procedures for the two annual blanket contracts managed by ACE district operations. ACE supervisors provide oversight and direction to the contractor crews in the same manner as ACE crews.
5. Construction management internal audit results have generally been favorable. PHI's conducted a series of internal audits of major transmission construction projects in 2008. The audit scope included the functions performed by the Construction Management Department. The audit findings were generally positive and did not indicate significant management deficiencies.

### Recommendations

1. PHI should consider replacing some temporary CM-CRs with permanent CM-CRs. The stated purpose of using the retirees is to supplement the permanent workforce to address peak workload requirements. Ten of the retirees are essentially working for ACE full time. The contracting approach does not result in significant cost savings. Replacing some of the retirees with permanent employees would produce a number of benefits including improving internal controls and facilitating process improvements.

2. A final inspection report should be prepared for contracts exceeding \$100,000. A written inspection report should be prepared for larger projects to document compliance with contract requirements and facilitate communications and accountability.
3. The contractor evaluation should be completed for all contracts exceeding \$100,000. PHI has a form for evaluating contractor performance. However, the evaluations are only prepared for about ten to twenty percent of ACE's lump-sum bid projects. The contractor evaluation could provide valuable information for future bid evaluations.

## **Background**

The following table shows ACE's 2007 and 2008 actual construction expenditures by type of cost.

Type Cost	2007	2008
Contractors <sup>1</sup>	52	64
Materials <sup>2</sup>	50	53
Direct Labor Charges	39	38
Other Labor <sup>3</sup>	10	15
AFUDC <sup>4</sup>	3	3
Other (net) <sup>5</sup>	1	(9)
<b>Total</b>	<b>155</b>	<b>164</b>

Source: Response to Discovery, OC-832 and OC-1180.

ACE internal construction crews perform most of ACE's smaller construction projects.<sup>6</sup> ACE uses construction contractors for larger projects and to supplement its internal crews when workloads are heavy.

Most of ACE's construction contracts are competitively bid lump-sum contracts. The contractor bids a fixed lump-sum price to perform a defined scope of work. PHI's Construction Management ("CM") Department manages ACE's lump-sum contracts.<sup>7</sup>

<sup>1</sup> The contracts budget consists primarily of the lump-sum bid contracts and district managed blanket contracts discussed in this Chapter. In addition, the contracts budget includes some miscellaneous contracts managed by areas such as real estate, environmental and rights-of-way groups.

<sup>2</sup> Virtually all of the materials installed by contractors are provided by ACE. The materials costs shown above include the materials installed by both the ACE internal crews and contractor crews.

<sup>3</sup> Engineering and Supervision and A&G labor allocated to construction.

<sup>4</sup> AFUDC is allowance for funds used during construction.

<sup>5</sup> Includes contributions in aid of construction and reimbursements.

<sup>6</sup> Interview with John Loble, PHI Manager of Construction Management and Kim Okamoto, Construction Representative.

<sup>7</sup> The Construction Management Department also manages ACE's project specific units bid contracts. Units bid contracts are used when the project scope is not sufficiently defined to allow lump-sum bidding. The contractor bids a unit price which is applied to the actual number of units installed (for example, feet of cable). The units bid

In 2007, ACE had 94 lump-sum contracts with an initial bid amount of \$39 million.<sup>8</sup> ACE provides virtually all of the materials installed by the contractors.<sup>9</sup> The lump-sum bid amounts contain very little for materials costs.

ACE also has two annual blanket contracts to perform recurring small projects.<sup>10</sup> Both of the blanket contracts have been with the same contractor, JW Foley, for several years. The blanket contracts are supervised and managed by ACE's district operations.<sup>11</sup> ACE incurred \$6.1 million in total costs under the two blanket contracts in 2007.<sup>12</sup>

ACE's basic approach to construction contract procurement is to require lump sum bidding on a detailed scope of work. ACE is able to utilize lump sum bidding on a high percentage of its contracts because it places a lot of emphasis on preparing a detailed project scope prior to issuing the request for bids.<sup>13</sup>

ACE utilizes PHI's standard construction contract terms and conditions for each contract. ACE's policy is to strictly enforce the standard terms and conditions.<sup>14</sup> The standard terms and conditions include a one year warranty on the work performed by the contractor.<sup>15</sup> ACE does not typically include incentives or penalty provisions in its construction contracts. There were no disputes with construction contractors in 2007 or the first half of 2008. ACE's policy is to resolve issues before they get to the formal dispute level.<sup>16</sup>

PHI's transmission and distribution engineering groups identify the projects to be performed by contractors. The designated project engineer prepares a pre-bid job package and forwards that package to the CM Department.<sup>17</sup> The CM Department reviews the job package and forwards the package on to PHI's Strategic Sourcing Department. The Strategic Sourcing Department arranges a pre-bid meeting attended by potential contractors and receives, opens and evaluates the bids. The CM Department prepares its own bid evaluation and selects the successful bidder.<sup>18</sup>

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contracts are rarely used. In 2007, ACE's total expenditures under those contracts was only \$277,586. Response to Discovery, OC-319.

<sup>8</sup> Response to Discovery, OC-318.

<sup>9</sup> Interview with John Loble, PHI Manager of Construction Management and Kim Okamoto, Construction Representative.

<sup>10</sup> The two blanket contracts are the Ariel Distribution Time & Materials Contract and the Buried Distribution Units Contract. Response to Discovery, OC-317.

<sup>11</sup> The PHI Construction Management Department does not manage the two "annual" blanket contracts.

<sup>12</sup> Response to Discovery, OC-317.

<sup>13</sup> Interview with John Loble, PHI Manager of Construction Management and Kim Okamoto, Construction Representative.

<sup>14</sup> Interview with John Loble, PHI Manager of Construction Management and Kim Okamoto, Construction Representative.

<sup>15</sup> Response to Discovery, OC-320.

<sup>16</sup> Interview with John Loble, PHI Manager of Construction Management and Kim Okamoto, Construction Representative.

<sup>17</sup> Response to Discovery, OC-320, Item 3, Construction Management process summary.

<sup>18</sup> Response to Discovery, OC-321.

The project engineer is responsible for project decisions, budget, cost and completion. The CM Department assigns a construction representative (“the CM-CR”) to each lump sum project. The CM-CR is the “owner” of the contract within ACE and is responsible for day-to-day oversight and management of the contract.<sup>19</sup> The CM-CR serves as the primary contact between ACE and the contractor.<sup>20</sup> The CM-CR is typically located at the construction site when work is being done.

The CM-CR’s duties include:<sup>21</sup>

- Attending the pre-bid meeting.
- Transmitting project drawings, maps and other documents to the contractor.
- Coordinating and receiving materials at the site.<sup>22</sup>
- Coordinating outage schedules with system operations and the local district.
- Conducting daily tailboard meetings with the contractor to review job assignments.
- Monitoring compliance with contract terms and conditions.
- Monitoring contractor safety, work practices, performance and schedule.
- Approving contract change orders.
- Submitting weekly forms listing the major contractor activities and staffing levels for each day during the week.
- Approving time sheet information supporting cost-plus change order billings.
- Processing contractor invoices for progress payments.
- Addressing customer complaints.
- Conducting the final job walk-through inspection with the project engineer.
- Preparing the punch list of outstanding work to be completed prior to final payment.
- Collecting field test results for substation equipment.
- Transmitting as-built drawings (prepared by contractor) to the project engineer.
- Preparing credit records for excess materials returned to ACE storerooms.

The CM-CR, project engineer and contractor attend the final walk-through inspection. The walk-through includes a meeting to address the completion of the project scope and any other outstanding issues. The contractor typically provides the as-built drawings at that meeting.<sup>23</sup> The CM-CR is responsible for verifying that the as-built drawings reflect the installed facilities.<sup>24</sup>

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<sup>19</sup> Response to Discovery, OC-1148.

<sup>20</sup> Response to Discovery, OC-320, item 3.

<sup>21</sup> Response to Discovery, OC-246, OC-324 and OC-320.

<sup>22</sup> The CM-CR approves all stores requisitions and signs for the receipt of the materials. The contractors cannot directly request materials from ACE’s storerooms.

<sup>23</sup> Response to Discovery, OC-327.

<sup>24</sup> Interview with John Loble, PHI Manager of Construction Management and Kim Okamoto, Construction Representative.

The PHI CM Department has nine employees. The department consists of a manager, seven permanent construction representatives and an administrative position.<sup>25</sup> Two of the permanent construction representatives (“permanent CM-CRs”) are assigned to ACE on a long-term basis. The other five are assigned to Delmarva or Pepco. The senior strategic relationship coordinator (the CM Coordinator) performs administrative tasks, including record-keeping and invoice processing.

PHI retains contractors through a temporary labor agency to serve as CM-CRs on the individual construction contracts. The contract CM-CRs are referred to as temporary construction representatives (“temporary CM-CRs”). The permanent CM-CRs supervise the temporary CM-CRs.

ACE has 18 temporary CM-CRs available. All of the temporary CM-CRs are former ACE field operations supervisors who have retired from permanent positions at ACE.<sup>26</sup>

### **Temporary Construction Representatives - Staffing Levels**

#### **ACE spends about \$1.7 million per year on the Temporary Construction Representatives.**

ACE spent an average of \$144,000 a month on the temporary construction representatives during the period April 2006 through June 2008.<sup>27</sup> That equates to annualized spending of \$1.73 million a year.

The temporary CM-CRs billed 59,037 hours during the 27 month period.<sup>28</sup> That equates to the productive hours of approximately 15 full time employees.<sup>29</sup> The costs averaged \$66 per hour billed.

ACE used 19 temporary CM-CRs during the 27 month period. Many are essentially working on a full time basis. The top ten billed an average of 1,921 hours a year.<sup>30</sup> The average annualized cost for the top ten billers was \$129,244 per year. The temporary CM-CR annual spending equals approximately four percent of the related construction contract value.<sup>31</sup>

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<sup>25</sup> Interview with John Loble, PHI Manager of Construction Management and Kim Okamoto, Construction Representative.

<sup>26</sup> Response to Discovery, OC-315. Most are former construction supervisors. Some are former substation maintenance supervisors.

<sup>27</sup> Response to Discovery, OC-316. ACE did not provide a monthly breakdown of the costs.

<sup>28</sup> Response to Discovery, OC-316.

<sup>29</sup> Based on 1,760 productive hours per year per employee. Productive hours are based on a 40 hour week excluding vacation, holidays and sick pay.

<sup>30</sup> Response to Discovery, OC-316. The ten with the most hours during the 27 month period. The top 10 accounted for 73 percent of the total hours billed during that period.

<sup>31</sup> Based on 2007 contract bid amounts of \$39 million (Response to Discovery, OC-318).

## Change Orders

**ACE's level of change order spending was reasonable in 2007 and 2008.** Change orders compensate contractors when work is added to the contract scope after the project is awarded. Change orders also compensate contractors for incremental costs caused by factors outside of their control, such as delays in receiving materials from ACE, unanticipated site conditions, or additional labor required to support warranty repairs made by equipment manufacturers.<sup>32</sup>

Change orders are typically proposed by the contractor.<sup>33</sup> If the temporary CM-CR agrees that a change order is justified, the temporary CM-CR generates a change order request form which is forwarded to the project engineer for approval. The change order form includes a cost estimate prepared by the temporary CM-CR.<sup>34</sup> Change orders exceeding specified threshold amounts must be approved by the applicable engineering manager and the Senior Vice President - Asset Management.<sup>35</sup>

The change orders are billed on a cost-plus basis.<sup>36</sup> The temporary CM-CR reviews and approves the time sheet information supporting the change order invoices.<sup>37</sup>

The following table summarizes the change orders granted by ACE in 2007 and 2008 for contracts managed by the CM Department.

Description	2007	2008
Total Bid Amount <sup>38</sup>	39.0	13.0
Changes Orders	4.6	1.8
Percentage of Bid Amount	11.9%	13.5%
Source: Response to Discovery, OC-318.		

<sup>32</sup> Response to Discovery, OC-833.

<sup>33</sup> Change orders can also be proposed by ACE if it wants to expand the scope of work. The project engineer is responsible for proposing those change orders.

<sup>34</sup> Interview with John Loble, PHI Manager of Construction Management and Kim Okamoto, Construction Representative.

<sup>35</sup> Response to Discovery, OC-327 and OC-833.

<sup>36</sup> Response to Discovery, OC-320, item 4. The contractors submit hourly billing rates for additional work with their initial proposals.

<sup>37</sup> Response to Discovery, OC-325, item 3.

<sup>38</sup> 2008 excludes four contracts that were not complete as of the date of the analysis. Those four contracts had a total bid amount of \$2.7 million. Response to Discovery, OC-1179 asked PHI to explain why the 2008 lump-sum bids represented such a small percentage of its total construction contract spending in 2008. The response does not provide any meaningful insight into the reasons for the low percentage.



ACE does not benchmark its change order levels against those reported by other utilities.<sup>39</sup> ACE's 2007 and 2008 change order percentages are reasonable.

## **Contract Inspection**

**ACE's contractor inspection process is informal.** ACE's philosophy is to focus on remedying problems rather than issuing inspection reports.<sup>40</sup> ACE does not prepare any inspection reports or forms for the lump sum contracts.<sup>41</sup>

The temporary CM-CRs are responsible for monitoring and inspecting the contractors work. ACE does not provide any training to the temporary CM-CRs on inspection or contract management procedures.<sup>42</sup> Instead, ACE relies on their experience as former field operations supervisors.

ACE provides the temporary CM-CRs with a three page outline of their responsibilities. The outline does not include any instructions pertaining to inspecting the contractor's work.<sup>43</sup>

The temporary CM-CR and the project engineer conduct a joint final walk-through when the project is substantially complete. The parties agree to a punch list of the remaining outstanding items at the final walk-through. ACE does not prepare any documentation of the final walk-through inspection other than the punch list.<sup>44</sup> The temporary CM-CR is responsible for verifying that the installed facilities are accurately reflected in the contractor supplied as-built drawings.<sup>45</sup>

ACE describes the final walkthrough as "more of an informal inspection."<sup>46</sup> The inspection is informal because ACE's temporary CM-CR has been assigned to the project from the beginning and has observed the work as it was being performed. ACE views the final walkthrough meetings as a forum for open discussion of the project and opportunities for improvement.<sup>47</sup>

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<sup>39</sup> Response to Discovery, OC-1150.

<sup>40</sup> Interview with John Loble, PHI Manager of Construction Management and Kim Okamoto, Construction Representative.

<sup>41</sup> Response to Discovery, OC-246 and Interview with John Loble, PHI Manager of Construction Management and Kim Okamoto, Construction Representative.

<sup>42</sup> Response to Discovery, OC-324. The temporary contract representatives do receive the regular continuing training given to ACE employees on work rules and regulations.

<sup>43</sup> Response to Discovery, OC-324.

<sup>44</sup> If the contractor wants to receive final payment before the punch list is completed, the contractor can request a "certificate of substantial completion." The certificate allows final payment to be made with a retainage deducted to cover the outstanding items. The certificate consists of five lines of boilerplate language and can be signed by either the permanent CM-CR or the project engineer. Response to Discovery, OC-1147 through OC-1149. The certificate of substantial completion is not prepared if there are no outstanding punch list items when final payment is requested. OC-1170.

<sup>45</sup> Interview with John Loble, PHI Manager of Construction Management and Kim Okamoto, Construction Representative.

<sup>46</sup> Response to Discovery, OC-1147.

<sup>47</sup> Response to Discovery, OC-1147.

According to ACE, one of the main benefits of final walkthrough meetings is open discussion and that benefit can be obtained without additional documentation requirements.<sup>48</sup>

As part of the job closing process, ACE compares the materials quantities charged to the job to the bill of materials prepared prior to awarding the contract. The temporary CM-CR is responsible for resolving significant variances between the planned and installed quantities.<sup>49</sup>

The temporary CM-CRs are instructed to complete a contractor evaluation form. However, the form is only completed for about ten to twenty percent of the lump-sum contracts.<sup>50</sup> The one page form allows the contractor to be graded on a scale of one to four on sixteen items.<sup>51</sup>

PHI does not track or analyze the results of the contractor evaluations.<sup>52</sup> The temporary CM-CRs do not receive any instructions on how to grade the contractors.<sup>53</sup>

**ACE does not have any formal inspection procedures for the two annual blanket contracts managed by ACE district operations.** ACE has two annual blanket construction contracts with JW Foley. Foley provides complete crews with foremen. ACE supervisors provide oversight and direction to the Foley crews in the same manner as ACE crews. ACE does not have any formal inspection procedures for the Foley crews. The ACE supervisors perform spot checks to see if ACE's construction standards are being followed, in the same way that they spot check ACE's internal crews. The spot checks results are not documented or tracked. The Foley crews are basically treated the same as internal crews.<sup>54</sup>

ACE is generally satisfied with the quality of Foley's work. The contracts include a one year warranty. The amount of work replaced under the warranty has been very small.<sup>55</sup>

## **Internal Audits**

**Construction management internal audit results have generally been favorable.** PHI's internal audit department conducted a series of audits of major PHI transmission construction

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<sup>48</sup> Response to Discovery, OC-1147.

<sup>49</sup> Interview with John Loble, PHI Manager of Construction Management and Kim Okamoto, Construction Representative.

<sup>50</sup> Response to Discovery, OC-323. Only 11 contractor evaluations were prepared during the first 10 months of 2008. Most of the contractors were scored as satisfactory or very satisfactory. Only one contractor was scored as unsatisfactory.

<sup>51</sup> Response to Discovery, OC-246.

<sup>52</sup> Overland Interview with John Loble, PHI Manager of Construction Management. PHI does not enter the results into an electronic database or spreadsheet.

<sup>53</sup> Interview with John Loble, PHI Manager of Construction Management and Kim Okamoto, Construction Representative.

<sup>54</sup> Interview with John Loble, PHI Manager of Construction Management and Kim Okamoto, Construction Representative.

<sup>55</sup> Interview with John Loble, PHI Manager of Construction Management and Kim Okamoto, Construction Representative.

projects in 2008.<sup>56</sup> The results of those audits are documented in three audit reports.<sup>57</sup> The results of the audits are generally favorable.

The audit of ACE's new Orchard Substation focused on contract management.<sup>58</sup> The report for that audit included the following positive findings:

- The CM Coordinator exhibited ownership of the contracts and adequately monitors the contracts.
- Contract documentation was readily available.
- Despite very compressed project schedules, the CM Department worked successfully to complete the projects on time. Good working relationships allowed the project to stay on schedule despite adverse site conditions.
- Coordination between the CM Department, Engineering and the contractors was effective.
- The contractors selected for the project had the required skill sets and were flexible in adjusting to changing requirements.

Another audit found that CM Department adequately monitored processes related to invoicing.<sup>59</sup>

The internal audits raised some concerns and identified some opportunities for improvement. Most of the findings and recommendations were typical internal audit items and will not be repeated here.<sup>60</sup> The most significant findings and recommendations are discussed below.

**[BEGIN CONFIDENTIAL]**

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<sup>56</sup> The audits were undertaken because PHI expected the frequency of major construction projects to increase in the future and the 2008 projects represented the first major transmission projects in several years. Response to Discovery, OC-724 (restricted).

<sup>57</sup> Response to Discovery, OC-724 (restricted), Major Transmission Construction Review dated January 31, 2008; Major Transmission Construction Review - Todd to Allen 69kv Contract Review; and Major Transmission Construction Review - Orchard Substation 500/230 kV Review, November 11, 2008.

<sup>58</sup> The audit reviewed 12 contracts with a total value of \$39 million. Response to Discovery, OC-724 (restricted).

<sup>59</sup> Response to Discovery, OC-724 (restricted), Todd to Allen 69kv Contract Review, June 18, 2008. The scope of that audit included six contracts.

<sup>60</sup> The three audit reports contained 19 recommendations. Some of the recommendations have already been implemented.

<sup>61</sup> Response to Discovery, OC-724 (restricted), June 18, 2008 Internal Audit Report.

<sup>62</sup> Response to Discovery, OC-724 (restricted), January 31, 2008 and November 11, 2008 Internal Audit Reports.

[END CONFIDENTIAL]

PHI's active auditing of construction contract management is commendable. The Internal Audit findings are generally positive and do not indicate significant management deficiencies.

## **Recommendations**

**PHI should consider replacing some temporary CM-CRs with permanent CM-CRs.** The stated purpose for using retirees as CM-CRs is to supplement the permanent workforce to address peak workload requirements throughout the year.<sup>68</sup> The temporary agency billings demonstrate that ten of the retirees are essentially working for ACE on a full time basis.

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<sup>63</sup> Response to Discovery, OC-724 (restricted), November 11, 2008 Internal Audit Report, page 3.

<sup>64</sup> The overpayment to the cable supplier was \$32,270. The excessive markup paid to the insulation contractor was not quantified.

<sup>65</sup> Response to Discovery, OC-724 (restricted), June 18, 2008 Internal Audit Report.

<sup>66</sup> Response to Discovery, OC-724 (restricted), June 18, 2008 Internal Audit Report.

<sup>67</sup> Response to Discovery, OC-724 (restricted), November 11, 2008 Internal Audit Report.

<sup>68</sup> Overland Interview with John Loble, PHI Manager of Construction Management, and Response to Discovery, OC-724 (restricted), June 18, 2008 Internal Audit Report, page 3.

The annualized charges for those ten temporary CM-CRs averaged \$129,244 during the 27 month period ending in June 2008. That equates to a base salary of approximately \$96,000.<sup>69</sup> The contracting approach does not appear to result in significant cost savings for ACE.

The temporary CM-CRs have all retired from permanent positions at ACE.<sup>70</sup> That raises concerns about reduced enthusiasm for implementing new process improvements. Having temporary agency employees serve as gatekeepers for contractor change order requests and approve the support for cost-plus invoices raises concerns about internal controls and compliance with ACE policies.

Temporary agency employees may be less willing to challenge decisions made by supervisors and may have less enthusiasm for aggressively enforcing contract terms.

Additional benefits of using permanent employees to perform some of the work currently done by the temporary CM-CRs include:

- Additional backup capability for the two permanent CM-CRs currently working at ACE.
- Increased capability to develop and implement process improvements and standardized procedures.
- Increased opportunities for professional development and oversight through dialogue, training, job rotation and participation in industry activities.

On April 28, 2009, the BPU approved an infrastructure investment program for ACE as an economic stimulus measure.<sup>71</sup> That program increased ACE’s 2009 and 2010 construction budgets by \$12.5 million and \$15.2 million respectively.<sup>72</sup> The following table shows ACE’s revised 2009 and 2010 construction forecast with the infrastructure replacement program.

<p align="center"><b>Table 19-3</b> <b>ACE Construction Forecast</b> <b>2009 through 2013</b> <b>Dollars in Millions</b></p>			
<b>Year</b>	<b>March 2009 Forecast</b>	<b>Infrastructure Program</b>	<b>Total</b>
2009	139	13	152
2010	143	15	158
<p><small>Source: PHI Analyst Conference Presentation, March 27, 2009, Power Delivery Appendix, page 22 and Response to Discovery, OC-1090.</small></p>			

<sup>69</sup> At an employee benefits, payroll taxes and annual incentive plan load of 35 percent.

<sup>70</sup> The average age of the temporary CM-CRs is 62. Response to Discovery, OC-315.

<sup>71</sup> Response to Discovery, OC-1089.

<sup>72</sup> Response to Discovery, OC-1090.

The construction forecast implies a continuing need for a substantial number of CM-CRs. PHI should review the anticipated base work load for construction representatives and consider adding additional permanent CM-CRs to ACE's service territory. PHI should consider replacing at least three of the temporary CM-CRs in ACE's service territory with permanent employees.

PHI should also consider adding an additional administrative position to the CM Department. The CM Coordinator currently handles a heavy workload with no backup. ACE's share of the cost of the additional administrative position would be approximately 24 percent.

**A final inspection report should be prepared for contracts exceeding \$100,000.** ACE does not currently prepare written inspection reports for any of its construction projects. The punch list is the only documentation of the final walk-through inspection.

A written inspection report should be prepared for larger projects to document compliance with contract requirements and facilitate communications and accountability. The inspection report should be prepared using a flexible on-line form. The form should be structured as a checklist with expandable comment fields.<sup>73</sup>

The inspection report should document completion of each major component of the contract scope of work including change orders. The inspection report should also document compliance with ACE construction standards, completion of any required testing, completion of the required as-built drawings, and acceptance of the facility by ACE. The punch list of open items should be attached to the inspection report.<sup>74</sup>

The final inspection report should be approved by the temporary CM-CR, the supervising permanent CM-CR and the project engineer.

**The Contractor Evaluation should be completed for all contracts exceeding \$100,000.** In 2007 and 2008, the temporary CM-CRs only completed contractor evaluation forms for ten to twenty percent of the contracts they managed.<sup>75</sup> The contractor evaluations could provide valuable input into future bid evaluations. The construction representatives should be required to prepare contractor evaluations for all significant contracts. PHI should provide written guidance on the criteria to be used in the scoring process.

The CM Department should track the contractor evaluation scores in a sortable database. The CM Department should analyze the scores periodically to identify high and low scoring contractors. The analysis results should be shared with the Strategic Sourcing Department to assist in bidder qualification and evaluation.

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<sup>73</sup> PHI created a sourcing workflow working group in 2008. The working group included the CM Department. The working group focused on leveraging technology to automate the contract procurement process. The group created a Lotus Notes workflow tool to automate and standardize the process. A similar approach could be taken to creating a project inspection form. Response to Discovery, OC-1146.

<sup>74</sup> For large complex projects, it may be appropriate to attach electronic photographs.

<sup>75</sup> Response to Discovery, OC-323, part 2, eleven contractor evaluations were prepared in the first ten months of 2008.

## Chapter 20. Customer Service

The Customer Care Group is an organization comprised of approximately 800 employees whose primary focus is on two core corporate processes – Manage Revenue and Supply Customers' Energy.<sup>1</sup>

### Summary of Findings

1. ACE's customer service is largely performed by employees of PHI Service Company with the notable exceptions of meter reading which is performed by another related party, Millennium Account Services LLC, and call center support which is partially handled by a third-party contractor. The size of this organization has not changed significantly from 2006 to 2008.
2. The C3 customer information system, shared with DPL, was found to be lagging behind more modern commercial off-the-shelf products in a 2005 study commissioned by PHI. However, plans to replace and integrate the C3 system with Pepco's system have been put on hold as management has shifted its attention to its smartgrid and automated metering initiatives. More recently, the C3 system was cited as a reason that the Billing organization did not compare favorably to ACE's and DPL's peers in a 2008 benchmarking study.<sup>2</sup>
3. Based solely on the targets established in the Annual Incentive Plan, customer service functions (e.g., Billing Services, Call Center, etc.) have performed admirably over the past two years. In both years, five of seven functions earned pay-outs in excess of 100 percent of target based on performance-against-target metrics.
4. Compared to executives, customer service employees eligible for the Annual Incentive Plan have much less compensation at risk. However, they often have more performance metrics, which implicitly leads to individual measures that are assigned relatively little weight. Given this combination, we concur with the findings of a compensation expert retained by the Board of Directors that there is a point at which the incentive to attain a goal is so small that there is little to no motivation to achieve it.
5. While metrics used to determine pay-outs under the Annual Incentive Plan showed favorable results, other performance measurements of the customer services organization were mixed. Overall ACE customer satisfaction declined slightly between 2006 and 2008 even though ACE scored higher than the other PHI utilities. A benchmarking study conducted in 2008 showed that the combined customer service organizations of ACE and DPL placed in the third quartile of their peer group, largely due

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<sup>1</sup> Response to Discovery, OC-1047 (2005-2007 Business Plan Customer Care Executive Area Summary, p. 2-1).

<sup>2</sup> According to the company, this is largely due to supporting two billing systems.

to poor performance in safety and the high costs associated with Call Centers and Billing. On the other hand, ACE met its call responsiveness commitment to the New Jersey BPU by a comfortable working margin.

6. Meter reading is currently conducted by an affiliate, Millennium Account Services, under the terms of an agreement that expires in 2010. The pricing of this agreement was not set in the market or based on a regulatory cost standard. If and when smart metering technology is employed (currently part of the Blueprint for the Future initiative), the need for a meter reading group will be greatly reduced if not eliminated.
7. Customers having difficulty making payment for their energy usage have the opportunity to enter into deferred payment agreements with ACE. The Company has chosen not to adopt a specific policy with respect to the terms and conditions offered to customers who request such an arrangement, although management approval is required in certain circumstances. ACE and its representatives do not disclose to customers that (based on New Jersey regulations) utilities shall not require more than 25 percent of balances owed as down-payment on individual agreements. As a result, nearly half of the active deferred payment agreements involved customers who initially paid in excess of this cap.
8. While past due accounts fluctuate on a seasonal basis, they have trended up in the past three years, most likely due to the general downturn in the economy. Amounts written off or charged to bad debt expense by ACE are approximately 0.5%. Although not directly comparable, these statistics are generally more favorable than those experienced by either DPL or Pepco.
9. Customers of ACE are serviced by call center representatives located in either Carney's Point, NJ or Salisbury, MD. Additional customer service assistance is provided by a third party, ER Solutions. In addition to annual surveys conducted by Market Strategies, Inc. to measure overall customer satisfaction, call center performance was historically monitored via monthly surveys conducted by Rickinson Associates. Before they were suspended in September 2008 due to budgetary constraints, the Rickinson Associates' surveys showed nearly four out of five customers were satisfied with the ACE call center experience in 2007 and the first nine months of 2008.
10. Outstanding accounts receivable balances of customers moving between PHI utility service territories are supposed to be settled and not transferred from the books of one utility to another. However, the PHI utilities do not always successfully identify such customers. Cumulatively, in the last three years, DPL has transferred a net balance owed to customers of approximately \$74,000 to ACE (probably due to outstanding customer deposits). Pepco has transferred no customer account balances to ACE. This is less than 0.1% of ACE customer receivable balances at any quarter end during this same time period.



## **Summary of Recommendations**

1. We recommend the Company reevaluate the number and weighting of Annual Incentive Plan goals it maintains for its various employee groups. In doing so, the Company should consider both the additional costs of developing and tracking numerous performance goals and diminishing benefits (e.g. lack of motivation) that assigning insignificant weightings to goals will have on employees.
2. Absent disclosure to the customer of the New Jersey rules concerning down-payments prior to the initiation of a deferred payment agreement, we recommend Company representatives be trained on these rules on a periodic basis, and the training manual be updated to incorporate these rules. In addition, during negotiations, company representatives should not suggest down-payments that exceed 25 percent of outstanding balances owed, and customers should not be coaxed by company representatives to pay more than a 25-percent down-payment on a deferred payment arrangement if they initially offer less.

## **Organization**

The Customer Care Group<sup>3</sup> is headed by the Vice President of Customer Care, Mr. Charles R. Dickerson, who reports directly to the Senior Vice President of Operations, Mr. Michael J. Sullivan.<sup>4</sup> Mr. Dickerson assumed these duties in May, 2008 after Mr. Sullivan was promoted to Senior Vice President.<sup>5</sup> Most of the Customer Care Group is housed within the Power Delivery organization and composed of PHI Service Company employees with the notable exception of ACE meter reading which is outsourced to a related party, Millennium Account Services LLC.<sup>6</sup> The Customer Care Group is primarily organized around the following functional areas:<sup>6</sup>

- Customer Relations - a group of employees who develop and maintain commercial and industrial relationships for all PHI utilities. They act as the liaison between the customer and other department's within the Company when necessary.
- Billing Services - a department of employees that oversee activities associated with the billing of commercial and residential accounts. This department is also responsible for the administration of tariffs.
- Credit, Collections & Remittance Processing - an organization which ensures that PHI

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<sup>3</sup> The Customer Care Group and the Customer Service organization are used interchangeably in this chapter.

<sup>4</sup> Response to Discovery, OC-215.

<sup>5</sup> Company press release dated May 5, 2008.

<sup>6</sup> E-mail clarification to Discovery, OC-776 dated May 1, 2009.

<sup>6</sup> Responses to Discovery, OC-215, OC-1047 (2005-2007 Business Plan Customer Care Executive Area Summary, p. 2-1), OC-1135, and OC-776.

utilities are promptly and properly compensated for energy and services used by customers. This includes, but is not limited to, processing payments and managing inactive accounts.

- Energy Supply - a group of employees responsible for administering the Retail Choice programs, determining load settlements at the retail and wholesale level for all PHI utilities, managing financial settlements of wholesale power transactions (including PJM) for all PHI utilities, and procuring electricity supplies necessary to serve Standard Offer Service.
- Meter Services - an organization responsible for meter engineering, installation, testing, and reading of the PHI utilities.
- Call Centers - also known as the Customer Operations Group, this group is charged with developing, implementing, and overseeing a customer's initial contact with the Company. This encompasses in-bound telephone calls, walk-in business offices, internet inquiries, and written correspondence. This group is also tasked with encouraging customer self-service.

The total number of employees across all of PHI working in each of these functional areas is summarized in the following table:

<b>Function</b>	<b>Dec 31, 2006</b>	<b>Dec 31, 2007</b>	<b>Dec 31, 2008</b>
Call Centers	294	316	295
Billing Services	159	157	152
Meter Services	127	142	148
Credit, Collections & Remittance Processing	86	82	88
Customer Relationship Management	47	53	51
Energy Supply	38	38	40
Customer Care Group Leadership	5	4	5
<b>TOTAL (A)</b>	<b>756</b>	<b>792</b>	<b>779</b>

Sources: Responses to Discovery, OC-560 and OC-687.  
(A) The December 2006 Customer Care Group Report is not clerically accurate. It shows a total of 757 employees. The December 31, 2007 total includes 10 Customer Operations temps.

## **Information Systems**

The primary computer systems employed by the Customer Care Group are the C3 system (customer information system), MV90 (meter translation system), SAP (financial management and tracking system), Advantex (work management system), LPSS (load profile and settlement system), Nexus, and VRU.<sup>8</sup>

<sup>8</sup> Response to Discovery, OC-776 and information provided by the company on December 18, 2009.

The status of the C3 system is discussed further in the Billing section later in this chapter.

## **Performance Measurement**

In an attempt to achieve and maintain PHI's vision to be the "premier energy delivery services and competitive energy company in the mid-Atlantic region", PHI management sets goals for the Company in the areas of Safety, Diversity, Employee Satisfaction, Reliability, and Financial Success. Different levels within the organization are then assigned performance metrics to achieve these goals.<sup>9</sup>

These performance metrics are also used to determine the level of pay-outs under the PHI Annual Incentive Plan. Meeting but not exceeding each of these performance metrics results in a pay-out of 100 percent of the target award. Deviations from the performance metric goals results in additions to (for exceeding a goal) or subtractions from (for falling short of a goal) the target award.

In the last two calendar years, the Customer Service functional areas achieved the following results with respect to the performance metrics employed to determine Annual Incentive Plan pay-outs:

<b>Function</b>	<b>2007</b>	<b>2008</b>
Billing Services	124%	140%
Call Center	94%	86%
Credit, Collections & Remittance Processing	115%	145%
Customer Relations	119%	130%
Customer Care	101%	64%
Energy Supply Group	122%	127%
Meter Services	96%	129%
Sources: Responses to Discovery, OC-1118 and OC-1144.		

Each performance metric has a pre-established weighting, and no payment will be made under the Annual Incentive Plan if total corporate earnings goals are not met.<sup>10</sup> A review of the 2008 Customer Care performance metrics indicates that they were classified in one of three main categories – Employees (includes Safety, Diversity, and Employee Satisfaction), Customers (includes aspects of Reliability), and Financial Success.<sup>11</sup>

In the case of the Customer Services organization, performance metrics were largely established at the functional area levels previously discussed. Besides Customer Care, these included Billing Services; Call Center; Credit, Collections & Remittance Processing; Customer Relations; PHI Meter Services; and the Energy Supply Group. A summary of the customer-

<sup>9</sup> Response to Discovery, OC-70.

<sup>10</sup> Responses to Discovery, OC-415 and OC-416.

<sup>11</sup> Response to Discovery, OC-1118.

focused performance metric goals and results achieved for the last two years is summarized in the following table for Billing Services; Call Center; and Credit, Collections & Remittance Processing – the three functional areas that include over two-thirds of the employees assigned to customer care by the Company:

<b>Table 20-3 Balanced Scorecard Results 2007 - 2008 Part 1 of 3</b>				
Description	Weighting	Target	Actual	AIP %
<b>2008 Billing Services:</b>				
Employees - Various	20%	N.A.	N.A.	20.0%
Customers - % of Large Power/Billing Expert Accounts that Auto-Billed	10%	80%	91.20%	15.0%
Customers - Bill Timeliness	10%	99.3%	99.7%	15.0%
Customers - Bill Accuracy	10%	99.3%	99.7%	15.0%
Customers - % of Accounts Billed	10%	99.3%	99.9%	15.0%
Customers - Develop Process for Special Appointments/Consec Estimations by 6/30/08	5%	6/30/08	5/31/08	7.5%
Customers - Reduce Monthly Estimations	5%	5.00%	2.59%	7.5%
Financial Success - Various	30%	N.A.	N.A.	45.0%
<b>TOTAL BILLING SERVICES (A)</b>	<b>100%</b>			<b>140%</b>
<b>2007 Billing Services:</b>				
Employees - Various	30%	N.A.	N.A.	37.50%
Customers - % of Large Power / Billing Expert Accounts that Auto-Billed	5%	75.00%	83.68%	7.50%
Customers - Bill Timeliness	10%	99.00%	99.67%	15.00%
Customers - Bill Accuracy	10%	99.00%	99.77%	15.00%
Customers - % of Accounts Billed	10%	99.00%	99.97%	15.00%
Customers - Provide 360 Feedback to Other Operating Areas Regarding Disconnects	5%	90%	100%	7.50%
Financial Success - Various	30%	N.A.	N.A.	26.25%
<b>TOTAL BILLING SERVICES (A)</b>	<b>100%</b>			<b>124%</b>

<b>Table 20-4 Balanced Scorecard Results 2007 - 2008 Part 2 of 3</b>				
Description	Weighting	Target	Actual	AIP %
<b>2008 Call Center:</b>				
Employees – Various	20%	N.A.	N.A.	20.00%
Customers - Customer Satisfaction Rep Attributes as Measured by Monthly Survey	5%	86%	85%	3.75%
Customers - Develop Process for Special Appointments/Consec Estimations by 6/30/08	5%	6/30/08	5/31/08	7.50%
Customers - Transactional Survey Follow Thru	5%	74%	72%	0.00%
Customers - Transactional Survey Showed Care and Concern	5%	83%	83%	5.00%
Customers - Improve Quality - % of 4 <sup>th</sup> quartile who “meet” (baseline group)	10%	90%	57%	0.00%
Customers - Refer 9000 EA contacts thru the Energy Awareness Pilot team with a 90% satisfaction (depending on a minimum of 19 CSRs)	10%	9,000	13,640	15.00%
Customers - Assist CRM in conducting quarterly CSR focus groups and implementing X ideas per quarter that will drive customer satisfaction	10%	2	1	5.00%
Financial Success – Various	30%	N.A.	N.A.	30.00%
TOTAL CALL CENTER (A)	100%			86%
<b>2007 Call Center:</b>				
Employees - Various	35%	N.A.	N.A.	37.50%
Customers - Overall Customer Satisfaction as Measured by Transactional Survey	10%	79%	75%	0.00%
Customers - First Call Resolution as Measured by Monthly Transactional Survey	10%	70%	70%	10.00%
Customers - Implement Pepco Natural Language Redundancy XX	5%	11/1/07	11/1/07	5.00%
Customers - Improvement in the Energy Know How Solution (EKHS - Nexus) usage by CSRs	10%	10%	15%	15.00%
Financial Success – Various	30%	N.A.	N.A.	26.25%
TOTAL CALL CENTER (A)	100%			94%

<b>Table 20-5 Balanced Scorecard Results 2007 - 2008 Part 3 of 3</b>				
Description	Weighting	Target	Actual	AIP %
<b>2008 Credit, Collections &amp; Remittance Processing:</b>				
Employees – Various	20%	N.A.	N.A.	30.0%
Customers - Handle 95% of incoming calls	10%	95%	99%	15.0%
Customers - Achieve service level of 80% within 30 seconds	10%	80%	83%	15.0%
Customers - Process manual remittance within 2 days of receipt	10%	93%	93%	10.0%
Customers - Complete number of initiatives on the 2008 Collection Improvement list by year end	15%	5	7	22.5%
Financial Success – Various	35%	N.A.	N.A.	52.5%
<b>TOTAL CREDIT, COLL &amp; REMITTANCE PROC (A)</b>	<b>100%</b>			<b>145%</b>
<b>2007 Credit, Collections &amp; Remittance Processing:</b>				
Employees – Various	20%	N.A.	N.A.	22.5%
Customers - Handle 95% of incoming calls	15%	95%	99%	22.5%
Customers - Achieve service level of 80% within 30 seconds	15%	80%	89%	22.5%
Customers - Process manual remittance within 2 days of receipt	15%	90.0%	95.5%	22.5%
Financial Success – Various	35%	N.A.	N.A.	25.0%
<b>TOTAL CREDIT, COLL &amp; REMITTANCE PROC (A)</b>	<b>100%</b>			<b>115%</b>
Sources: Responses to Discovery, OC-1118 and OC-1144. (A) Rounded to the nearest whole percentage.				

As can be seen from the previous table, the actual customer-related metrics tracked and the weight assigned to each can change from year to year. In addition, the weight allocated among the Employees, Customers, and Financial Success classifications also can change on an annual basis. This makes year-to-year comparisons difficult if not impossible.

Of the three groups presented in the preceding table, the Call Center's performance relative to specified goals was the worst as reflected in the Annual Incentive Plan pay-out percentages. Even so, eligible employees of the Call Center earned at least 86 percent of target incentive plan pay-outs, mostly driven by meeting or exceeding their Employee and Financial Success goals.

No pay-outs under the PHI Annual Incentive Plan were made in 2006, presumably for the same reason that executive management earned no short-term incentive pay, because the 2006 corporate earnings goals were not met.<sup>12</sup>

The Annual Incentive Plan is designed to align the interests of eligible employees with those of the business unit or company as a whole. However, it is questionable whether the achievement of any one performance metric goal is sufficiently motivational. For example, the consultant who reviewed executive compensation expressed concerns that a Performance Stock Program

<sup>12</sup> Response to Discovery, OC-415 and review of the Comp HR Committee meeting minutes dated February 22, 2007.

goal weighted 12.5% or less was “too low to have a motivational impact.”<sup>13</sup> This was in the context of awards that could range from 30% to 200% of salary depending on the Executive Level assigned to an employee. Put in proper context, a goal weighted at 12.5% for an executive in the lowest Executive Level eligible for the Performance Stock Program has a target impact of 3.75% of base salary (12.5% x 30%).<sup>14</sup> The target pay-out percentages under the Annual Incentive Plan for non-executives range from 5% to 15% of base pay depending on the assigned Pay Grade.<sup>15</sup> As the previous table demonstrates, many of the individual performance metric goals are weighted at 10% and some as low as 5%. The Annual Incentive Plan target impact of a goal weighted at 10% for an employee in the highest Pay Grade is only 1.5% (10% x 15%),<sup>16</sup> and this person in all likelihood has less ability than an executive to impact the achievement of more than a handful of goals.

Coupled with the resources that must be mobilized to develop and track the achievement of the various performance metric goals, a simplification may be in order.

We recommend the Company reevaluate the number and weighting of Annual Incentive Plan goals it maintains for its various employee groups. In doing so, the Company should consider both the additional costs of developing and tracking numerous performance goals and diminishing benefits (e.g. lack of motivation) that assigning insignificant weightings to goals will have on employees.

In addition to these performance metrics that directly impact the incentive compensation of employees working in the Customer Care area, management also tracks the performance of other key measures in managing the revenue process. Historically, these have been reported to the President and Chief Operating Officer both on a monthly and year-to-date (or average) basis.<sup>17</sup> They include, but are not limited to, the following:<sup>18</sup>

Description	2006	2007	2008
Avg Days Revenue Outstanding - ACE	30.5	31	28
Avg Speed to Answer Call (in seconds) - ACE/DPL	37	31	39
% Calls Answered w/l 30 seconds - ACE/DPL	80.0%	83%	81%
Avg Call Handle Time (in minutes) - ACE/DPL	4.33	4.70	4.68
Call Center Customer Satisfaction - Achieved Goal on 1 <sup>st</sup> Call (First Call Resolution) - ACE	74%	73%	70%
% of Meters Read on Schedule - Atlantic	98.5%	97.3%	98.4%
Sources: Responses to Discovery, OC-560 and OC-687.			

<sup>13</sup> Response to Discovery, OC-1010 (Pearl Meyer PHI Executive Program Review dated June 29, 2007, p. 16) (restricted).

<sup>14</sup> For simplification purposes, we ignore the time value of money.

<sup>15</sup> Response to Discovery, OC-416 (PHI Annual Incentive Plan, p. 3).

<sup>16</sup> This assumes the achievement of Corporate Performance resulting in a multiplier of 100% (see response to Discovery, OC-416 (PHI Annual Incentive Plan, pp. 3-4)).

<sup>17</sup> Responses to Discovery, OC-146 and OC-560 (Customer Care Group Monthly Report).

<sup>18</sup> Responses to Discovery, OC-560 and OC-687.

According to the Company, the year-over-year deterioration in average speed to answer calls was attributable to a 2 percent increase in overhead (e.g., time when representatives were not available to answer calls, such as meetings, training, etc.) and an increase in significant weather events. Two classes of representatives have been hired in 2009 to meet demand during peak volume months. The Company asserts that customer satisfaction scores were affected by a 2007 initiative to educate customers on their energy usage and conservation measures they could take to reduce consumption. These matters occasionally required more than one contact which may have affected the customer's perception of the Company.<sup>19</sup>

To improve the operational aspects of customer service, ACE and DPL invested time in reviewing customer accounts that resulted in back-billings of over \$2,400,000 to date. In addition, the awarding of a call center outsourcing contract to ER Solutions should provide all PHI utility companies, including ACE, additional support in addressing customer concerns in a timely manner.<sup>20</sup>

ACE management also monitors the following data with respect to customer inquiries and complaints:

Description	2006	2007	2008
% of Incoming Calls Handled	94.3%	99.3%	99.1%
Complaints Received	1,461	1,625	2,271
Sources: Responses to Discovery, OC-187 and OC-685.			

The first of these measurements gives an indication of the calls made to the Company that are ultimately abandoned. While ACE's responsiveness has leveled out the past two years, it does show a marked improvement over 2006 and is also better than the results achieved in 2005 of 97.2%.<sup>21</sup>

Complaints tracked by ACE come from a variety of sources, but the vast majority of them come from those filed at the New Jersey BPU. In 2006, 2007, and 2008, complaints at the New Jersey BPU accounted for 81.2%, 82.3%, and 80.3%, respectively of all complaints registered by ACE.<sup>22</sup> Historically, over two-thirds of all complaints are associated with credit matters such as collection letters, deposit requests, deferred payment arrangements, payment postings, and disconnections for non-payment.<sup>23</sup> According to the Company, customer complaints are followed up through two primary channels – an annual customer satisfaction survey conducted

<sup>19</sup> Response to Discovery, OC-1201.

<sup>20</sup> Response to Discovery, OC-688.

<sup>21</sup> Response to Discovery, OC-187.

<sup>22</sup> Responses to Discovery, OC-187 and OC-685 (some calculations required).

<sup>23</sup> Response to Discovery, OC-187.



by Market Strategies, Inc. (MSI)<sup>24</sup> and monthly follow-up surveys concerning the call center experience.

As the main tool utilized, MSI's residential customer surveys have had the following primary goals:<sup>25</sup>

- To identify strengths and weaknesses with regard to customer relationships and specific aspects of the Company's performance,
- To provide ACE with meaningful, actionable information regarding which customer perceptions of the Company's performance have the most impact on customer satisfaction, value perceptions, and reputation,
- To sharpen the Company's focus on specific performance improvement opportunities that will increase customer satisfaction, and
- To provide benchmarking information relative to other energy utilities and to a select group of "peer" companies along the Eastern Seaboard, so that ACE can identify its current position among its peer utilities and define specific customer satisfaction goals.

Overall, customer satisfaction with ACE (as measured by percent positive response) has deteriorated slightly over the past couple of years both nominally and in comparison to a peer group as demonstrated in the following table:

Description	2006	2007	2008
ACE:			
Somewhat Satisfied (6 - 8)	33	36	34
Very Satisfied (9 - 10)	43	41	40
<b>TOTAL SATISFIED (6 - 10)</b>	<b>76</b>	<b>77</b>	<b>74</b>
Energy Utility Average:			
Somewhat Satisfied (6 - 8)	40	40	41
Very Satisfied (9 - 10)	36	36	35
<b>TOTAL SATISFIED (6 - 10)</b>	<b>76</b>	<b>76</b>	<b>76</b>
Sources: Responses to Discovery, OC-263 and OC-1134.			

Of the three PHI utility subsidiaries, ACE has posted the highest "overall satisfaction" for each of the last three years.<sup>26</sup>

<sup>24</sup> Response to Discovery, OC-775. In 2008, MSI conducted two surveys, one being used as a tool to make "mid-course" adjustments (see response to Discovery, OC-1173).

<sup>25</sup> Response to Discovery, OC-68 (ACE 2006 Residential Customer Satisfaction Survey and Modeling Analysis prepared by Marketing Strategies, Inc., p. 1).

<sup>26</sup> Response to Discovery, OC-775.

The key drivers to customers' overall satisfaction with ACE are Reliability and Restoration, Overall Customer Service, Management Performance, and Perception of Rates. These key drivers are listed in order of those with the highest perceived performance followed by those with less favorable performance in 2008. Although it scores higher than two other key drivers, Overall Customer Service measures at ACE have declined since 2005. MSI recommended that ACE focus additional resources on resolving customer problems in a timely manner, following through on its promises made to customers, and being available when needed. The fact that the research for this survey was conducted in late 2008 also likely has some bearing on the relatively low scores assigned to Perception of Rates. Customer concerns about the economy affect their perception of rates they pay for electricity. It was recommended that ACE offer programs that help customers save energy and communicate the associated benefits of these initiatives.<sup>27</sup>

According to MSI, ACE performed above the national benchmarking average on 20 of 27 measures. Six of those measures are in the first quartile, and none fall in the bottom quartile. With respect to the Eastern Seaboard peer group, 24 of the measures for ACE exceed the peer group average. Eight of these measures are in the top quartile.<sup>28</sup>

On a corporate-wide basis, PHI has embarked on the following customer satisfaction initiatives:<sup>29</sup>

- Expanding the use of customer satisfaction metrics (as measured by the MSI survey) in assessing employee performance.
- Reinforcing the importance of customer wants and needs through the use of a "Day in the Life" video tool produced in collaboration with seven other utilities. This video was previously shown to employees during a condensed two-week window in concert with discussions about the Blueprint for the Future program. The video is currently made available to all employees on the Company's intranet.
- Improving the ACE website by providing information on a variety of topics including, but not limited to, Blueprint for the Future, energy conservation tips, renewable energy, carbon footprints, and reliability.
- Enhancing "self-service" on-line tools such as simplified "do-it-yourself" energy audits, Ebill payment options, and street light outage status updates. In addition, the Company will promote the use of direct debit as a convenient payment option.

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<sup>27</sup> Response to Discovery, OC-968 (ACE 2008 Residential Customer Satisfaction Survey Analysis prepared by MSI, pp. 5-20).

<sup>28</sup> Response to Discovery, OC-968 (ACE 2008 Residential Customer Satisfaction Survey Analysis prepared by MSI, pp. 21-23).

<sup>29</sup> Response to Discovery, OC-69.

- Expanding the Energy Awareness Pilot Team, which is a group of customer service representatives dedicated to providing customers with information on how they can conserve energy and reduce energy consumption. This team has bi-lingual capabilities to reach out to a larger percentage of the Company's customers.

In the latter half of 2008, PHI also began conducting reliability summits that highlighted management's concern about the Company's lack of performance with respect to reliability and, to a lesser extent, customer satisfaction. The purpose of these summits was to solicit employee input with regard to actions that could be adopted to improve results. Over a hundred recommendations were identified at these summits, and they will be used to devise both short-term and long-term plans.<sup>30</sup>

### **Benchmarking**

In addition to the supplemental benchmarking data provided in the MSI surveys, Customer Service has been benchmarked for many years with the most recent studies performed by PA Consulting Group in 2006 and 2008. These studies were based on data from the prior year in both cases. Each of these studies considered the combined ACE and DPL customer service organizations for benchmarking purposes as they share many of the same systems and operational activities.<sup>31</sup>

The results of these studies included the following:<sup>32</sup>

#### **2006:**

- Excluding uncollectibles and pensions and benefits, the ACE/DPL total cost per customer was \$16 greater than the panel mean of \$39 per customer. Over half of this difference was attributed to the Call Center and Customer Service Support (p. 114).
- Even though its costs were higher than its peers, ACE/DPL had made significant strides in reducing costs per customer since 2003 (p. 115).
- While ACE/DPL did not fair well against its peers with respect to cost per customer (scoring largely in the 3<sup>rd</sup> and 4<sup>th</sup> quartiles), it did score better in both service level and safety measures (mostly 1<sup>st</sup> and 2<sup>nd</sup> quartiles) (p. 117).
- Some of the higher costs per customer experienced by ACE/DPL were likely due to the higher entry-level labor rates paid to call center and meter reading employees.

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<sup>30</sup> Response to Discovery, OC-964.

<sup>31</sup> Response to Discovery, OC-73.

<sup>32</sup> Responses to Discovery, OC-73 (PHI 2006 Customer Service Benchmarking presentation dated October 30, 2006 by PA Consulting Group) and OC-686 (PHI 2008 Customer Service Results Overview Executive Summary dated October 3, 2008 by PA Consulting Group).

Because of the national scope of the panel, these rates may be driven by the higher cost of living in the ACE/DPL geographical region (pp. 140-141).

**2008:**

- Overall ACE/DPL customer service costs increased by approximately 10% in the two-year period since the last benchmarking study. The panel mean increase for this same time period was only 1% (p. 15).
- Based on the expanded overall customer service scorecard, ACE/DPL dropped from the second quartile in the previous benchmarking study to the third quartile in the current study. This was driven largely by decreases in safety performance (e.g., lost time incident rates) (pp. 18 and 28).
- High costs plagued ACE/DPL in several areas reviewed. ACE/DPL was ranked in the fourth quartile in most cost performance metrics for the Call Centers and Billing (pp. 32 and 53). Wages in a high-cost part of the country were identified as a reason for ACE/DPL's poor showing in call center cost performance (pp. 34, 37, and 39), and the antiquated customer information system was noted as a source of relatively high expense in the Billing area (pp. 59-61).

In its 2008 study, PA Consulting identified a number of "key opportunities for improvement" for all PHI utilities. These opportunities as well as the Company's response are provided in Attachment 20-1.<sup>33</sup>

## **Functional Areas**

### **Meter Reading**

ACE's meter reading has been conducted by an affiliate, Millennium Account Services (MAS), for approximately 10 years. MAS is jointly owned by Conectiv Solutions (a subsidiary of Conectiv Holding, Inc.) and South Jersey Industries, and its profits are shared equally between the two owners. The two predominant customers of MAS are the two utility company affiliates of its owners that operate in a largely overlapping service territory in southern New Jersey. Pricing is set by the joint owners at rates they deem reasonable rather than at market-based rates or rates based on a regulatory cost standard. The current services agreement expires in 2010.

MAS has approximately 80 full-time employees, 70 of which are meter readers. Currently, meter data is input by the readers in the field into hand-held electronic units. However, in the long-term, the Company's proposed Blueprint for the Future initiative may render this activity obsolete. The Blueprint for the Future calls for the replacement of 540,000 existing meters with

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<sup>33</sup> Response to Discovery, OC- 1178.

computer-imbedded advanced meters, which will enable the Company to capture customer usage information remotely.<sup>34</sup> Implementation of this initiative in the ACE service territory is subject to New Jersey BPU acceptance and approval. To date, no comprehensive procedural schedule has been established for the matter.<sup>35</sup>

Under the current service agreement, the minimum acceptable level of meters read is 98.0 percent, with incentive compensation paid if the level equals or exceeds 98.5 percent and a penalty assessed if the level is at or below 97.5 percent. A \$5 penalty is also assessed for each incorrect meter read that leads to the rendering of an incorrect bill.<sup>36</sup> According to the key measures tracked by ACE, meter read percentages were 97.3% and 98.4% in 2007 and 2008, respectively.<sup>37</sup>

### **Billing**

Based on the balanced scorecard performance metrics, Billing's objective is to bill all of its customers in an accurate and timely manner.<sup>38</sup> This is largely achieved through an automated process by means of the C3 customer service system. This mainframe-based system was implemented in 1999 and has not undergone a major upgrade since then. Data inputs to this system include, but are not limited to, usage data from meter reading, rates from the Regulatory Affairs process, and payments from Remittance Processing.<sup>39</sup>

As noted in the discussion of Information Technology, the C3 system is used by both legacy Conectiv utilities, ACE and DPL, while a separate customer information system (CIS) is used by Pepco. Even though a 2005 study indicated that both systems were inadequate, plans to integrate these systems have been on hold for over three years and will likely not be acted upon until the 2011-2014 timeframe given management's decision to focus on smart grid and automated metering instead.

From a benchmarking perspective, Billing lags its peers in performance. This below-average performance has been partially attributed to the higher cost of labor in the PHI geographical area and the additional costs of operating an older customer service system.<sup>40</sup> Irrespective of these relative measurements, Billing's Annual Incentive Plan pay-out in 2007 (the same time period included in the last benchmarking study) was 124% of target because the performance goals set by the company were largely met or exceeded. Not all of these goals were related to billing performance.<sup>41</sup>

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<sup>34</sup> Response to Discovery, OC-54 (Filing with the New Jersey BPU, Section 6A).

<sup>35</sup> Response to Discovery, OC-1122.

<sup>36</sup> Response to Discovery, OC-81 (ACE and South Jersey Gas Company Statement of Work for Joint Meter Reading Services associated with the February 2007 Joint Meter Reading Services Agreement, pp. 3, 9, and 10).

<sup>37</sup> Response to Discovery, OC-687.

<sup>38</sup> Response to Discovery, OC-1047.

<sup>39</sup> Response to Discovery, OC-776.

<sup>40</sup> OC-686 (PHI 2008 Customer Service Results Overview Executive Summary dated October 3, 2008 by PA Consulting Group, pp. 53-61).

<sup>41</sup> Response to Discovery, OC-1144.

### **Credit, Collections, and Remittance Processing**

The Company operates five corporate payment centers located in Egg Harbor Township, Atlantic City, Turnersville, Cape May Court House, and Millville, New Jersey. The Company also accepts payment at over 90 third-party locations throughout the state. In addition to offering walk-in payment options, customers may pay their bills via the mail, telephone (including with a credit card if a convenience fee is paid), direct debit, and on-line.<sup>42</sup>

ACE offers a budget billing option whereby a customer can smooth out his or her bills by dividing payments evenly over an entire year subject to a year-end settlement process. In other cases, low-income customers may be eligible for financial assistance through various government programs such as the Universal Service Fund.

Pursuant to New Jersey Administrative Code Title 14: Chapter 3: Subchapter 7, a utility must make a good faith effort to provide an opportunity for a residential customer to enter into a fair and reasonable deferred payment agreement if a customer notifies the utility that he or she is unable to pay an outstanding bill or deposit and wishes to discuss such an arrangement. In addition, “the utility shall not require a residential customer to pay, as a down-payment, more than 25 percent of the total outstanding bill at the time the [deferred payment] agreement(s) is made or executed.”<sup>43</sup>

According to the Company, it has no formal policy with respect to the minimum initial payment, minimum monthly payments, or duration of payment terms offered to customers in these situations because it believes a set policy is too restrictive. Instead, the general constraints of the process are communicated to call center and credit representatives through training materials. The actual negotiated deferred payment agreement is dependent on many variables such as the customer’s length of service, amount and age of balance, payment history, conformity with the terms of past arrangements, and returned bank items. Management authorization of these arrangements does not typically occur unless an agreement extends beyond 12 months or the customer’s past actions suggest that he or she is a high risk (e.g., previous defaults).<sup>44</sup>

Company representatives are not instructed to disclose to customers the 25 percent cap on down-payments associated with deferred payment agreements. Instead, they are taught that “the minimum initial payment is negotiable, [the Company representative] should attempt to collect as much as possible, at least attempt to collect the minimum of the current months (sic) charges.”<sup>45</sup> According to the Company, it believes that a customer is in the best position to decide how much they can afford to pay immediately.<sup>46</sup> Our review of the Customer’s Bill of Rights on the New Jersey BPU website notes that this summary is silent on the matter of pro-

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<sup>42</sup> ACE company website (Payment Locations, Billing and Payment Information, and Pay Your Bill Online).

<sup>43</sup> New Jersey Administrative Code 14:3-7.7(b)1.

<sup>44</sup> Responses to Discovery, OC-135 and OC-774 (Payment Arrangement Guidelines).

<sup>45</sup> Response to Discovery, OC-774.

<sup>46</sup> Responses to Discovery, OC-1197 and OC-1198.

active disclosure. ACE indicates that it has not compared its deferred payment agreement terms with that of other New Jersey utilities.<sup>47</sup> Of the active agreements established since 2006, nearly half were initiated with down-payments in excess of 25 percent (3,407 out of 7,294).<sup>48</sup> Out of nearly 550,000 ACE customers, the number who established deferred payment agreements was 20,221; 30,528; and 36,256 in 2006, 2007, and 2008, respectively. More than 90 percent of these customers were residential.<sup>49</sup>

Absent disclosure to the customer of the New Jersey rules concerning down-payments prior to the initiation of a deferred payment agreement, we recommend Company representatives be trained on these rules on a periodic basis, and the training manual be updated to incorporate these rules. In addition, during negotiations, Company representatives should not suggest down-payments that exceed 25 percent of outstanding balances owed, and customers should not be coaxed by Company representatives to pay more than 25 percent in a down-payment on a deferred payment arrangement if they initially offer less.

When customers do not pay or do not set up a deferred payment plan, ACE must take action to mitigate its losses. The following is a timeline showing the steps taken if an account becomes overdue and requires dunning and disconnection. Beginning in early 2007, the bill sent by ACE began incorporating a warning message to replace a separate warning letter that had been used previously:<sup>50</sup>

Day 1:	Bill Date
Day 20:	Due Date
Day 30:	Enters Collections
Day 42:	Suspension Letter Sent
Day 57:	Eligible for Field Visit
Day 60:	Past Due Letter Sent
Day 90:	Account Sent to Third-Party Collection Agency
Day 180:	Inactive Final Bill Balance Written Off

Field visits (see Day 57) can result in one of three actions – the service is disconnected; the customer pays all or part of the amount owed, and the service is left on; or a notice is left at the customer's premises, and no disconnect action is taken.<sup>51</sup> Consistent with the Winter Termination Program adopted by the New Jersey BPU, residential customers cannot be disconnected by ACE from November 15 through March 15 (or longer if winter conditions persist) if the customer participates in one of several assistance programs and makes a good faith effort to pay as much as they can afford.<sup>52</sup>

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<sup>47</sup> Response to Discovery, OC-1199.

<sup>48</sup> Response to Discovery, OC-1200.

<sup>49</sup> Responses to Discovery, OC-560, OC-678, and OC-687 (some summing and computation required).

<sup>50</sup> Response to Discovery, OC-868.

<sup>51</sup> Review of Internal Audit workpapers associated with the Review of Credit & Collections for ACE and DPL (report dated August 29, 2007).

<sup>52</sup> Response to Discovery, OC-137 (Fact Sheet on Winter Shut Offs).

ACE's past due accounts (those over 30 days outstanding) fluctuate on a seasonal basis both in total and as a percentage of total receivables outstanding. This is demonstrated in the following table:

Month	Past Due (> 30 days)	Total Receivables	Past Due as a % of Total Receivables
March 2006	\$27,293,136	\$80,127,836	34.06%
June 2006	20,717,463	78,369,893	26.44%
September 2006	39,466,552	120,178,963	32.84%
December 2006	33,301,713	86,435,402	38.53%
March 2007	31,738,355	89,422,929	35.49%
June 2007	28,196,908	91,127,100	30.94%
September 2007	42,462,884	140,235,799	30.28%
December 2007	40,412,345	102,419,859	39.46%
March 2008	40,337,919	99,846,506	40.40%
June 2008	30,031,129	93,562,889	32.10%
September 2008	44,722,966	129,554,927	34.52%
December 2008	40,560,503	95,252,081	42.58%

Source: Derived from response to Discovery, OC-682.

Past due accounts have trended up over the past several years. This is most likely due to the difficulties experienced by ACE's customers as a result of the general downturn in the economy. Even though a significant percentage of receivables are past due at any one time, ACE does eventually collect the vast majority of its customer balances owed. As a percentage of revenues, ACE's bad debt expense (the total amount estimated to be uncollectible from an accounting standpoint) and write-offs (the individual customer accounts no longer carried by the Company on its books) for ACE were as follows:

Description	2006	2007	2008*
Bad Debt Expense as a % of Revenue	0.45%	0.40%	0.64%
Write-Offs as a % of Revenue	0.42%	0.45%	0.55%

Source: Response to Discovery, OC-680.  
\*Through November, 2008 (11 months).

While these results may not be directly comparable to PHI's other utilities because of differences in the jurisdictional timing of rate increases and economic factors unique to a given service territory, ACE's bad debt and write-off activity was generally less than Pepco and DPL for these same time periods.

ACE employs three third-party collection agencies to pursue overdue accounts – Allied Interstate, Advantage Collection Techniques, and Rickart Collection Systems.<sup>53</sup> All of these collection agencies handle both residential and non-residential accounts. These collection

<sup>53</sup> Response to Discovery, OC-684.



agencies are compensated approximately one-quarter of every dollar collected.<sup>54</sup> In a brief review of the performance of one of the collection agencies for the period 2000 to 2005, it was noted that the average recovery percentage of accounts for this agency was 18%, with 70% of the total collections occurring in the first twelve months of placement.<sup>55</sup>

As noted previously, ACE eventually writes off customer receivable balances that remain outstanding for long periods of time. Identifying an opportunity to recover some of the losses associated with these accounts, ACE, DPL, and Pepco adopted a commonly used practice at other utilities by selling a portfolio of written-off receivables to a third party in March, 2007. ACE raised \$659,000 for selling \$23,873,000 of these receivables (2.76 percent of the amount written off).<sup>56</sup>

### **Call Centers / Inquiries and Complaints**

ACE customer inquiries are handled by call center employees located in Carney's Point, NJ and Salisbury, MD. Representatives at these two call centers only handle matters associated with ACE or DPL, the legacy Conectiv utilities. PHI's other utility, Pepco, has its own dedicated call center group. Workload at the Carneys Point and Salisbury call centers is supplemented by a third party, ER Solutions, who is expected to handle 270,000 billing and credit calls per year for ACE and DPL from its base in Atlanta, GA. In the event that call center resources are not capable of handling all inbound calls (e.g., during an outage), calls are routed to an automated system, the 21<sup>st</sup> Century Call Center.<sup>57</sup>

In its latest benchmarking study, PA Consulting recommended the consolidation of all PHI call centers.<sup>58</sup> However, management concluded that to consolidate any further would be counter-productive. Reasons given for this decision included the different policies and procedures associated with multiple jurisdictions, compliance with various bargaining unit agreements, and the differences in customer information systems between Pepco and ACE/DPL. In addition, it was noted that there are benefits to having multiple call centers, including the ability to support customers if circumstances should render the Company's only call center inoperative.<sup>59</sup>

Inbound telephone calls are answered by a voice-activated system in both English and Spanish that routes calls based on the customer's needs. Options offered when calling include:

- Electric Problem,
- Billing,
- Start or Move My Service,
- Stop Service,

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<sup>54</sup> Response to Discovery, OC-871.

<sup>55</sup> Response to Discovery, OC-869 (Sale of Written Off Accounts Receivable at the PHI Brands dated May 15, 2006).

<sup>56</sup> Responses to Discovery, OC-869 and OC-1188.

<sup>57</sup> Responses to Discovery, OC-688 and OC-1138.

<sup>58</sup> Response to Discovery, OC-686 (2008 PA Consulting Overview, p. 50).

<sup>59</sup> Responses to Discovery, OC-1176 and OC-1178.

- Emergency,
- Meter Reading,
- Phone Update,
- Customer Choice,
- Letter of Credit, and
- Payment Mailing Address.

ACE also offers customers the option of contacting customer service on-line.

With respect to telephone communications, ACE has committed to the New Jersey BPU to answer 75% of all calls within 30 seconds.<sup>60</sup> As noted in Table 20-6 above, the ACE/DPL call center group has achieved rates of 80%, 83%, and 81% in 2006, 2007, and 2008, respectively.

In the past, the Company retained Rickinson Associates to assess customer satisfaction with the call centers on a monthly basis. Overall satisfaction of ACE customers with the call center remained steady from 2007 to the first nine months of 2008 (score of 79 on a scale of 1 to 100). Although some of the data collected was used in the Annual Incentive Plan metrics, the survey work was suspended in September 2008 due to budgetary constraints.<sup>61</sup>

As previously noted, ACE does track total complaint activity by source of complaint and complaint type. Complaints are logged and assigned to a responsible employee for further review. After data is gathered on the complaint, it is analyzed, and a recommendation is made to address the customer's issue. This recommended course of action is then communicated to the customer. If the customer is not satisfied with the response, the matter can be escalated for further review. When a customer requests a third review, the complaint is considered "escalated."<sup>62</sup>

Obviously, the circumstances surrounding a complaint dictate the turn-around time for potential resolution. That being said, complaints received from the New Jersey BPU are required to be resolved in 7 days (20 days for formal complaints) and those from a department or executive are intended to be resolved within 15 days or less.<sup>63</sup>

According to a December 2008 management report to the CEO, the on-time processing rate of escalated complaints was 97.5% on a year-to-date basis. This exceeded the target of 96%.<sup>64</sup> However, a formal root cause analysis is not conducted on customer complaints, and one of the two other primary channels for follow-up, the monthly survey conducted by Rickinson Associates, has now been suspended.

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<sup>60</sup> Response to Discovery, OC-560 (December 2008 Customer Care Group Monthly Report, Table 1).

<sup>61</sup> Response to Discovery, OC-1152.

<sup>62</sup> Response to Discovery, OC-1189.

<sup>63</sup> Response to Discovery, OC-1189.

<sup>64</sup> Response to Discovery, OC-560 (December 2008 Customer Care Group Monthly Report, pp. 1 and 4).

## Other Matters

Occasionally, customers move from ACE's service territory to another PHI utility's service territory, and conversely customers move from the service territory of another PHI utility to ACE's service territory. In these circumstances, the customer is theoretically required to settle up his or her account before establishing new service. However, the balance owed to the Company or to the customer (e.g., deposit) sometimes is not identified before the new service is initiated. In those cases, the outstanding balance is transferred to the active customer account.<sup>65</sup>

We requested a list of all customer receivable balances transferred either from DPL or Pepco to ACE. No transfers were made from Pepco to ACE between 2006 and 2008. The following table summarizes the balances transferred from DPL to ACE:<sup>66</sup>

<b>Description</b>	<b>2006</b>	<b>2007</b>	<b>2008</b>
Amounts Owed by Customers to the Utility:			
Residential	\$31,156	\$27,922	\$35,793
Commercial	7,446	14,130	50,948
Other / Industrial	596	877	6,492
TOTAL	39,198	42,929	93,233
Amounts Owed by the Utility to Customers:			
Residential	(50,965)	(57,014)	(66,087)
Commercial	(43,049)	(8,503)	(22,947)
Other / Industrial	(315)	(5)	–
TOTAL	(94,329)	(65,522)	(89,034)
NET TOTAL	(\$55,131)	(\$22,593)	\$4,199
Source: Response to Discovery, OC-675 (some summing required).			

For perspective, ACE's outstanding customer accounts receivable balances at the end of the year for 2006, 2007, and 2008 were \$86,435,402; \$102,419,859; and \$95,252,081, respectively.<sup>67</sup> Customer deposit balances for the same dates were \$16,867,608; \$18,025,326; and \$18,181,995.<sup>68</sup> According to the Company, the data summarized in the table above is not routinely tracked and had to be summarized as an ad hoc request.<sup>69</sup>

While ACE and its sister utilities should have the ability to discern which customers are moving from one service territory to another with unsettled account balances before new service is initiated, the amounts eluding the Company's attention have recently been relatively immaterial.

<sup>65</sup> Response to Discovery, OC-133.

<sup>66</sup> Response to Discovery, OC-675.

<sup>67</sup> Response to Discovery, OC-682.

<sup>68</sup> Response to Discovery, OC-773.

<sup>69</sup> E-mail clarification of response to Discovery, OC-675 received June 9, 2009.

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**In The Matter of**  
**The Audit of Affiliated Transactions Between Atlantic City Electric Company**  
**and PEPCO Holdings, Inc. and Its Affiliates**  
**and**  
**The Management Audit of Atlantic City Electric Company**  
**BPU Docket No. EA07100794**

**Document Class Code: UN**

**Request Number**      OC Request Set #63

**Request:**

OC 1178 Referencing the response to OC-686 (2008 PA Consulting Overview, p. 122), for all key opportunities for improvement that involve ACE, please describe the actions taken to adopt these recommendations. Please specify any items attributed solely to Pepco or DPL.

**Response:**

Please note that the recommendations made by the PA Benchmarking effort were made in 2008 based on requested 2007 data. While the report that was presented by PA to the Customer Care team in 2008 was informative, many of the issues they cited were already recognized and had actions being taken to improve.

Key opportunities for improvement -

Contact Center / Self Service

Please note that for the ACE region, operations are combined with DPL in the call centers.

- *Investigate call handling resource options (outsource/pt).*  
There has been sourcing of calls to ER Solutions, the same firm that is used at Pepco. This has been done to help “smooth” the call volume profile so as to mitigate the need for increased full time FTEs. ACE/DPL also has utilized temporary CSRs to address seasonal increases in call volume.
- *Review regulations around the current performance reporting requirements and seek ways of changing*  
Efforts at revamping the performance reporting requirements were made with the Delaware staff, with little success. Currently the Telephone Service Factor (the key performance reporting measure) for Delaware is the most rigorous of the three jurisdictions PHI performs in; (ACE: 75% within 30 sec. – Annual, DPL: 80% within 30 sec. – Monthly).
- *Increase the use of the IVR within the ACE/DPL service territory.*  
ACE/DPL call centers have increased the utilization of IVR through the use of Natural Language. Natural Language has been instituted and updated in the IVR to provide customers a better interaction with automated response when they call in. The premise for this is that a satisfactory interaction could take place at a lower cost per call for those tasks the customer could complete through automation.
- *Investigate the use of cross functional process teams with an eye on process improvement*

**In The Matter of**  
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**The Management Audit of Atlantic City Electric Company**  
**BPU Docket No. EA07100794**

This has been part of the process for PHI in general and Customer Care in particular through the years. The entire business has been set up as process organization, typically evaluating the end-to-end process as we look to make improvements. In addition to internal quality improvement efforts within the call center operations, significant project improvement efforts require the input from the various organizations that would be impacted by a given project.

- *Review current target marketing, promotion channels and retention strategies for self-service channels.*

A focused effort has been made in the ACE/DPL regions to increase the use of the online tool “My Account”. The web-based tool can be utilized by customers to assist in understanding the energy use in their locations, how to effectively impact it, and see the savings that result from specific actions taken. The My Account tool has also been enhanced to serve as the secure single sign-on portal that also permits customers to view and pay their bills on line. As AMI is implemented it is reasoned that customers will advantage themselves by viewing detailed interval information relevant to their usage patterns and thereby be able to make informed decisions regarding their energy use.

- *Follow through with contact center consolidation.*

With respect to ACE/DPL, the contact center consolidation took place previously with the movement of ACE and DPL call center operations to Carneys Point and Salisbury. The smaller call center in the Salisbury operations center also serves ACE/DPL customers. It was thought wise to have secondary source call center capabilities to help support and diversify the call load and especially should there be an operational problem at the main Carneys Point call center. Much of this consolidation took place with the merger of ACE and DPL and incorporated the consolidation of many (>20) district offices throughout the service territories. It should be noted that there are some personnel in walk-in centers that can also take customer calls if needed.

#### Meter Reading

- *Consider targeted deployment of AMR / AMI in area of the territory where it is economically and operationally justified*

AMI technology is being deployed in the Delaware service territory on a pilot basis to understand how a full deployment in that geography will roll out. The company will further deploy the AMI technology and associated infrastructure as jurisdictions approve adequate recovery for these significant investments. To date the NJBPU has not provided approval.

- *Investigate options to reduce MR expenses in a targeted manner focusing on: bi-monthly meter reading, estimates, alternatives to current MR processes*

Meter reading expenses already incorporate estimates for those locations where a reading could not be effected. PHI in general and ACE/DPL in particular have no plans to move to bi-monthly meter reading and with the expected deployment of AMI, it is believed that most meter reading issues will be resolved in that environment.

- *Separate MR manual from remote meter reading expenses and report them*

The plan to deploy the AMI infrastructure will all but do away with the need for manual meter reading for the vast majority of customers. Currently there are customers (<1,000) across PHI for whom we currently perform remote meter reading through phone lines. These are generally larger customers (> 1 MW in ACE) that are interrogated once a week. All meter reading costs are tracked and reported by jurisdiction and type.

- *Investigate MR expenses drivers*

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This information is gathered, analyzed, and reported every month. Actions have been taken to reduce the cost per customer and the cost per meter read, as well as the efficiency of the Meter Reading process. In the ACE territory, meter reading has been sourced to the Millenium group, which generally has the highest meter reading effectiveness (98.8% in 2008) rating of the three PHI utilities. Costs for this activity are based on a fixed cost per read contract.

#### Billing

- *Improve scorecard service levels such as billing adjustments and the # of exceptions by addressing upstream inputs and other reasons for adjustments.*

Billing adjustments have been the focus of attention, especially due to the high costs they can create. A key to controlling these has been the coordinated effort by Operations, Meter Services, Revenue Management, and the Call Centers to improve the meter reading effectiveness and reduce unnecessary field visits for re-reads. There have also been efforts from Regulatory and the IT organizations to focus on quality of input of billing determinants which can wind up as a billing adjustment on a scale of billing cycles of customers.

- *Review personnel roles and responsibilities given relatively large FTE ratio to customers.*

PHI supports two separate older customer information systems (Pepco and ACE/DPL) and has done so since the merger between the two companies took place. PHI has taken steps to improve the efficiency of the overall billing process through enhancements to the respective systems. ACE/DPL also has also increased its focus on self-serve and automation through the implementation of e-bill and enhancements to its IVR system with Natural Language.

- *Promote e-billing opportunities*

In December of 2008 ACE/DPL implemented fully integrated (see, evaluate, and pay) secure e-billing capabilities on its website. Previously customers had the option only of paying their bill online. This has been promoted in through the company's "My Account" web-based system. To date more than 36,000 (13,019 in ACE, 23,527 in DPL) customers are making their monthly payments through the "My Account" portal at a savings to the company of more than \$14,000 monthly.

#### Payment

- *Identify reasons and reduce the # of payment processing errors*

This is a continuous process and is evaluated monthly as well as incorporated in the Revenue Management's annual Balanced Score Cards.

- *Increase % of payments received electronically*  
See "Promote e-billing opportunities" above

- *Report data for special handling and identify if they contribute to high levels of expenses*

This has already been addressed within the Revenue Management process and we know special handling adds costs to the process.

#### Credit & Collections

- *Examine Pepco's collections placement strategy to determine if yields can be increased.*  
This is pertinent only to Pepco.
- *Develop roll rate analyses to ensure that receivables are not aging at an abnormal rate.*

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This will be taken under consideration. The recent and ongoing economic conditions have contributed and will continue to provide challenges in this area. As indicated in previous responses related to receivables, ACE continues to work with customers to assist in timely payment to help mitigate this issue.

- *Review deposit coverage rates in relation to business policy and regulations.*

There is no specific deposit coverage rate for ACE; however since 2006 there has been an effort on the part of ACE to ensure deposits have been made to help off-set potential non-pays. Deposits have increased from \$16.9 MM to \$18.6MM and are implemented in accordance with the tariff as indicated below:

**Deposits:**

A deposit may be required of the customer before service will be supplied. Such deposit shall be the estimated average bill of the customer for a billing period based upon the average monthly charge over an estimated 12 month service period increased by one month average bill. Customers in default in the payment of bills shall be required to furnish a deposit or increase their existing deposit in an amount sufficient to secure the payment of future bills.

- *Review high turnover rates in Pepco's Credit Office operation to identify opportunities for improvement Revenue Protection*

This is pertinent only to Pepco.

- *Examine potential usage on unlinked meters for billing opportunity*

See answer below

- *Evaluate staffing opportunities to focus on other, nontampering or diversion revenue assurance activities.*

PHI has evaluated the implementation of a vendor provided service for the systematic evaluation of potential revenue diversion through theft, losses and unlinked meters activities. It is currently in use in the ACE/DPL region for small commercial customers. ACE/DPL would like to expand that capability into the residential sector in 2010. Currently energy diversion activities are under the Security department in ACE/DPL. When fully implemented, this work will be moved to the Meter Services (Manage Revenue process) group.



## **Chapter 21. HR Overview, Work Force Planning and Staffing**

Human resources (HR) management focuses on hiring, developing, motivating, evaluating and compensating employees. HR functions are important both in terms of direct costs and corporate performance.

Our review encompassed the full range of HR functions and is divided into three chapters. This first chapter addresses the following areas.

- Overview
- Information Systems
- Work Force Planning
- Succession Management
- Leadership and Employee Development
- Job Rotation Program
- Employee Recognition and Rewards
- Staffing
- Diversity Management

Chapter 22 addresses:

- Performance Evaluation
- Compensation
- Training
- Labor Relations

And finally, Chapter 23 addresses:

- Employee Benefits
- Productivity Analysis

### **Summary of Findings**

The findings and recommendations contained in this Chapter are shown below.

1. The HR Department has made significant progress in recent years. PHI evolved through the 1998 and 2002 mergers. As a result, the HR department inherited a large number of legacy benefit plans and information systems. The HR Department has worked in recent years to consolidate and standardize those plans and systems. The Department is making good progress towards accomplishing its goals.
2. ACE and the PHI service company have reasonable employee turnover rates. The best measure of a company's ability to retain employees is its employee turnover rate. ACE's

employee terminations are largely due to retirements. Very few ACE employees leave voluntarily for jobs at other companies. The PHI Service Company's voluntary turnover rate is approximately three percent per year. That implies that the PHI Service Company's total employment offering is competitive.

3. PHI made significant improvement in HR IT in 2008. HR inherited a number of legacy systems through the Conectiv and PHI mergers. HR did not have a data architecture chart or an inventory of its systems prior to 2008, which resulted in the maintenance of systems that were no longer used. PHI recognized the need to improve the management of its HR applications and retained NorthHighland to review its data architecture. PHI implemented a number of improvements in 2008 in response to NorthHighland's recommendations.
4. PHI has the capability to retrieve employee records when needed. PHI did not experience any significant employee records retrieval problems in 2007 and 2008. According to PHI, the quality of its human resources records retrieval capability is good.
5. PHI created an HR metrics dashboard in 2008. HR began developing an HR metrics dashboard in January 2008. Prior to that, no central location existed for HR metrics. The purpose of the dashboard is to provide an overall view of the current human capital health of PHI. HR has made significant progress on the dashboard. The May 2009 dashboard includes 62 metrics. The majority of the metrics rely on data that is manually captured. HR planned to procure a business intelligence (BI) tool in 2009 to automate the metrics. The HR BI dashboard project was cancelled in late 2008 for budget reasons.
6. PHI developed a workforce planning process in 2008. Workforce planning (WP) focuses on planning for employee retirements in critical workforce segments. HR initiated a project in 2008 to develop a workforce planning process. The new WP process was approved in September 2008. Some elements of the process were incorporated into the 2009 budget cycle.
7. PHI plans additional workforce planning improvements in 2009. HR will continue to develop and implement the WP process. HR is working to integrate WP with its other talent management processes in 2009. Several opportunities for improvement remain including the acquisition of WP planning tools and the implementation of a knowledge transfer program. PHI's Utility Operations Department should place a high priority on developing a WP strategy in 2009.
8. The terms of ACE's union pension plan are inconsistent with PHI's workforce planning goals. ACE's union retirement plan has unusually permissive early retirement eligibility terms. ACE's pension plan actually penalizes some employees economically for working

past age 55. ACE's union pension plan is inconsistent with PHI's WP planning goals. ACE should work constructively with its IBEW local to address this issue.

9. PHI implemented significant improvements to its succession management process in 2008 and plans additional improvements in 2009. Prior to 2008, PHI's succession management (SM) process was limited to top executives. PHI expanded and automated its SM process in 2008 and began to extend the process to lower levels of management in 2009.
10. PHI has made significant progress in leadership development. PHI's recent leadership development initiatives have included leadership coaching and mentoring programs and an executive assessment and coaching program.
11. PHI uses a structured hiring process. PHI has a well-documented structured hiring process.
12. PHI's structured interview process is not popular with hiring managers and applicants. Structured interviews are considered an industry best practice. The hiring managers find the process to be labor intensive and time consuming. Some applicants find the process to be cold, intimidating and unfair. PHI has a substantial investment in the structured interview process in terms of labor and outcomes. HR should review the process for opportunities for improvement.
13. PHI uses a variety of staffing metrics. Metrics include time to fill requisitions, cost per hire, new hire first year turnover, client satisfaction survey results, and new hire performance evaluation (PAS) scores.
14. PHI implemented significant staffing process improvements in 2007 and 2008. PHI's recruiting function was outsourced prior to 2006. That resulted in a hiring process that was fragmented, costly and inefficient. PHI terminated the outsourcing arrangement in March 2006 and staffed the recruiting function internally. PHI increased recruiting staffing and made improvements to its hiring process. Those improvements reduced the average time to fill hiring requisitions from 92 days in 2006 to 53 days in 2008. PHI recognized the problems with its hiring process in 2006 and took proactive steps to address those problems.
15. PHI receives a large number of qualified applicants for most positions. PHI has a good reputation as an employer in the market place. PHI receives approximately 26,000 job applications a year. The ratio of applications to new hires is approximately fifty to one.
16. PHI plans to improve its recruiting outreach programs in 2009. PHI recognizes the need to build strategic relationships with local high schools, colleges and community groups to meet the increased hiring demand caused by retirements.

17. PHI is replacing its applicant tracking system. The HMS vendor, First Advantage Corporation, is experiencing financial and management problems. PHI is dissatisfied with the service provided by First Advantage and has decided to replace the HMS system with PeopleClick RMS. Implementation of the new system is expected to be completed in the first quarter of 2010.
18. PHI and ACE are substantially in compliance with current equal opportunity and affirmative action requirements. PHI has a policy of providing equal employment opportunity in all aspects of employment. PHI's affirmative action goals and plans are established in accordance with federal requirements.
19. PHI's diversity, EEO and AA programs are effective. PHI has had significant success in its diversity, EEO and AA programs. PHI's programs have been widely recognized to be successful and effective.

### **Recommendations**

1. PHI should consider implementing an HR service center in 2010. Establishing an HR service center would concentrate administrative and transactional tasks in an organization dedicated to operational efficiency in those areas. The service center would allow the HR Department's other areas to focus on higher value activities. The service center concept recommended by NorthHighland has considerable merit.
2. PHI should move forward with the HR dashboard business intelligence project. The project will facilitate the extraction and analysis of data enabling better management decisions. The project will increase workforce planning efficiency and reduce the manual processing currently required to prepare the HR metrics dashboard. The implementation cost is relatively modest.
3. PHI should implement a cross-functional job rotation program. PHI does not currently have a cross-functional job rotation program. Those programs have a number of benefits including increased job satisfaction and reduced turnover. NorthHighland recommended that PHI implement a job rotation program as a career development tool. The program should be integrated with PHI's workforce planning and employee development strategies.
4. PHI should develop a centralized employee recognition and rewards program. PHI does not have any centralized programs to recognize and reward individual performance. Employee recognition and reward programs motivate performance and increase job satisfaction. A formal recognition system for rewarding individual performance is an industry best practice. PHI should accelerate its efforts to develop a recognition and rewards policy and program.

## Overview

PHI's People Strategy and Human Resources Organization (the "HR Department") is responsible for managing PHI's human capital. As of June 2008, the Department had an authorized headcount of 107, including 18 contractor positions.<sup>1</sup> The Department's staffing is shown below.

<b>Area</b>	<b>Positions</b>
Executive	2
HR Business Partners	21
Strategic Labor Relations	1
Employee Communications	4
Staffing and Work Force Planning	36
Diversity and Supplier Diversity	8
Executive Compensation	1
Compensation and Benefits	14
Disability	4
Talent Management and Performance Evaluation	9
Information Systems and Technology	5
Other	2
<b>Total</b>	<b>107</b>
Source: PS&HR Organization Chart, June 3, 2008	

The HR Business Partners are the liaison between the HR Department and PHI's line organizations. The HR Business Partners address human resources issues within their host departments and communicate HR policies and initiatives to the host departments.

Strategic labor relations addresses PHI's relationships with its unions, including union contract negotiation. Work force planning and talent management are industry terms. Work force planning focuses on replacement planning for future retirements. Talent management includes succession management and employee development. Performance evaluation refers to PHI's annual employee performance assessment process.<sup>2</sup>

PHI outsources the administration of its benefits programs to contractors. AON handles medical benefits administration. Unum does disability benefits administration. Vanguard is the contractor for pension administration.<sup>3</sup>

**The HR Department has made significant progress in recent years.** PHI evolved through the merger of ACE and Delmarva into Conectiv in 1998 and the merger of Conectiv and Pepco into PHI in 2002. As a result, the HR Department inherited a large number of legacy benefit plans and information systems. The HR Department worked to consolidate and standardize those plans and systems in recent years. The improvements include:

<sup>1</sup> Supplemental response to Discovery, OC-18, PS&HR Organization Chart, dated June 2, 2008.

<sup>2</sup> Interview with Karen Francks, Manager Performance Process and Technology.

<sup>3</sup> Response to Discovery, OC-440.

- New management compensation and benefit plans in 2005.
- Staffing process restructuring in 2006.
- New employee performance evaluation system in 2006.
- Integrated health care strategy development in 2008.
- Workforce planning process development in 2008.
- HR information system management improvements in 2008.
- HR metrics dashboard in 2008.

Overland has a favorable impression of the progress the HR Department has made since 2004.

PHI's CEO commissioned a consultant, NorthHighland, to review PHI's talent management processes in 2007.<sup>4</sup> The results were presented to PHI's Board of Directors in September 2007. The review concluded that PHI had made good progress on HR and talent management since the PHI merger in 2002.<sup>5</sup>

NorthHighland concluded that PHI had a solid talent management foundation in place. However, PHI needed to increase its focus on integration, alignment, execution and accountability.<sup>6</sup>

NorthHighland also identified several opportunities for improvement. Talent management was not consistently integrated or supported throughout PHI. NorthHighland indicated that PHI should make talent management as high of a priority as financial management.

NorthHighland concluded that PHI needed to make improvements in workforce planning, succession planning, leadership development, performance management and employee recognition and rewards programs.

### **Employee Turnover Rates**

**ACE and the PHI Service Company have reasonable employee turnover rates.** The best measure of a company's ability to retain employees is its employee turnover rate. The following table shows ACE's employee turnover rates for the past three years.<sup>7</sup>

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<sup>4</sup> Response to Discovery, OC-744. PHI defines talent management as the ability to attract, develop, retain and motivate employees. The scope of the review included workforce planning, recruiting, performance management, employee learning, employee rewards and recognition, and succession planning.

<sup>5</sup> Response to Discovery, OC-744.

<sup>6</sup> Response to Discovery, OC-744.

<sup>7</sup> ACE sold the BL England Power Plant in February 2007. That transaction resulted in a large number of retirements and other terminations in 2006 and 2007. BL England is excluded from the turnover statistics in this Chapter to provide a normalized view of ACE's continuing operations.

**Table 21-2**  
**ACE Employee Turnover Rates**  
**2006 through 2008**  
**Excluding BL England Power Plant**

Description	2006	2007	2008
Terminations	53	9	16
Total Employees	497	508	524
Turnover Percentage	10.7	1.8	3.1

Source: Response to Discovery, OC-1194 and OC-1193

ACE's turnover rate averaged 5.1 percent for the three year period. The following table shows the 78 terminations by reason.

**Table 21-3**  
**ACE Employee Terminations By Reason**  
**2006 through 2008**  
**Excluding BL England Power Plant**

Reason	Number
Retirement	58
Voluntary	9
Unsatisfactory Performance	8
Other	3
<b>Total</b>	<b>78</b>

Source: Response to Discovery, OC-1194 and OC-1193.

ACE's employee terminations are largely due to retirements. Very few ACE employees leave voluntarily for jobs at other companies.

The PHI Service Company turnover rates are shown below.

**Table 21-4**  
**PHI Service Company Employee Turnover Rates**  
**2006 through 2008**

Description	2006	2007	2008
Terminations	171	185	134
Total Employees	1,742	1,807	1,888
Turnover Percentage	9.8	10.2	7.1

Source: Response to Discovery, OC-1193.

The following table shows the terminations by reason.

**Table 21-5**  
**PHI Service Company**  
**Employee Terminations By Reason**  
**2006 through 2008**

Reason	Number
Voluntary	168
Retirement	124
Return to School <sup>8</sup>	83
Unsatisfactory Performance	49
End Temporary Employment	30
Health	20
Sale of Assets	12
Staff Reductions	10
<b>Total</b>	<b>496</b>

Source: Response to Discovery, OC-1194 and OC-1193.

The PHI Service Company loses an average of five percent of its employees a year to voluntary terminations and retirements. The voluntary turnover rate is approximately 3 percent a year. That implies that the PHI Service Company’s total employment offering is competitive.

**HR Service Center**

**PHI should consider implementing an HR service center in 2010.** NorthHighland completed a study of the HR Department’s workload distribution in January 2008.<sup>9</sup> That report provided the following breakdown of the HR’s Department activities by function.

**Table 21-6**  
**PHI HR Department**  
**Workload Distribution by Function**  
**As of November 2007**

Function	Percent
Recruitment and Selection	11
Administrative Support	11
Information Systems and Reporting	10
Department Management	10
Labor Relations	8
Benefits	7
Organizational Design and Effectiveness	6
Employee Relations	5
Rewards and Recognition	5
Vendor Management	4
HR Strategy	4
Supplier Diversity	3
Leadership Development and Employee Learning	3
Performance Management	2
Payroll	2
Work Force Management	2
Diversity Management	2
Categories Under 2 percent (6)	5
<b>Total</b>	<b>100</b>

Source: Response to Discovery, OC-459

<sup>8</sup> This appears to include PHI’s college summer intern program.

<sup>9</sup> Response to Discovery, OC-459.



NorthHighland noted that the Department spent a large percentage of its time on transactional and administrative tasks. Many of the administrative and other functions were spread across multiple organizational groups, raising questions about efficiency. PHI appeared to have higher HR staffing levels relative to total employment than many other companies.<sup>10</sup>

NorthHighland recommended creating an HR Service Center and transferring all transactional and administrative services to the service center, including responding to employee questions. The service center would focus on streamlining and efficiently delivering those services.

The service center would be accountable for developing and managing HR self-service tools, manning an HR shared service help desk, and performing transactional and systems/reporting services.

NorthHighland also recommended expanding employee on-line self-service resources to address employee questions. The service center and expanded self-service options would allow the Department's other areas to focus on higher value services such as workforce planning, knowledge management, succession management and leadership development.<sup>11</sup>

The advantages of implementing an HR service center include consolidating administrative tasks, allowing more focus on strategic work, increasing productivity, improving customer service, and leveraging technology.<sup>12</sup> Impediments include implementation costs, staffing requirements, systems requirements and the complexity of PHI's organization. PHI concluded the service center concept had merit but the impediments caused PHI to decide not to implement an HR service center in 2009.<sup>13</sup>

Establishing an HR service center would concentrate administrative and transactional tasks in an organization dedicated to operational efficiency in those areas. The service center would allow the HR Department's other areas to focus on higher value activities. The service center concept recommended by NorthHighland has considerable merit. PHI should consider implementing the HR service center concept in 2010.

## **Information Systems**

The HR Business Solutions Group (HRIS) is responsible for managing HR's information systems. HRIS serves as the liaison between HR and the Information Technology (IT) Department.<sup>14</sup> HRIS manages HR's technology selection process and data architecture.<sup>15</sup> The group also facilitates HR data analysis and manages PHI's contracts with HR application

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<sup>10</sup> Response to Discovery, OC-459.

<sup>11</sup> Response to Discovery, OC-459.

<sup>12</sup> Response to Discovery, OC-749.

<sup>13</sup> Response to Discovery, OC-749.

<sup>14</sup> Interview with Ron Godwin, PS&HR Manager Business Solutions.

<sup>15</sup> Data architecture defines how data is stored, managed and used in a system or process.

service providers. The group has five employees.<sup>16</sup> One employee is assigned to the learning management system.<sup>17</sup> Another employee is the coordinator for the HR dashboard.

The IT Department provides the technical expertise needed to install and maintain systems and software applications. HRIS has a good working relationship with the IT Department.<sup>18</sup>

The HRIS staff is well qualified.<sup>19</sup> The group stays current on industry trends through participation in PHI's IT committees, including the IT Steering Committee.

The HR System Steering Committee (HRSSC) coordinates and prioritizes HR IT initiatives. The committee includes representatives from the IT Department and the various groups in the HR Department.<sup>20</sup>

HR has adopted a strategy of combining its base HR system with "best of breed" specialized software applications supplied by other vendors. That strategy is referred to as a federated architecture strategy. PHI's federated architecture strategy also includes outsourcing selected administrative functions, such as benefits administration.

PHI's base HR system is SAP - HR. The alternative to a federated architecture is a consolidated architecture. Under a consolidated architecture strategy, PHI would utilize SAP products for all of its applications. The federated architecture strategy requires greater attention to system integration and vendor management. The federated architecture approach also increases data integrity and security issues and requires more auditing.<sup>21</sup>

HRIS recognizes the following "big principles" when considering new HR applications:<sup>22</sup>

- Use what you have - fully utilize the applications you already own before adding more.
- Consider total cost of ownership.
- Look at the data architecture holistically.
- Consider data integration requirements.
- Make sure the new application is compatible with SAP-HR
- Proactively work with the IT Department to implement the new application.

The following table shows the applications currently managed by HRIS.

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<sup>16</sup> PS&HR Organization Chart as of June 2, 2008.

<sup>17</sup> The Learning Management System is also known as the Knowledge Center.

<sup>18</sup> Interview with Ron Godwin, PS&HR Manager Business Solutions

<sup>19</sup> Interview with Ron Godwin, PS&HR Manager Business Solutions

<sup>20</sup> Response to Discovery, OC-450.

<sup>21</sup> Response to Discovery, OC-449.

<sup>22</sup> Interview with Ron Godwin, PS&HR Manager Business Solutions

<b>Name</b>	<b>Function</b>
SAP - HR	Employee Data
Hiring Management System (HMS)	Hiring Process
Performance Accountability System (PAS)	Employee Performance Evaluations
Knowledge Center	Learning Management System (Training Courses)
Talent Management System (TMS)	Succession Management
InforMed	Medical Claims Data Analysis
Annual Incentive Plan (AIPC)	Incentive Pay Plan
SAP- Zmerit	Base Pay
Precedents Tracking System	Employee Disciplinary Actions
Balance AAP	AA/EEO Reporting
SIRTS	Hiring Process Interview Panels
Express Options	Executive Compensation
Web Exit	Exit Interview Survey for Former Employees

Source: Response to Discovery, OC-448 and Interview with Ron Godwin, Manager HR Business Solutions.

The HMS, PAS, TMS, InforMed and Web Exit systems are hosted by external application service providers. PHI has external data feeds with those vendors and with its outsourced services providers, AON and Unum.<sup>23</sup>

### **2008 Improvement Initiatives**

**PHI made significant improvements in HR IT in 2008.** HR inherited a large number of legacy systems through the Conectiv and Pepco mergers. HR did not have a data architecture chart or an inventory of its systems prior to 2008. That resulted in the maintenance of systems that were no longer used.

PHI recognized the need to improve the management of HR applications and retained NorthHighland to review its data architecture.<sup>24</sup> NorthHighland's report was completed in February 2008.<sup>25</sup>

NorthHighland's report contains the following findings:

- HR's federated architecture resulted in system communications and data flow problems in some instances.
- In the past, HR groups had acquired applications on a tactical instead of a strategic basis. The applications were acquired without fully considering the total cost from PHI's perspective or the interests of other groups within HR. This resulted in information not being shared between systems and groups (information silos).

<sup>23</sup> Response to Discovery, OC-448.

<sup>24</sup> Interview with Ron Godwin, PS&HR Manager Business Solutions

<sup>25</sup> Response to Discovery, OC-449.

- HR had insufficient inbound data feeds from some of its application services vendors and outsourced services providers. This required manual intervention in the data transfer processes and inhibited process automation.
- SAP - HR did not accurately reflect business rules for employee promotions and transfers and for the organizational reporting hierarchy. This resulted in the need to manually scrub data.
- HR had well designed systems of record for HR data elements.

NorthHighland cited the HMS and WebExit as examples of tactical acquisitions of applications that did not consider all of the strategic consequences. The insufficient data feeds from outsourced services providers prevented PHI from obtaining data it needed to analyze and manage its costs.<sup>26</sup>

NorthHighland indicated the HRIS should:

- Limit the number of technology solutions supporting HR processes;
- Negotiate better inbound data feeds from HRIS vendors;
- Use what they own - consider using additional capabilities of existing applications;
- Evaluate the total cost of ownership and how the application fits within HR's existing data architecture when considering new applications.
- Stop creating information silos by selecting point solutions for each process.
- Stop depending on manual efforts to "care and feed" systems.
- Automate data scrubbing and validation processes.
- Continue working to better understand HR processes and metrics.
- Solve data quality issues by attacking the root cause - Define PHI business rules with respect to employee transfers and promotions.

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<sup>26</sup> Interview with Ron Godwin, PS&HR Manager Business Solutions

NorthHighland created a tier 1 data architecture chart showing the relationships and feeds between HR's various applications and external vendors.<sup>27</sup> HR did not have a data architecture chart prior to that time.

HRIS implemented improvements in 2008 to respond to NorthHighland's recommendations. HRIS developed and implemented a system to track HR systems and completed an inventory of all major and intermediate systems. HRIS decommissioned twelve legacy applications and archived four which are still being used for historical purposes.<sup>28</sup>

HRIS is more involved now at the front end of the application selection process to ensure that the impact on the entire organization is considered and the selected application is compatible with HR's data architecture.<sup>29</sup> HR established a defined process through the HRSSC to make sure all HR interests are considered. HRIS is placing more emphasis on ensuring that PHI's data analysis needs are addressed in the contracts for new services and applications.

HRIS is addressing data integrity issues by giving employees access to their data in SAP so they can correct errors in their personal data. HR has increased the auditing of employee promotion and transfer data to identify errors. HR has also increased the auditing of new employee change of status form data entry. HR has improved the Balance AAP data base and reporting process to reduce the need for manual intervention.<sup>30</sup>

### **Employee Records Retrieval**

**PHI has the capability to retrieve employee records when needed.** PHI scans the employee files of all new employees into FileNet. That allows retrieval by authorized personnel within minutes. The availability of electronic files varies for other active employees depending on whether they worked for Conectiv or for PEPCO prior to the PHI merger.

The files for active employees who previously worked for Conectiv have been scanned into FileNet. PHI has not completed scanning the files for active employees who used to work for PEPCO.

The files of employees who terminated employment prior to the PHI merger are only available as paper documents.<sup>31</sup> Retrieving the paper documents from the records retention center takes longer.<sup>32</sup>

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<sup>27</sup> Response to Discovery, OC-448.

<sup>28</sup> Response to Discovery, OC-585, 2008 Strategic Plan for Performance Process and Technology Group, June 2008 update.

<sup>29</sup> Interview with Ron Godwin, PS&HR Manager Business Solutions

<sup>30</sup> Interview with Ron Godwin, PS&HR Manager Business Solutions

<sup>31</sup> Response to Discovery, OC-446. The Conectiv Files are stored at PHI's Martin Luther King Boulevard facility in Wilmington Delaware.

<sup>32</sup> Response to Discovery, OC-446.

PHI has not archived the employee data contained in SAP since it was implemented. Employee data for heritage Conectiv employees is available on line extending back to at least 1999. That data includes employment status, job title, organization and salary history. Pepco's SAP data extends back to 2004. The SAP data is available on line.<sup>33</sup>

PAS data is not archived.<sup>34</sup> PAS data includes the employees goals and semi-annual and annual performance evaluations. Employees and Managers can retrieve that data on-line back to the implementation of PAS in January 2006. AON is responsible for archiving and retrieving benefits eligibility and utilization data.<sup>35</sup>

PHI did not experience any significant employee data retrieval problems in 2007 or 2008.<sup>36</sup> According to PHI, the quality of its human resources records retrieval is good.<sup>37</sup>

One of the respondents to NorthHighland's 2007 HR workload distribution survey recommended that HR should improve its ability to access Pepco heritage payroll data.<sup>38</sup> The HR Department's 2008 strategic plan includes a goal for scanning backlogged Edison Place employee files into FileNet.<sup>39</sup> PHI should continue to scan its remaining employee files into FileNet to improve its records retrieval capability.

## **HR Dashboard**

**PHI created an HR metrics dashboard in 2008.** HR began the development of an HR metrics dashboard in January 2008. Prior to that, no central location existed for HR metrics.<sup>40</sup> The purpose of the dashboard is to provide an overall view of the current human capital health of PHI in a simple, easy to read, format.

PHI made significant progress on the HR dashboard in 2008. The May 2009 dashboard includes 62 metrics. The dashboard format requires each metric to have a goal. Many of the metrics and goals were incomplete at that time.<sup>41</sup>

Comparing actual results to goals highlights processes that are working well and identifies processes that need improvement. The metrics are organized by function. Each metric has an owner. The owner is responsible for defining the metric, setting the goal, and validating the

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<sup>33</sup> Response to Discovery, OC-446.

<sup>34</sup> PAS is the Performance Accountability System. PAS is used for employee performance evaluation.

<sup>35</sup> Response to Discovery, OC-446.

<sup>36</sup> Response to Discovery, OC-440.

<sup>37</sup> Response to Discovery, OC-446.

<sup>38</sup> Response to Discovery, OC-459. Presumably many former Pepco employees are now employed by the PHI service company. Data retrieval problems for those employees potentially impact ACE.

<sup>39</sup> Response to Discovery, OC-585. 2008 Strategic Plan for Strategic Staffing and Work Force Planning Group.

<sup>40</sup> Response to Discovery, OC-580, Dashboard Project Statement of Work.

<sup>41</sup> Response to Discovery, OC-1183.

data. HR plans to implement drillable metrics that will allow the user to view the metrics for each PHI division via a hyperlink.

The dashboard is currently maintained on an excel spreadsheet on HR's shared drive. The majority of the metrics rely on data that is manually captured.<sup>42</sup> HR planned to implement an HR dashboard business intelligence (BI) project in 2009 to automate the process of collecting the data and preparing the metrics. The project was cancelled in late 2008 for budget reasons.<sup>43</sup>

As discussed in Chapter 23, PHI selected a corporate BI platform in 2009. The HR dashboard project is not included in the BI initiatives scheduled for 2010. The HR dashboard project is on the BI initiatives list and will be prioritized by the BI Management Group based on resource availability.<sup>44</sup>

**PHI should move forward with the HR business intelligence project.** In addition to automating the dashboard, the HR BI application would be used to prepare workforce analytics and to respond to data requests from other departments.

Employee data is stored in a number of different systems. Manual processes are currently required to combine data from the different systems. HR BI would eliminate the need for manual processing by pulling the data together into a common platform for analytics and report preparation.

HR BI would increase the efficiency of the workforce analytics process by pulling education, training, succession management, performance management, and demographics data together into one data base.<sup>45</sup>

HR BI will facilitate the extraction and analysis of data enabling better management decisions. NorthHighland recommended implementing HR BI and the HRIS group wants to move forward with the project.<sup>46</sup> HR planned to implement HR BI in 2009. The HR BI dashboard project was cancelled in late 2008 solely for PHI financial reasons.<sup>47</sup> The implementation cost for HR BI is relatively modest.<sup>48</sup> PHI should move forward with the HR BI project within the next 18 months.

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<sup>42</sup> Response to Discovery, OC-580, Dashboard Update, Metric Leads, June 18, 2008, page 7.

<sup>43</sup> Response to Discovery, OC-766.

<sup>44</sup> PHI comments on Overland Draft Report, response to request for additional information.

<sup>45</sup> Response to Discovery, OC-582.

<sup>46</sup> Response to Discovery, OC-449 and Interview with Ron Godwin, PS&HR Manager Business Solutions.

<sup>47</sup> Response to Discovery, OC-755 and interviews with Karen Francks, PHI HR Manager Performance Process & Technology and Ron Godwin, PS&HR Manager Business Solutions.

<sup>48</sup> Response to Discovery, OC-764. PHI's Enterprise Information Management and Business Intelligence Strategy indicates a cost of \$2.4 million for a total enterprise BI system. That is a much larger scope than the HR BI project. OC-765. The BI Flexible Reporting proof-of-concept project for Utility Operations had a budget of \$438,000. An HR-BI project would produce cost savings through efficiency gains. Those savings should offset the initial implementation cost over a relatively short period of time.

## Workforce Planning

Workforce planning (“WP”) focuses on planning for employee retirements in critical workforce segments (“CWS”).<sup>49</sup> CWS employees are employees who have a significant impact on results and are difficult to replace.<sup>50</sup> WP is an important issue for many utilities because of their aging work force.

The WP process includes the following steps.

- Identify CWS positions.
- Forecast FTE requirements in CWS positions (the demand forecast).
- Forecast the number of existing employees who will be qualified to fill the CWS positions (the supply forecast).
- Identify the gaps between demand and supply.
- Identify and implement solutions to fill the gaps.

The supply forecast requires forecasting employee retirements, other terminations and promotions for each CWS.

PHI did not have a WP process prior to 2006. PHI retained Deloitte Consulting in 2006 to prepare an assessment of its WP needs.<sup>51</sup> Deloitte noted that the utility industry was rapidly losing workers due to retirements and many utilities were increasing their hiring to compensate for anticipated retirements.

Deloitte’s study focused on PHI’s regional utility operations.<sup>52</sup> Deloitte asked the managers of PHI’s four regions to identify CWS positions. The CWS positions identified by the managers included 58 percent of the employee population in their regions.

Deloitte noted that 21 percent of PHI’s regional operations CWS employees would be eligible to retire within three years.<sup>53</sup> Some of the most critical positions had the highest levels of retirement eligible employees. Within 10 years, 52 percent of the current CWS employees would be eligible for retirement.

Retirement eligibility was highest in the ACE region. The following table shows Deloitte’s analysis of the ACE region.

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<sup>49</sup> Interview with Karen Boyd, PHI Manager Strategic Staffing and Work Force Planning.

<sup>50</sup> Response to Discovery, OC-385, Northhighland WP Report, page 5 contains five criteria for CWS positions.

<sup>51</sup> Response to Discovery, OC-385. Deloitte’s Report was issued in February 2006.

<sup>52</sup> Response to Discovery, OC-385.

<sup>53</sup> Response to Discovery, OC-385, Deloitte Report, page 8.



Period	Percent
Within Three Years	20
Within Five Years	33
Within Ten Years	58
Source: Response to Discovery, OC-385. Note: Percentages are cumulative.	

ACE's high eligibility rates reflect its aging workforce and the permissive retirement terms of its union pension plan. The following table shows an age distribution for the 355 employees included in ACE's regional utility operations workforce.

Age	Percent
60 or over	2
55 to 59	13
50 to 54	22
44 to 49	26
38 to 43	21
32 to 37	9
31 or under	7
<b>Total</b>	<b>100</b>
Source: Response to Discovery, OC-385.	

The retirement terms of ACE's union pension plan are more permissive than those of Pepco and Delmarva, as shown in the following table.

Company	Minimum Age	Minimum Service
Pepco	55	30
ACE	55	5
Delmarva	60	20
PHI Management Plan	62	20
Source: Response to Discovery, OC-385		

Deloitte concluded that:

- WP at PHI was largely undefined. PHI did not have a consistent approach to forecasting retirements and planning for replacements.

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<sup>54</sup> The pension benefit formula for ACE's union pension plan is discussed in a subsequent part of this Section. .

- PHI's headcount planning process was driven by budget objectives, resulting in planning inconsistencies between regions and departments.
- PHI did not have any clear linkage between work force demographic information and hiring and succession management.
- There was no centralized authoritative source of work force information within PHI.

Deloitte recommended that PHI establish a consistent and standardized WP process that was integrated with the budget process and other talent management initiatives. Deloitte recommended establishing a centralized WP group and defining the WP processes from end-to-end.

PHI retained NorthHighland in 2007 to assist in the integration of its WP efforts. NorthHighland's 2008 WP Report indicates:<sup>55</sup>

- PHI's WP was reactive in nature and fragmented.
- PHI's WP did not effectively identify current and future workforce gaps.
- Managers provided input into the headcount planning process based on budget with little focus on workload drivers or future requirements. Executive approval was based on dollars not FTE requirements.
- PHI did not have a formal process for transferring knowledge from retirees to their replacements. That resulted in the return of retirees as contractors.
- Recruiting plans and succession management were not linked to workforce information.

NorthHighland noted that 49 percent of PHI's employees were eligible for retirement within five years. Worker shortages were expected in the utility industry because of the declining interest in craft work and the shrinking supply of engineering graduates entering the utility industry.<sup>56</sup>

NorthHighland recommended that PHI target CWS positions and develop a portfolio of options to address its workforce needs. NorthHighland recommended proactively hiring additional employees to address expected CWS retirements and the associated time to proficiency requirements.<sup>57</sup>

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<sup>55</sup> Response to Discovery, OC-385.

<sup>56</sup> Response to Discovery, OC-385.

<sup>57</sup> Response to Discovery, OC-385, NorthHighland WP Report, page 8.

NorthHighland recommended that PHI's Utility Operations Department track and manage the electrical craft internal pipeline based on qualifications, progressions and time to proficiency.

NorthHighland recommended that PHI integrate WP with its talent management processes and develop a program to transfer critical knowledge from retirees to their replacements.

NorthHighland also recommended that PHI implement an early retirement identification pilot to encourage prospective retirees to declare their anticipated retirement dates and transfer knowledge to their replacements.

### **Workforce Planning Process**

**PHI developed a workforce planning process in 2008.** PHI did not have a centralized WP process prior to 2008. HR initiated a WP project in 2008 in light of the number of employees expected to retire in the future and in recognition of the reactive nature of the prior process.<sup>58</sup> PHI's new WP process was approved by management in September 2008.

PHI incorporated parts of the WP process into the 2009 business planning cycle.<sup>59</sup> HR provided PHI's business units with lists of employees eligible to retire in 2009. The business units were required to prepare a one year CWS staffing forecast and incorporate that forecast into their planning discussions for the 2009 budget.<sup>60</sup> PHI added a line to the business unit budget templates to show new positions added to the 2009 budget in anticipation of retirements.<sup>61</sup> The business units were also required to provide a five year CWS demand forecast to HR.

HR implemented a process for identifying CWS in 2008. Deloitte estimated that CWS positions accounted for 58 percent of the employee population in PHI's four utility operations regions. That has been reduced to 40 percent.<sup>62</sup>

The employee's relationship with their supervisor is an important factor in early retirement decisions. PHI enhanced its foundations of supervision training course to foster better relationships between supervisors and employees. The HR Department would like to increase the amount of supervision skills training received by managers in 2009.<sup>63</sup>

PHI has not done any over-hiring in anticipation of retirements. PHI has started to increase its entry level hiring for lineman positions because of the four to seven year lead time between initial hire and journeyman status.<sup>64</sup>

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<sup>58</sup> Response to Discovery, OC-385.

<sup>59</sup> Response to Discovery, OC-385.

<sup>60</sup> The one year staffing forecasts show existing headcount, anticipated retirements, other terminations, promotions and the resulting headcount gap. Response to Discovery, OC-385, NorthHighland WP Report, page 27.

<sup>61</sup> Interview with Karen Boyd, PHI Manager Strategic Staffing and Work Force Planning.

<sup>62</sup> Interview with Karen Boyd, PHI Manager Strategic Staffing and Work Force Planning.

<sup>63</sup> Interview with Karen Francks, PHI HR Manager Performance Process & Technology.

<sup>64</sup> Interview with Karen Boyd, PHI Manager Strategic Staffing and Work Force Planning.

**PHI plans additional workforce planning improvements in 2009.** HR will continue to develop and implement the WP process in 2009. HR is working to integrate WP with its other talent management processes in 2009.<sup>65</sup>

HR did not prepare any WP supply plans in 2008. HR anticipates completing those plans in 2009.<sup>66</sup> Completion of the supply plans will allow PHI to conduct gap analysis. PHI should complete the implementation of the WP process in 2009 and fully incorporate the results into its 2010 planning cycle.

HR is considering the acquisition of a WP tool. The tool would automate the demand and supply planning process and gap analysis. The tool would also automate the assessment of the internal talent pipeline and knowledge transfer risks. One option is using SAP's WP tool.<sup>67</sup> Currently, ACE's only WP tool is an excel spreadsheet which lists the employees who are currently eligible for retirement. According to PHI, the WP tool acquisition may be delayed to 2010.<sup>68</sup> PHI should accelerate its plans to acquire a workforce planning tool.

NorthHighland proposed a Talent Bench tool to evaluate the skills proficiency of existing employees who potentially could replace CWS retirees. NorthHighland also proposed a Knowledge Transfer Risk tool to identify high priority employees requiring enhanced replacement planning. PHI is not implementing those tools in 2009. PHI will consider implementing those tools in 2010 or later years.<sup>69</sup>

PHI does not currently have a standardized process in place to transfer knowledge from retirees to their replacements. As a result, PHI incurs increased costs to bring retirees back as contractors.<sup>70</sup> HR has a project in 2009 to develop a knowledge management process.<sup>71</sup> The process may include financial incentives to motivate prospective retirees to train their replacements. The process may also include incorporating knowledge transfer goals into the employee level goals used in the Performance Accountability System (PAS).<sup>72</sup>

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<sup>65</sup> Interview with Karen Boyd, PHI Manager Strategic Staffing and Work Force Planning.

<sup>66</sup> PHI anticipates completing the demand forecasts for utility operations in 2009. PHI "hopes" to complete the demand forecasts for its corporate services departments in 2009. Interview with Karen Boyd, PHI Manager Strategic Staffing and Work Force Planning.

<sup>67</sup> Interview with Karen Boyd, PHI Manager Strategic Staffing and Work Force Planning.

<sup>68</sup> Interview with Karen Boyd, PHI Manager Strategic Staffing and Work Force Planning.

<sup>69</sup> Interview with Karen Boyd, PHI Manager Strategic Staffing and Work Force Planning

<sup>70</sup> Response to Discovery, OC-385, NorthHighland WP report pages 4 and 7. Also OC-395, Strategic Staffing & Workforce Planning Process Redesign, July 18, 2006, page 6.

<sup>71</sup> Response to Discovery, OC-581. The Knowledge Management Project is broader in scope than just retiree knowledge transfer. It encompasses identifying and mapping intellectual assets, generating new knowledge and making vast amounts of corporate data accessible. The goals of the project are to create a Knowledge Management infrastructure that allows PS&HR to consistently create, gather, organize, share and use information and eliminate current knowledge transfer issues. Another goal is to incorporate knowledge management into every current HR process of function. Overland encourages HR not to let the broader focus delay the implementation of retiree knowledge transfer programs.

<sup>72</sup> Interview with Karen Boyd, PHI Manager Strategic Staffing and Work Force Planning.

NorthHighland identified knowledge transfer as one of PHI's biggest HR gaps. NorthHighland and Deloitte both recommended implementing a retiree knowledge transfer program with incentives. PHI should place a high priority on developing and implementing a retiree information transfer program in 2009.

NorthHighland recommended that PHI conduct a retirement planning identification pilot. The pilot would provide incentives to prospective retirees to declare their intended retirement date in advance to allow time to plan and train their replacements. PHI has not decided whether it will implement the pilot. Encouraging employees to declare their retirement intentions several months in advance and train their replacements is a sound idea. PHI should accelerate its review of the retirement planning identification pilot recommended by NorthHighland.

PHI's lines of business are responsible for using the WP information to develop strategies to manage expected CWS staffing shortages. PHI's electrical craft workforce is the area of greatest concern.<sup>73</sup>

Deloitte identified sixteen CWS positions in ACE regional operations in its 2006 review. The groups with the highest number of CWS employees eligible for retirement were distribution supervisors and buried distribution leaders.<sup>74</sup>

Alternative approaches to addressing the CWS gaps include:

- Advanced hiring of replacements.
- Increasing the use of contractors.
- Developing and promoting existing employees to fill CWS positions.
- Encouraging employees to delay retirements by offering incentives or flexible work arrangements.
- Reducing other employee turnover.
- Bringing retirees back as temporary contractors.
- Implementing knowledge transfer programs to train replacements.

Utility Operations did not have a WP strategy in 2008. HR asked Utility Operations to provide its strategy in 2009.<sup>75</sup> PHI's Utility Operations Department should place a high priority on developing a WP strategy in 2009.

PHI is considering expanding the use of flex time to retain older employees. PHI is also considering offering financial incentives to first line supervisors to delay retirement.<sup>76</sup>

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<sup>73</sup> Interview with Karen Boyd, PHI Manager Strategic Staffing and Work Force Planning.

<sup>74</sup> Response to Discovery, OC-385. Deloitte Report, page 8.

<sup>75</sup> Response to Discovery, OC-741 and interview with Karen Boyd, PHI Manager Strategic Staffing and Work Force Planning

<sup>76</sup> Interview with Karen Boyd, PHI Manager Strategic Staffing and Work Force Planning.

**ACE Pension Plan**

**The terms of ACE’s union pension plan are inconsistent with PHI’s workforce planning goals.** ACE’s union retirement plan has unusually permissive early retirement eligibility terms. Employees are eligible to retire without a benefit penalty at age 55 if they have five years of service. Retirees are also eligible for full retiree medical benefits at age 55.

Delmarva union employees are not eligible for full pension benefits until age 60. Delmarva employees can retire at age 55, but their pension benefits are reduced by a substantial penalty factor.<sup>77</sup> ACE’s permissive retirement terms definitely result in ACE union employees retiring earlier than Delmarva union employees.<sup>78</sup>

PHI estimates retirement rates in its retiree medical expense actuarial calculations. The following table compares the ACE and Delmarva retirement rate assumptions.

*Table 21-11*  
**Retirement Rate Assumptions  
ACE and Delmarva  
Cumulative Percentage Retired by Stated Age**

Age	ACE	Delmarva
55	30	10
56	44	17
57	55	23
58	66	29
59	73	34
60	81	51
61	85	63
62	92	74
63	95	79
64	96	84
65	100	100

Source: Response to Discovery, OC-981, PHI SFAS 106 Actuarial Report, page 13.

Seventy-three percent of ACE pension plan participants retire by the age of 59. At Delmarva, only 34 percent retire by the age of 59.

ACE’s union pension plan actually penalizes some employees for working past age 55. The pension benefit equals 1.6 percent of the employees’ base pay for each year of service. The annual pension benefit is capped at \$25,000 a year.<sup>79</sup>

Without the cap, an employee who retires at age 55 with a base pay of \$70,000 and 25 years of service would get a retirement benefit of \$28,000. The cap reduces that pension benefit to \$25,000.

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<sup>77</sup> Delmarva employees retiring at age 55 with 15 or more years of service receive a benefit equal to 76 percent of the amount produced by the normal benefits formula. Response to Discovery, OC-981.

<sup>78</sup> Interview with Karen Boyd, PHI Manager Strategic Staffing and Work Force Planning.

<sup>79</sup> Response to Discovery, OC-75 (plan documents) and OC-981 (2008 pension actuarial report, page 26). Note: the Delmarva plan does not include a benefit cap.

If the same employee works until age 59, the cap limits the employee's pension benefit to \$25,000, even though the uncapped benefit formula would produce a benefit of \$35,264.<sup>80</sup>

The cap reduces the employee's incentive to work past the age of 55 because additional years of service and base pay raises do not increase the employee's pension. The net present value of the employee's pension benefits actually decreases if the employee continues to work because the employee draws the same monthly check over a shorter total retirement period.<sup>81</sup> ACE's union pension plan is inconsistent with PHI's WP goals.

ACE's pension plan retirement terms are subject to collective bargaining. PHI has a long-term goal of making ACE's early retirement terms more consistent with those of Delmarva and Pepco. ACE should continue to negotiate with its union to obtain early retirement terms that are more consistent with industry practice.

Adding early retirement penalties for employees who are within five years of retirement under the current rules may not be fair or practical. ACE should work with the union to understand near-term CWS gaps and develop targeted solutions for managing those gaps, including targeted financial incentives. ACE should also consider flexible work schedule options for employees over age 55.<sup>82</sup>

## **Succession Management**

**PHI implemented significant improvements to its succession management process in 2008 and plans additional improvements in 2009.** Succession management (SM) focuses on identifying key positions and assessing and developing talent for those positions.<sup>83</sup> PHI's SM process began in 2003. However, prior to 2008, the process was limited to top executives and was not automated.<sup>84</sup> NorthHighland recommended that PHI:<sup>85</sup>

- Develop a more comprehensive and robust succession management process.
- Hold executives accountable for developing talent, and
- Expand the process down to the manager level.

The HR Department initiated a project in 2008 to expand and enhance the SM process. The expanded process was implemented for Tier one positions in 2008. Tier one includes the top 70

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<sup>80</sup> Assuming a final average base pay of \$76,000 with 29 years of service.

<sup>81</sup> The benefits are payable from the month of retirement until death. Delaying retirement by three years shortens the benefit period by three years.

<sup>82</sup> The current union agreement does not allow for flex-time. Interview with Karen Boyd, PHI Manager Strategic Staffing and Work Force Planning

<sup>83</sup> Interview with Karen Francks, PHI HR Manager Performance Process & Technology.

<sup>84</sup> Response to Discovery, OC-578.

<sup>85</sup> Response to Discovery, OC-739. NorthHighland September 2007 Talent Management Presentation.

positions at PHI.<sup>86</sup> Tier two consists of PHI's other key positions. The HR Department began to implement Tier two succession management in 2009.

The SM process includes:<sup>87</sup>

- Identifying key positions
- Identifying potential candidates
- Assessing the candidates based on impact and risk of loss, potential and performance.
- Providing feedback to the identified talent.
- Developing and implementing talent development plans to bridge gaps in skills.

PHI automated the process in June 2008 with the activation of the Talent Management System (TMS).<sup>88</sup> The TMS includes searchable on-line resumes for potential candidates. The TMS allows managers to do on-line talent searches and assessments of risk of loss, impact of loss, promotibility and potential.<sup>89</sup> TMS is integrated with the PAS system and uses PAS performance rating data to create a view of performance and potential. The TMS is currently used for Tier one succession planning and will be used for Tier two in 2009.

PHI plans to integrate SM with its leadership development and workforce planning processes.<sup>90</sup> PHI is also developing metrics to monitor the process and ensure that development strategies are implemented for key leadership candidates.<sup>91</sup>

PHI implemented significant improvements to its succession management process in 2008 and plans additional improvements in 2009. PHI should follow through with its plans to extend the succession management process to the Tier two level in 2009.

## **Leadership and Employee Development**

**PHI has made significant progress in leadership development.** The NorthHighland September 2007 Talent Management report found that PHI had made significant progress in the leadership development area, including:

- Implementing the PHI "leading with safety" leadership development program (675 Leaders, 175 workshops).

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<sup>86</sup> Interview with Karen Francks, PHI HR Manager Performance Process & Technology.

<sup>87</sup> Response to Discovery, OC-387.

<sup>88</sup> TMS is a software product of SuccessFactors. SuccessFactors is also the vendor for PHI's performance accountability system (PAS).

<sup>89</sup> Response to Discovery, OC-579.

<sup>90</sup> Response to Discovery, OC-578.

<sup>91</sup> Response to Discovery, OC-387 and interview with Karen Francks, PHI HR Manager Performance Process & Technology.



- Conducting an executive assessment and coaching pilot.
- Implementing leadership coaching (1,650 sessions based on 360 degree feedback).<sup>92</sup>
- Implementing a mentoring program (159 pairs).

NorthHighland noted that PHI's leadership development initiatives had been well received by the workforce. NorthHighland recommended that PHI develop a leadership model and development strategy that was aligned with its succession management and performance management processes. NorthHighland also recommended that PHI build a leadership development organization and its leadership and management training curricula.

The initial group of 13 executives completed the executive assessment and coaching pilot in May 2008. As of June 2009, 31 executives have completed the program.<sup>93</sup>

PHI implemented a mentoring pilot in 2005. The response to the pilot was highly favorable. The mentoring program was expanded in 2007 to include two tracks, one for leadership and one for professional employees. In 2008, the mentoring program had approximately 110 pairs.<sup>94</sup>

PHI uses the Birkman Assessment tool in its employee and leadership development processes. The Birkman tool is an on-line survey that identifies the employee's everyday behaviors and provides insights into underlying motivations and needs.<sup>95</sup> The 45 minute on-line survey is followed by one or two hour session with a certified consultant who interprets the results and provides feedback to the employee.<sup>96</sup> The assessments focus on how the employee reacts to stress, team building and supervisor / subordinate relationships. PHI conducted 129 Birkman Assessments in 2007.

PHI designed and launched a "Foundations For Supervision" course in 2007.<sup>97</sup> The four day course provides training on the basic skills needed to supervise and lead employees.

The Foundations For Supervision course is designed for supervisors who have been in that role for less than three years. The course includes the following sessions:<sup>98</sup>

- Supervisory Roles and Responsibilities
- Key Information for New Supervisors
- Coaching and Discipline Skills
- Effective Communications

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<sup>92</sup> 360 degree feedback is an evaluation approach that gathers feedback from the employee's supervisor, co-workers, subordinates and client departments.

<sup>93</sup> PHI comments on Overland Draft Report.

<sup>94</sup> Response to Discovery, OC-387.

<sup>95</sup> Response to Discovery, OC-387.

<sup>96</sup> Interview with Karen Francks, PHI HR Manager Performance Process & Technology.

<sup>97</sup> Response to Discovery, OC-456.

<sup>98</sup> Response to Discovery, OC-456.

- Managing Performance
- HR Policies and Practices
- Coaching Practice
- Fundamentals of Safety and Environment
- The Transition to Supervision

PHI plans on expanding the course to include more experienced supervisors. Approximately 90 supervisors took the course in 2008.<sup>99</sup>

The HR Performance Process & Technology group had a goal in 2008 of designing and rolling out leadership and management development strategies and curricula.<sup>100</sup> That goal includes developing a foundations course for managers.

### **Job Rotation Program**

**PHI should implement a cross-functional job rotation program.** PHI does not currently have a cross-functional job rotation program. PHI has an engineering job rotations program. However, that program is limited to engineering positions and does not expose the participants to other functions.

PHI has a cross-functional job rotations pilot in progress. PHI anticipates that a small number of employees will participate in the job rotation pilot in 2009 and 2010.<sup>101</sup> PHI will decide whether to implement a company-wide job rotations program after reviewing the results of the pilot.<sup>102</sup> The results have been positive to date.

Job rotations are an employee retention and career development tool. Employees like job rotations because they increase their skill sets and opportunities for advancement.<sup>103</sup> The primary disadvantage is the need to replace the employee in their home department.

NorthHighland recommended that PHI implement a job rotation program as a career development tool.<sup>104</sup> Benefits of job rotations include:<sup>105</sup>

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<sup>99</sup> Response to Discovery, OC-585, 2008 Strategic Plan for Performance Process & Technology. June 2008 update. The course was held two times in the first half of 2008 and two more classes were planned for the remainder of 2008. The courses have approximately 22 participants in each class.

<sup>100</sup>Response to Discovery, OC-585, 2008 Strategic Plan for Performance Process & Technology. June 2008 update.

<sup>101</sup> Response to Discovery, OC-742. To date, only one employee has completed their rotational assignment. PHI anticipates having about 3 employees in the program in 2009 and as many as 6 employees in the program in 2010. The rotations can range from three months to a year.

<sup>102</sup> Interview with Karen Boyd, PHI Manager Strategic Staffing and Work Force Planning

<sup>103</sup>Interview with Karen Boyd, PHI Manager Strategic Staffing and Work Force Planning

<sup>104</sup> Response to Discovery, OC-385, NorthHighland 2008 Workforce Planning Report, page 9.

<sup>105</sup> Response to Discovery, OC-742, Pilot Cross Rotational Development Program 2.0, November 4, 2008, page 3.

- Increased employee retention and reduced turnover.
- Increased job satisfaction and employee motivation.
- Increased cross-functional knowledge.
- Broader internal talent pool.
- Increased internal contacts and networking.
- Reduced job burn-out.

Job rotation programs also facilitate innovation and the sharing of best practices.<sup>106</sup> The utility industry has long-term experience with cross-functional job rotation programs. Utilities are well suited to job rotation programs because of their stable workforces and cooperative internal cultures.

PHI should accelerate the development of a cross-functional job rotation program. The program should be integrated with PHI's workforce planning and employee development strategies.

### **Employee Recognition and Rewards**

**PHI should develop a centralized employee recognition and rewards program.** Employee recognition and reward programs recognize and reward individual performance. The programs are used to motivate and retain employees. PHI does not have any centralized employee recognition and reward programs.<sup>107</sup> PHI's incentive pay program does not recognize individual performance.

PHI has procedures to reward high-performers with off-cycle pay increases and special incentive pay awards.<sup>108</sup> Those rewards must be requested by the employee's manager and are rarely used.<sup>109</sup> The off-cycle pay increases and special incentive pay awards are charged to the manager's cost center. The managers are expected to meet their pre-existing budget targets.<sup>110</sup> That may explain why managers rarely request those rewards.

Individual departments can recognize individual performance through the distribution of gift cards and event tickets.<sup>111</sup> The HR Department does not track the costs of those programs. The 2008 employee recognition budget for ACE's District Operations was \$250 per employee.<sup>112</sup>

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<sup>106</sup> Speeding Up Rotations and Internal Movement For Development, Retention and Profit (Part II), Dr. John Sullivan, San Francisco State University, May 18, 2009.

<sup>107</sup> Sullivan interview and Response to Discovery, OC-744, NorthHighland Talent Management Report, page 5.

<sup>108</sup> Response to Discovery, OC-75, Manager's Guide to Compensation at PHI.

<sup>109</sup> Interview with Mike Sullivan, PHI Manager Compensation and Benefits. PHI grants about 30 off-cycle pay increases a year.

<sup>110</sup> Interview with Mike Sullivan, PHI Manager Compensation and Benefits.

<sup>111</sup> Response to Discovery, OC-75, Manager's Guide to Compensation at PHI.

<sup>112</sup> Response to Discovery, OC-453, Atlantic Region Metrics - 2008. District and electric maintenance budgets are \$250 per employee. Budget for five employees located on Mays Landing second floor is \$2,200 per employee.

NorthHighland recommended the implementation of both monetary and non-monetary recognition and reward programs with established criteria and guidelines.<sup>113</sup> A formal recognition system for rewarding individual performance on a regular basis is an industry best practice.<sup>114</sup> The awards should include professional development opportunity programs.<sup>115</sup>

The 2008 strategic plan for the HR compensation group included a goal of developing a PHI-wide rewards and recognition strategy.<sup>116</sup> The compensation group has a project in the planning stage to develop a PHI-wide rewards and recognition program.<sup>117</sup>

Employee recognition and rewards programs motivate performance and increase job satisfaction. PHI should accelerate its efforts to develop a recognition and rewards policy and program.

The rewards and recognition program costs should have a separate budget managed by the HR Department. That will eliminate the current disincentive for rewarding superior performance.

### **Staffing**

The HR Strategic Staffing and Work Force Planning (SSWF) group is responsible for PHI's employee recruiting and hiring function.<sup>118</sup> The following table shows the group's authorized headcount as of June 2008.

<b>Table 21-12 Strategic Staffing and Work Force Planning Authorized Positions - June 2008</b>	
<b>Area</b>	<b>Positions</b>
Manager and Other	4
Staffing	21
HR Client Services	11
<b>Total</b>	<b>36</b>
Source: PS&HR Organization Chart, June 3, 2008. Note: Includes 14 contractors.	

The recruiters in the Staffing Section are the subject matter experts and managers of the hiring process.<sup>119</sup> They work with the hiring manager to fill requisitions for new hires. The recruiters are

<sup>113</sup> Response to Discovery, OC-744, NorthHighland Talent Management Report, page 6.

<sup>114</sup> Response to Discovery, OC-744, NorthHighland Talent Management Report, page 13.

<sup>115</sup> Response to Discovery, OC-744, NorthHighland Talent Management Report, page 13. Opportunity programs consist of giving high performers enhanced access to professional development opportunities.

<sup>116</sup> Response to Discovery, OC-585.

<sup>117</sup> Interview with Mike Sullivan, PHI Manager Compensation and Benefits.

<sup>118</sup> SSWF is also responsible for administering PHI's temporary labor agency contracts and temporary worker acquisition process.

<sup>119</sup> Response to Discovery, OC-395.

also responsible for work force planning. Client services is a support group that schedules and administers applicant testing and manages the new hire “on-boarding” process.<sup>120</sup>

The Staffing Section includes eight contract recruiters.<sup>121</sup> PHI uses contract recruiters to manage hiring workload fluctuations. Using contractors provides PHI with the flexibility to reduce staffing when hiring needs diminish. PHI uses a contractor, PMG, to develop applicant interview questions and employment tests.

PHI uses the Hiring Management System (HMS) to manage the hiring process. HMS is a web-based applicant tracking system that manages the process from the initial requisition to the employee’s first day of work.<sup>122</sup> HMS is a standard product offering of the First Advantage Corporation.

PHI announced a hiring freeze in October 2008. The freeze placed a complete ban on hiring. PHI relaxed the hiring freeze in 2009 to allow hiring for vacancies caused by attrition as long as the replacement does not constitute an addition to the budget complement.<sup>123</sup> The replacements must be approved by the manager’s executive. The following table shows hiring by month in 2009.

<b>Month</b>	<b>Number</b>
January	4
February	1
March	5
April	31
May	12
June	35
<b>Total</b>	<b>88</b>
Source: Response to Discovery, OC-1211	

## **Staffing Process**

**PHI uses a structured hiring process.** PHI has a well-documented structured hiring process. The process includes the following components.<sup>124</sup>

- Requisition
- Posting and Testing Requirements
- Recruiting

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<sup>120</sup> Interview with Karen Boyd, Manager Strategic Staffing and Work Force Planning. HR Client Services is also responsible for processing and auditing change of status forms for promotions and new hires. The change of status forms are currently processed manually. PHI plans to implement automated processing in 2009 or 2010.

<sup>121</sup> The contract recruiter vendor is Double Star.

<sup>122</sup> Response to Discovery, OC-393, HMS Overview.

<sup>123</sup> Response to Discovery, OC-1211.

<sup>124</sup> Response to Discovery, OC-393.

- Screening and Testing
- Interview
- Selection
- Job Offer
- On-Boarding

The on-line requisition is created by the hiring manager with the assistance of the assigned recruiter. Posting requirements are comprised of minimum and preferred requirements for qualified applicants. The requirements are developed based on work activities and required competencies. PHI has established posting and testing requirements for most positions. PMG develops posting and testing requirements for newly created positions.<sup>125</sup>

The recruiter works with the hiring manager to develop a sourcing strategy.<sup>126</sup> Sourcing strategies include both internal and external job postings. Internal job postings are placed on company bulletin boards and the intranet. External job postings are placed on PHI's web-site and sent to community organizations.<sup>127</sup>

The recruiter screens all applications for compliance with the minimum requirements. Telephone screens are conducted for the best qualified candidates that appear to meet the minimum requirements.<sup>128</sup> The external job postings do not include salary information. Salary ranges are discussed in the telephone screening. The results of the telephone screening are discussed with the hiring manager.<sup>129</sup>

Aptitude testing is required for electrical craft and some other technical positions.<sup>130</sup> PHI tests applicants who appear to meet the minimum requirements. Many applicants fail the tests. PHI tests qualified applicants to build an applicant pool for future job openings.<sup>131</sup>

PHI typically interviews five to ten applicants for each position.<sup>132</sup> Interviews are conducted for both external and internal candidates for non-union positions.<sup>133</sup> PHI uses a structured interview process. The interviews last from 1 to 3 hours. All applicants for a position are interviewed by the

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<sup>125</sup> PHI typically has about 15 newly created positions a year.

<sup>126</sup> PHI's sourcing strategies are discussed in a subsequent finding.

<sup>127</sup> The external postings may also be sent to other job boards if included in the hiring strategy.

<sup>128</sup> Some candidates who meet the minimum requirements are not phone screened due to the high volume of candidates.

<sup>129</sup> Response to Discovery, OC-393. Candidate Screening and Testing.

<sup>130</sup> PHI does use personality or cognitive testing.

<sup>131</sup> Interview with Karen Boyd, Manager Strategic Staffing and Work Force Planning.

<sup>132</sup> The hiring manager and recruiter decided how many applicants should be interviewed.

<sup>133</sup> Interviews are also conducted for Pepco union positions (local 1900). PHI comments on Overland Draft Report.

same panel of two to four interviewers.<sup>134</sup> The panel members are generally supervisors or subject matter experts from the applicable organization.<sup>135</sup>

The panel is provided with an instruction booklet that contains scripted opening and closing statements and questions. The interviewers are required to read the questions as scripted to ensure every candidate is asked exactly the same questions. The interview questions are currently developed by PMG. PHI has a data base of the questions. PHI's long-term goal is to develop the questions internally, without the assistance of PMG.<sup>136</sup>

The questions are behavioral based. Behavioral questions are based on the premise that past performance is the best indicator of future performance. The questions reflect the general competencies required for the job and are open-ended. Examples of behavioral based questions include:

- Describe a best practice that you introduced in your prior work?
- How do you keep up to date with recent developments in your professional discipline?
- Describe a situation where you had to deal with individuals who were difficult, hostile or distressed?

In addition, there are always one or two technical questions.<sup>137</sup> The booklet includes a scoring guide. Each question is rated and each panel member also gives the applicant an overall rating.

The hiring manager selects the successful candidate. The selected candidate does not have to have the highest interview score.<sup>138</sup> Once the offer is approved internally, the hiring manager or recruiter can extend a verbal contingent offer. Almost everyone who receives a job offer accepts the offer.<sup>139</sup>

The offer is contingent on the applicant passing a drug screen, drivers license check, criminal records check, citizenship verification and terrorist list check.<sup>140</sup> PHI does not check credit

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<sup>134</sup> The panel must be diverse in terms of gender and race. Therefore, two is the minimum.

<sup>135</sup> Response to Discovery, OC-393. Candidate Interview and Selection.

<sup>136</sup> Interview with Karen Boyd, Manager Strategic Staffing and Work Force Planning.

<sup>137</sup> Interview with Karen Boyd, Manager Strategic Staffing and Work Force Planning.

<sup>138</sup> The lowest possible grade is a one. Applicants with an overall rating of one cannot be selected.

<sup>139</sup> Interview with Karen Boyd, Manager Strategic Staffing and Work Force Planning.

<sup>140</sup> The terrorist list check is required by NERC, the electric utility industry reliability council. If the position requires a physical (medical) examination, the offer is also contingent on passing the physical.

history.<sup>141</sup> PHI verifies college degrees for positions that require a degree. PHI also verifies prior employment.<sup>142</sup>

The offer is rescinded if the applicant does not pass the drug test. If the criminal records and drivers license checks reveal information that may impact the candidate's ability to perform the job, that information is shared with the hiring manager with a recommendation not to hire. The hiring manager makes the final decision as to whether the candidate should be hired.<sup>143</sup>

After the background checks have been completed, the recruiter contacts the manager and new hire to coordinate a start date and finalize the hiring process.

### **PHI's structured interview process is not popular with hiring managers and applicants.**

Structured interviews are considered industry best practice.<sup>144</sup> The majority of Fortune 500 companies and large government agencies use some form of behavior-based structured interviewing.<sup>145</sup> Structured interviews have demonstrated a higher level of reliability, validity and defensibility than unstructured interviews.<sup>146</sup>

The hiring managers do not like the structured interview process.<sup>147</sup> They do not like asking every applicant the same questions and find the process to be labor-intensive and time consuming.<sup>148</sup>

HR is encouraging hiring managers to limit the number of job competencies they include in the job requirements.<sup>149</sup> Each required competency has to be tested in the interview. Limiting the number of competencies reduces the length of the interview.<sup>150</sup>

Some applicants find the structured interviews to be cold and intimidating.<sup>151</sup> Using exactly the same questions for every candidate leaves the impression that the interviewers do not recognize or appreciate the applicant's specific experience or skills. Some applicants report that the process does not provide a fair opportunity to explain why they should be hired for the job.

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<sup>141</sup> Interview with Karen Boyd, Manager Strategic Staffing and Work Force Planning.

<sup>142</sup> Interview with Karen Boyd, Manager Strategic Staffing and Work Force Planning. Education and prior employment are verified during the background check.

<sup>143</sup> Response to Discovery, OC-393. New Employee Orientation & Transition (On-Boarding).

<sup>144</sup> Response to Discovery, OC-395, NorthHighland 2007 Talent Management Review.

<sup>145</sup> Corporate Executive Board White Paper, Using Behavior-Based Structured Interviews, November 2004, citing a Workforce.com article.

<sup>146</sup> Reliability refers to consistency of scoring for the same candidate by different interviewers. Validity means the selected applicants score higher on future performance evaluations. Defensibility refers to success in defending against lawsuits by unsuccessful applicants. Structured Interviews: A Practical Guide, US Office of Personnel Management, September 2008, page 4.

<sup>147</sup> Interview with Karen Boyd, Manager Strategic Staffing and Work Force Planning.

<sup>148</sup> Response to Discovery, OC-395. NorthHighland Talent Management Report, page 1.

<sup>149</sup> Interview with Karen Boyd, Manager Strategic Staffing and Work Force Planning.

<sup>150</sup> HR also encourages the hiring managers to be more relaxed during the interviews and has the applicants watch a video prior to the interview that explains the process.

<sup>151</sup> Interview with Karen Boyd, Manager Strategic Staffing and Work Force Planning.



Applicants can find examples of behavioral-based questions and suggested structured interview strategies on the internet and in book stores. Applicants can improve their scores through preparation. That creates the risk that the best coached applicant will be selected instead of the best overall candidate.

PHI has a substantial investment in the structured interview process in terms of labor and outcomes. The HR Department should review its structured interview process to identify opportunities for improvement.

**Staffing Metrics**

**PHI uses a variety of staffing metrics.** PHI’s staffing metrics address the timeliness and quality of new hires and the cost of the hiring process. The key metrics are shown below.

Metric	2005	2006	2007	2008
Number of External Hires	149	216	353	288
Time to Fill (days)	70	92	75	53
Cost per Hire (dollars)	4,741	6,279	4,154	6,389
New Hire First Year Turnover (percent) <sup>152</sup>	4.0	8.3	4.0	9.7
Client Satisfaction (percent favorable) <sup>153</sup>	NA	NA	83	91
New Hire PAS Scores (5.0 is best) <sup>154</sup>	NA	3.1	3.1	NA
Sources: Response to Discovery, OC-1193, OC-380, OC-1183, OC-395 and OC-585				

The industry average for the time to fill metric is 64 days. PHI’s days to fill metric was high in 2006 because of:<sup>155</sup>

- An increase in hiring requests without an increase in recruiter staffing, and;
- The need to streamline the hiring process.

The industry average for the cost to hire metric was \$3,279 in 2007.<sup>156</sup> PHI’s average cost was high in 2008 because of the hiring freeze implemented in October and relocation costs. Relocation costs include the cost of selling the employee’s former house. The depressed real estate market increased those costs in 2008.<sup>157</sup>

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<sup>152</sup> PHI provided conflicting data on new hire turnover. The data shown above was taken from Response to Discovery, OC-1193. OC-380 shows a new hire turnover rate of 8.0 percent for 2007. The December 2008 HR dashboard shows a new hire turnover rate of 4.0 for 2008 (OC-1183).

<sup>153</sup> Staffing surveys the hiring managers after the completion of the process. The 2008 surveys included six questions. The lowest scoring question was on the timeliness of testing. That question received a favorable score of 83 percent. Approximately 174 hiring manager surveys were completed in 2008.

<sup>154</sup> This metric is of questionable value since 98 percent of all PHI employees receive a score of either three or four. A grade of three indicates the employee met expectations during the evaluation period.

<sup>155</sup> PHI comments on Overland’s Draft Report.

<sup>156</sup> Response to Discovery, OC-585. 2008 Strategic Staffing and Work Force Planning Strategic Plan.

<sup>157</sup> Interview with Karen Boyd, Manager Strategic Staffing and Work Force Planning

A PAS score of three indicates the employee meets expectations.<sup>158</sup> The best of a large pool of applicants should be able to perform at a high level. The 2007 and 2008 scores imply that PHI is not consistently selecting the best applicant. However, the metric may be of questionable value because PHI's supervisors do not use the full range of PAS scores.<sup>159</sup>

### **Staffing Process Improvements**

**PHI implemented significant staffing process improvements in 2007 and 2008.** PHI's recruiting function was outsourced prior to 2006. That resulted in a hiring process that was fragmented, costly and inefficient.<sup>160</sup> The outsourcing arrangement created long delays because there were too many hand-offs in the hiring process.<sup>161</sup> Inefficiencies and disconnects also resulted in delays in the testing process.

PHI terminated the outsourcing contract in March 2006 and implemented a hybrid model staffed by contract and internal recruiters. During the same time period, PHI investigated the need for work force planning. PHI recognized that approximately 1,200 employees were eligible for retirement over the ensuing three years. PHI increased recruiter staffing by 50 percent in 2007 and 2008 to address the anticipated increase in hiring needs.<sup>162</sup> PHI instructed the recruiters to work more closely with the hiring managers to push the process along.

PHI installed HMS in 2007. HMS increased the efficiency of the hiring process by providing web-based access to hiring managers and recruiters. Prior to HMS, the paper forms used in the process were difficult to locate and sometimes incomplete.<sup>163</sup>

PHI reorganized the process for scheduling testing.<sup>164</sup> The scheduling process was shortened by allowing applicants to self-schedule testing dates and providing testing administrators with earlier notice of testing requirements.

The process improvements reduced the average time to fill from 92 days in 2006 to 53 days in 2008. PHI recognized the problems with its hiring process in 2006 and took significant proactive steps to address those problems.

SSWP prepared its first annual staffing plan in 2009. Previously, Staffing developed its sourcing strategies as requisitions came in. The new annual plan contains a forecast of the positions that need to be filled and describes sourcing strategies and initiatives for meeting those needs.<sup>165</sup>

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<sup>158</sup> A PAS score of four indicates the employee exceeds expectations. The highest score is five.

<sup>159</sup> See Chapter 22. 98 percent of all PHI employees receive a score of 3 or 4.

<sup>160</sup> Response to Discovery, OC-395. SS&WP Process Redesign, July 18, 2006, page 2.

<sup>161</sup> Interview with Karen Boyd, Manager Strategic Staffing and Work Force Planning

<sup>162</sup> Response to Discovery, OC-395.

<sup>163</sup> Response to Discovery, OC-395. SS&WP Process Redesign, July 18, 2006, page 7.

<sup>164</sup> Interview with Karen Boyd, Manager Strategic Staffing and Work Force Planning.

<sup>165</sup> Interview with Karen Boyd, Manager Strategic Staffing and Work Force Planning.

## Applicant Pool

**PHI receives a large number of qualified applicants for most positions.** PHI has a good reputation as an employer in the market place. PHI's name reputation and benefits programs are positive factors. In the past, the most significant negative factor has been the length of the hiring process.<sup>166</sup>

PHI receives approximately 26,000 job applications a year.<sup>167</sup> The ratio of applications to new hires is approximately fifty to one.<sup>168</sup> The large volume of applications requires a lot of screening and other processing.

Approximately ninety percent of the job applications are submitted through the careers page on PHI's web-site. The web-site lists PHI's open positions and provides the job description, minimum requirements and preferred requirements for each position.

The PHI web-site produces a large number of qualified applicants for most positions. PHI posts positions on its web-site in advance of the jobs being authorized for hiring to build an applicant pool.<sup>169</sup> PHI kept 30 to 40 jobs posted on its web site for employment branding purposes during the hiring freeze even though it was not hiring anyone.<sup>170</sup>

Government agencies, such as unemployment offices, are another source of applicants. PHI places some positions on Careers.com.<sup>171</sup> The information placed on Careers.com is very similar to the information on PHI's web site. PHI's budget for internet recruiting sites is approximately \$35,000 per year.<sup>172</sup>

The ten hardest to fill positions at PHI are listed below.<sup>173</sup>

1. Lead Lineman
2. Lineman (Trainee/helper)
3. Engineers
4. Finance Coordinator (Budgets & Forecasts)
5. Financial Forecasting Coordinator
6. Tax Manager
7. Tax Supervisor
8. System Operator
9. IT Applications Analyst

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<sup>166</sup> Interview with Karen Boyd, Manager Strategic Staffing and Work Force Planning.

<sup>167</sup> PHI comments on Overland Draft Audit Report.

<sup>168</sup> Response to Discovery, OC-388, Military Recruiting Initiative, page 6.

<sup>169</sup> Those postings are referred to as "dummy requisitions."

<sup>170</sup> Applicants were informed of the hiring freeze during the initial telephone screening. Interview with Karen Boyd, Manager Strategic Staffing and Work Force Planning.

<sup>171</sup> As of June 26, 2009, 26 of the 34 positions listed on the PHI web site were also listed on Careers.com.

<sup>172</sup> Interview with Karen Boyd, Manager Strategic Staffing and Work Force Planning.

<sup>173</sup> Response to Discovery, OC-388.

## 10. Distribution Designer (Engineering)

PHI uses employment agencies for finance and accounting positions.<sup>174</sup> Those positions are hard to fill because of the demand created by Sarbanes-Oxley regulations.

The PHI web site produces a good supply of applicants for engineering positions. PHI's engineering intern program is another important source of entry level engineering applicants.

PHI also has an employee referral program that give incentives to existing employees to refer applicants to PHI. The referral program produces 15 to 20 hires a year.<sup>175</sup>

### Recruiting Outreach Programs

**PHI plans to improve its recruiting outreach programs in 2009.** PHI recognizes the need to build strategic relationships with local schools and community groups to meet the increased hiring demand caused by retirements.<sup>176</sup> The 2008 SSWP strategic plan includes goals for developing the following initiatives:<sup>177</sup>

- Formal internship program
- College recruiting program
- Military recruiting initiative
- Hispanic recruiting initiative

PHI is an active participant in local, regional and national job fairs, career days and employment conferences.<sup>178</sup> PHI participated in eleven job fairs in September and October 2008. Only one of those job fairs was in New Jersey.<sup>179</sup>

PHI plans to expand its outreach efforts to include local community centers.<sup>180</sup> PHI is working with local vocational and high schools to provide information concerning electrical craft apprenticeship programs.<sup>181</sup> PHI has site visit, training, job shadowing and internship initiatives with a small number of vocational and high schools.<sup>182</sup>

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<sup>174</sup> Interview with Karen Boyd, Manager Strategic Staffing and Work Force Planning

<sup>175</sup> PHI comments on Overland Draft Audit Report.

<sup>176</sup> Response to Discovery, OC-395. SS&WP Process Redesign, July 2006, page 5.

<sup>177</sup> Response to Discovery, OC-585.

<sup>178</sup> Response to Discovery, OC-388.

<sup>179</sup> Response to Discovery, OC-388, Upcoming Recruiting Events (list). One of the other job fairs was in the Wilmington Delaware area. Most of the events were in Maryland or Washington DC.

<sup>180</sup> Response to Discovery, OC-746.

<sup>181</sup> Response to Discovery, OC-746. Schools in New Jersey are Atlantic City High School, Pennsauken Technical High School, Camden High School, Camden County Vocational Technical School, Winslow Township High School, Penns Grove High School, Hammonton High School and Glassboro High School.

<sup>182</sup> Response to Discovery, OC-385, 2008 NorthHighland Workforce Planning Report, page 16.

PHI's new college relations program focuses on engineering and business related disciplines. The purpose of the program is to build working relationships with local colleges and universities to create sources of new talent. The program targets 14 universities in Delaware, Maryland, New Jersey and Pennsylvania. Two of the target schools are in New Jersey.<sup>183</sup> The program includes:

- Periodic on campus mixer events to introduce students to PHI.
- Attending college career fairs.
- Distributing marketing materials.
- Adding information to PHI's careers web site about on-campus events, PHI's college internship program and career progression paths.

PHI enhanced its college summer internship program in 2008. The engineering area requested 30 interns. The other areas of the Company requested a total of six interns.<sup>184</sup> PHI posted the intern openings at 19 universities, including two in New Jersey.

The benefits of an internship program include:

- Developing a pool of candidates.
- Providing managers with an opportunity to assess the candidate's abilities prior to extending a permanent job offer.
- Increasing the retention rate for new hires.
- Providing a low cost training and development program.
- Strengthening PHI's relationships with local universities.

PHI developed military and Hispanic recruiting initiatives in 2008. The military initiative focuses on members of the military who are transitioning to civilian employment. The program includes identifying the military occupational specialities that are applicable to PHI, advertising in media aimed at military audiences and networking with military associations and groups.<sup>185</sup>

The purpose of the Hispanic recruiting program is to increase PHI's bi-lingual capabilities. The program includes participating in Hispanic job fairs, advertising in Hispanic media and networking with local high schools, community centers and Hispanic professional societies.<sup>186</sup>

PHI's Operations Department expects a high level of electrical craft retirements over the next five to ten years. One of the challenges facing PHI is the declining interest in electrical craft work among young people.<sup>187</sup> PHI should work with local vocational and high schools to identify, attract and prepare high potential candidates for its electrical craft apprenticeship programs.

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<sup>183</sup> Response to Discovery, OC-388.

<sup>184</sup> That total does not include regulatory, audit, business planning or finance. Response to Discovery, OC-388.

<sup>185</sup> Response to Discovery, OC-388, Military Recruiting Initiative, August 2008.

<sup>186</sup> Response to Discovery, OC-388, Hispanic Recruiting Initiative, July 2008.

<sup>187</sup> Response to Discovery, OC-385, 2008 NorthHighland Workforce Planning Report, page 4.

ACE is expected to have a high rate of retirements over the next five to ten years. PHI's community, high school and college outreach programs may not give appropriate weight to New Jersey resources. PHI should review its outreach strategies for opportunities to strengthen its efforts in New Jersey.

### **HMS Replacement**

**PHI is replacing its applicant tracking system.** The HMS vendor, First Advantage Corporation, is experiencing financial and management problems. First Advantage notified PHI in 2008 that it would no longer provide technical support for the HMS system and proposed a replacement product. PHI was dissatisfied with the service quality provided by First Advantage and decided to investigate alternatives.<sup>188</sup> PHI's HMS experience demonstrates the importance of investigating a vendor's financial qualifications before acquiring a application.<sup>189</sup>

PHI issued a request for proposals for a replacement system in the fall of 2008. PHI selected PeopleClick RMS as its new applicant tracking system in May 2009. RMS implementation is expected to be completed in the first quarter of 2010.<sup>190</sup>

RMS was selected for the following reasons:<sup>191</sup>

- Easy to use - intuitive.
- Configurable to PHI's hiring process.
- Scalable to meet future needs.
- Excellent candidate experience.
- SAP Integration.
- Robust reporting capabilities.

### **Diversity Management**

PHI's diversity strategy is led by its Diversity Council. The council includes representatives from each line of business and is chaired by the PHI Director of Diversity and Supplier Diversity. The council meets monthly to recommend and develop initiatives towards leveraging diversity for improved business performance.<sup>192</sup>

PHI's HR Diversity and Supplier Diversity Group has the following headcount.

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<sup>188</sup> Interview with Karen Boyd, Manager Strategic Staffing and Work Force Planning. HMS had limited customization capability. HMS did not include enough fields to accommodate PHI's large number of unions. When PHI requested changes to fit its requirements, First Advantage took too long to make those changes.

<sup>189</sup> Interview with Ron Godwin, HR Manager Business Solutions.

<sup>190</sup> Response to Discovery, OC-1212.

<sup>191</sup> Response to Discovery, OC-1212.

<sup>192</sup> Response to Discovery, OC-550.

<b>Description</b>	<b>Headcount</b>
Director	1
Supplier Diversity	4
Diversity Management	3
Total	8
Source: PS&HR Organization Chart, June 3, 2008.	

In addition, two of the consultants in the SSWP group work on affirmative action (AA) and equal employment opportunity (EEO) reports.<sup>193</sup>

**PHI and ACE are substantially in compliance with current Equal Opportunity and Affirmative Action requirements.** PHI's affirmative action goals are established in accordance with Federal Executive Order 11246 and Office of Federal Contract Compliance Programs (OFCCP) guidelines. PHI has an agreement with the OFCCP for the development of Functional Affirmative Action Plans based on its line of business.

The AA goals are disseminated to company executives, HR Business Partners, and staffing recruiters. Executives are accountable for the dissemination of the goals to the hiring managers and supervisors in their business units. The AA goals are monitored on a quarterly basis and updates are distributed to company executives.<sup>194</sup>

PHI's Statement of Policy reaffirms its policy of equal employment opportunity in all aspects of employment at all company locations.<sup>195</sup> The policy requires equal employment opportunity in all aspects of the employee-employer relationship, including:

- Recruiting.
- Hiring.
- Upgrading and promotion.
- Conditions of employment.
- Compensation.
- Training and educational assistance.
- Social and recreational programs.
- Benefits.
- Transfers.
- Discipline.
- Layoff and recall.
- Termination of employment.

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<sup>193</sup> Interview with Karen Boyd, Manager Strategic Staffing and Work Force Planning.

<sup>194</sup> Response to Discovery, OC-549 (restricted) and interview with Karen Boyd, Manager Strategic Staffing and Work Force Planning.

<sup>195</sup> Response to Discovery, OC-536, Attachment 1, Statement of Policy.

The policy requires equal employment opportunity without discrimination because of race, color, religion, national origin, age, sex, disability, sexual orientation, status as a special disabled veteran, veteran of the Vietnam era, other veteran or other conditions protected by law.<sup>196</sup>

PHI's Equal Employment Opportunity & Affirmative Action Business Policy states "the company has an Affirmative Action Plan that assists in achieving its equal opportunity objectives, including the full utilization of minorities and females, and the employment and advancement of qualified persons with disabilities, special disabled veterans, veterans of the Vietnam era or other veterans."<sup>197</sup>

PHI's Statement of Policy is reviewed and updated annually and distributed to all PHI bulletin boards for posting. The EEO and AA policies are reviewed during new employee orientation as well as during the annual corporate business policy certification process. PHI posts the required Federal and State EEO posters in each of its locations. The posters outline the authority of the EEOC and the OFCCP.<sup>198</sup>

PHI monitors its AA goals results on a quarterly basis by reviewing the placement of new hires, promotions and transfers. PHI prepares the following quarterly reports.<sup>199</sup>

- AA Goal Attainment Report Summary shows placement opportunities and results for each major business unit by job category.<sup>200</sup>
- The AA Goal Monitoring Job Placement Report lists the placements impacting AA goal attainment by department.
- Executive Goal Attainment Scorecard Report calculates AA/EEO balanced scorecard goal results for each major business unit.

The balanced scorecard results are used to determine incentive pay awards.<sup>201</sup> The Tier 1 goals for the Power Delivery Business Unit include the following diversity goals in 2009.<sup>202</sup>

<b>Description</b>	<b>Weight</b>
Achieve AA Goals & Good Faith Efforts - Utility Operations	5%
Achieve AA Goals & Good Faith Efforts - Corporate Services	5%
Source: Response to Discovery, OC-1118.	

<sup>196</sup>Response to Discovery, OC-536, Attachment 1, Statement of Policy.

<sup>197</sup> Response to Discovery, OC-536, Attachment 2.

<sup>198</sup> Response to Discovery, OC-542 and interview with Karen Boyd, Manager Strategic Staffing and Work Force Planning and Joy Dorsey, Director, Diversity and Supplier Diversity.

<sup>199</sup> Response to Discovery, OC-549 (restricted).

<sup>200</sup> There were three major business units in 2007. Corporate Services, Conectiv Energy and Utility Operations & Services. Response to Discovery, OC-549 (restricted).

<sup>201</sup> The incentive pay formula is described in the Compensation Section included in Chapter 22.

<sup>202</sup> The goals reflects both actual placements that advance AA goals and good faith efforts toward advancing those goals.



All of the 2009 Power Delivery and Corporate Services Tier 2 balanced scorecards include a goal with a weight of five percent for employee participation in diversity discussions.<sup>203</sup>

PHI's Manager of SSWP attends annual executive staff meetings to discuss AA goals. Line Department managers are encouraged to hold annual meetings with their employees to discuss AA and EEO programs.

All employees and contractors are required to complete the annual on-line PHI Corporate Business Policy course and certify they have reviewed and understand the policies, including the EEO policy. PHI also has a number of training programs that focus on EEO, AA and diversity.<sup>204</sup> PHI has taken significant steps to support supplier diversity.<sup>205</sup>

ACE should continue its existing practices and procedures to stay in compliance with the EEO/AA requirements of Federal Executive Order 11246. To keep current on developments in this area, PHI should consider sending appropriate staff to an Equal Employment Opportunity Commission Training Institute. The Equal Employment Opportunity Commission also offers customized on-site training. The Company might consider taking advantage of that on-site training if issues begin to develop in a specific area.

If PHI has to consider reductions in force at some point in the future, it should perform an EEOC four/fifths analysis to ensure that the reductions do not have a disparate impact on protected employees.

**PHI's diversity, EEO and AA programs are effective.** During 2007, PHI's Corporate Services and Utility Operations & Services Business Units had 127 placements that advanced AA goals out of 306 opportunities.<sup>206</sup> ACE has only had four EEO complaints filed against it since January 2006. Two of the complaints were filed by one individual.<sup>207</sup>

PHI has had significant success in its diversity, EEO and AA programs. PHI has been recognized as one of Black Enterprise Magazine's 40 best companies for diversity in employee programs and business practices for five consecutive years.<sup>208</sup> PHI was named as one of DiversityInc. Magazine's top five utility companies for diversity in employee programs and business practices.

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<sup>203</sup> Response to Discovery, OC-1118. Tier 2 balanced scorecards correspond to major organizational areas such as Asset Management, Utility Operations and Information Technology.

<sup>204</sup> Response to Discovery, OC-542 and OC-543 (restricted). Interview with Karen Boyd, Manager Strategic Staffing and Work Force Planning and Joy Dorsey, Director, Diversity and Supplier Diversity.

<sup>205</sup> PHI corporate web-site, message from Joy J. Dorsey and interview with Joy Dorsey, Director, Diversity and Supplier Diversity.

<sup>206</sup> Response to Discovery, OC-549 (restricted). 73 of the placements were in the minority category and 54 were in the female category. Placements include new hires, promotions and transfers.

<sup>207</sup> Response to Discovery, OC-547 (restricted) and Interview with Karen Boyd, Manager Strategic Staffing and Work Force Planning and George Bleazard, HR Business Partner - Atlantic Region.

<sup>208</sup> The selection process focuses on four key areas: supplier diversity, board of directors, senior management, and employee base.

PHI has also been recognized for diversity successes by the Veterans Business Journal, Women Enterprise USA Magazine, Fortune, AARP and the Asian American Business Roundtable.<sup>209</sup> PHI's diversity, EEO and AA programs have been widely recognized to be successful and effective.

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<sup>209</sup> PHI corporate web-site, message from Joy J. Dorsey, Director, Diversity and Supplier Diversity.

## **Chapter 22. HR Performance Evaluation, Compensation and Training**

This Chapter addresses the following human resources functions:

- Performance Evaluation
- Compensation
- Training
- Labor Relations

PHI's other human resources functions are addressed in Chapters 21 and 23.

### **Summary of Findings**

This Chapter contains the following findings and recommendations.

1. PHI implemented a new employee performance evaluation process in 2006. PHI manages employee performance through an annual cycle of goal setting, evaluation and coaching. The process is automated using the web-based Performance Accountability System (PAS). PHI implemented PAS in January 2006. PAS receives favorable reviews from supervisors and employees.
2. Supervisors are not using the full range of performance ratings. PAS uses a performance rating scale of one (unsatisfactory) to five (significantly exceeds expectations). Supervisors are not using the full range of ratings. Currently, 98 percent of employees are rated either three (meets expectations) or four (exceeds expectations). PHI's supervisors need to do a better job of differentiating levels of performance in the PAS evaluations.
3. The performance ratings are only loosely linked to pay. PAS ratings are not reflected in PHI's incentive pay plan. PAS ratings are considered in the annual base pay increases given to non-union employees. PHI typically budgets an average base pay increase of about three percent per year. That budget does not provide much capability to differentiate salary based on performance.
4. PHI is implementing a new management discipline policy. The policy promotes fair and consistent disciplinary actions across all of PHI's lines of business. Violations are classified and tracked using a catalog of approximately 200 infraction codes. The policy provides for a hierarchy of disciplinary actions depending on the severity of the violation.
5. PAS receives generally favorable reviews from consultants. The PAS system was reviewed by two consultants in 2007. Both consultants had generally favorable assessments of PHI's performance evaluation process. Both consultants recommended more training for managers and supervisors.

6. Several opportunities exist for improving the performance evaluation process. PAS distributes responsibility for goal setting and performance evaluation to supervisors across PHI's entire organization. That decentralized approach requires effective oversight and training. The HR Department does not take an active role in overseeing goal setting, performance evaluation, job coaching or employee development plans. As a result, the HR Department does not have the information it needs to identify potential improvements. The HR Department should increase its oversight and analysis of the performance management process.
7. PHI's policy is to pay at the market median. PHI's policy is to pay base salaries consistent with the median salaries paid by other companies for comparable positions in the relevant labor markets. For most positions, PHI compares its salaries to those paid by other similarly sized electric utilities. PHI increases the national salary survey results by five percent to account for the higher cost of labor in PHI's region. PHI's total compensation offering is in line with the median value offered by other electric utilities, adjusted for geographic location.
8. PHI's compensation structure focuses on evaluating positions, not individual employees. The HR Department assigns each position to one of PHI's sixteen pay grades based on salary survey results. The pay grades have minimum and maximum salary levels. The line department supervisors are responsible for setting the salaries of the employees they supervise within the applicable range.
9. PHI's merit pay increases averaged 3.65 percent per year in 2007 and 2008. PHI changes base salaries once a year. The salary changes are referred to as the annual merit pay increase and reflect both performance and inflation. The merit increase budget was 3.6 percent in 2007 and 3.7 percent in 2008.
10. Promotions have gradually shifted management employment to higher pay grades. Promotions can result in a gradual shift of employees to higher pay grades. All of the growth in PHI's management employment is concentrated in salary grades twelve through fourteen. The percentage of PHI's management workforce in salary grades twelve and higher has increased from 23 percent in 2005 to 29 percent in 2008. This raises concerns about whether the promotions granted by PHI are justified.
11. PHI plans to conduct a comprehensive review of its compensation programs in 2009. PHI's management compensation programs have not changed much since the Total Value Program was implemented in 2005. PHI plans to conduct a comprehensive review of its compensation and benefits programs in 2009. The resulting changes will be implemented in 2010.
12. The linkage between individual performance and incentive pay is very weak. The purpose of PHI's Annual Incentive Plan (AIP) is to motivate desirable behavior by

rewarding performance that contributes to accomplishing PHI's business goals. The AIP rewards performance at the business unit level. Individual performance is not recognized through the AIP.

13. PHI does not have an enterprise-wide training organization. The Utility Operations Department has a centralized Training & Procedures (T&P) Group. PHI's other Power Delivery and Corporate Services Departments are responsible for their own training.
14. The T&P Group uses widely accepted industry approaches to design, deliver and assess training. The T&P Group uses the Instructional System Design methodology and the ADDIE model to create learning solutions. The T&P Group uses the Kirkpatrick training evaluation model to assess course effectiveness. All three are widely accepted industry approaches.
15. ACE's electrical craft apprenticeship programs have low drop-out rates. ACE's apprenticeship programs have low drop-out rates compared to other utilities.
16. ACE has a web-based Learning Management System. PHI's Knowledge Center (KC) is a web-based learning management system. The KC tracks training course completion and provides web access to e-learning courses. The KC is primarily focused on the Customer Care and Utility Operations Departments.
17. PHI recognizes the need for a more enterprise-wide approach to training. PHI transferred ownership of the KC to the HR Department in 2008 to allow a broader enterprise-wide approach to on-line learning. The HR Department plans to expand the scope of the KC to include PHI's Corporate Services Departments.
18. PHI strives to maintain open communications with its unions. PHI keeps the lines of communications with its unions open to avoid unnecessary disputes and surprises. PHI seeks a cooperative relationship with its unions built on trust and good faith.
19. PHI provides adequate labor relations training to managers and supervisors. PHI has a three day training course on labor relations for supervisors and managers. PHI also provides contract language training during the first and second years of a new union contract.
20. PHI has good constructive relationships with its unions. PHI and its unions agree that they have a good constructive relationship.

## **Recommendations**

1. PHI should implement mandatory performance evaluation training for supervisors and managers. PHI supervisors are not using the full range of PAS ratings. PHI's current supervisor training is ineffective. PHI should enhance its training for supervisors and make the training mandatory.
2. PHI should incorporate individual performance into the AIP. The current linkage between individual performance and AIP payouts is too weak to motivate employees. PHI's ability to recognize individual performance in merit pay increases is limited by the budgeting process. The AIP appears to be the most viable mechanism for differentiating pay based on performance. Individual performance should be given at least a one-third weight in the AIP payout formulas.
3. PHI should evaluate its training organizational model. There are three basic types of training organizational models: decentralized, centralized and federated. The trend in general industry is to move towards the centralized model. PHI currently uses the decentralized model. PHI's decentralized approach lacks enterprise-wide governance and coordination and does not optimize resource utilization. PHI should review industry best practices and evaluate the advantages and disadvantages of using the federated or centralized training organizational models.
4. PHI should accelerate its efforts to standardize operating procedures. Historically, each of PHI's four operating regions wrote and maintained separate operating procedures. PHI has a goal of standardizing the procedures. Standardizing procedures would reduce training costs because the same training courses could be used in all the regions. The resources assigned to the standardization process are currently inadequate.

## **Performance Evaluation**

**PHI implemented a new employee performance evaluation process in 2006.** PHI manages employee performance through an annual cycle of performance goal setting, evaluation, and coaching. Management of the process is automated using the web-based Performance Accountability System (PAS). PAS is hosted by an application services provider, Success Factors. PHI implemented PAS in January 2006.<sup>1</sup> PAS was only used for non-union employees in 2008. Union employees will be included in PAS beginning in 2009.<sup>2</sup>

PAS data is stored on individual employee forms. The employees and their supervisors have easy on-line access to the applicable PAS data. They also have on-line access to system

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<sup>1</sup> Response to Discovery, OC-398.

<sup>2</sup> Interview with Karen Francks, PHI HR Manager Performance Process & Technology.

guides and checklists.<sup>3</sup> The PAS system includes a dashboard that allows supervisors to monitor process status in their areas. The PAS system receives favorable reviews from supervisors and employees.<sup>4</sup>

The annual process starts with goal setting in February. The PAS system includes the following types of goals.

Type	Description	Weighting
SMART	Employee specific goals	50
PHI Values	Generic behavioral goals	10
Core Competencies	Generic behavioral goals	15
Job-Related Competencies	Application of job-related skills	25
Development	Training and employee development	0
<b>Total Performance Evaluation Weighting</b>		<b>100</b>

Source: Response to Discovery, OC-398 and OC-402.

SMART goals are department and employee specific. SMART is an acronym that stands for specific, measurable, attainable, results-focused and time-bound.<sup>5</sup> Each employee should have three to eight smart goals. Each goal is assigned a weight. The manager assigns a rating of one through five to each goal and calculates a composite score. The SMART goals focus on results and should be aligned with the Department’s objectives.

PHI values and core competencies are generic behavioral goals. PHI values and core competencies are established for three types of employees: regular employees, leaders and executives. The goals are the same for all of the employees in each classification. Safety, accountability and integrity are examples of PHI values. Customer focus, building relationships and effective communications are examples of core competencies.

HR recommends the inclusion of three job-related competencies for each employee. Job-related competencies are specific professional and technical competencies required by the job. Development goals focus on training and professional development. Development goals are not scored and do not factor into the employee’s overall performance rating.

Employees are evaluated twice a year, once at mid-year and again at year-end. The evaluations start with the employee’s completing a self-assessment. The evaluations are documented on the employee’s PAS form by adding scores and comments for each goal. The supervisors are instructed to have a 30 to 60 minute discussion with each employee twice a year to review the evaluations.<sup>6</sup>

<sup>3</sup> Response to Discovery, OC-402.

<sup>4</sup> Interview with Karen Francks, PHI HR Manager Performance Process & Technology. The HR Department conducts an annual survey of PAS users. The survey indicates overall PAS user satisfaction rates of 80 percent.

<sup>5</sup> Response to Discovery, OC-398.

<sup>6</sup> Response to Discovery, OC-402, Supervisors/Manager check lists for mid-year and annual performance reviews.

The performance coaching element of PAS is informal. PHI does not have any written guidelines for the performance coaching. The HR Department does not monitor the coaching. The performance coaching occurs primarily in the semi-annual performance review meetings.<sup>7</sup>

Employees can also complete and edit their on-line employee profile. The employee profile is an on-line resume. Completion is strongly recommended but not required.<sup>8</sup>

The HR Department views its PAS role as providing education and tools to the line departments. The HR Department does not actively review employee SMART goals or development plans. The HR Department does not actively monitor the supervisor/employee performance discussions or job coaching. The HR Business Partners are available to provide training to the line departments. However, the line departments rarely request training sessions.<sup>9</sup>

The implementation of the performance evaluation process is largely up to the supervisor, with reminders, guidance and job aids available on-line or from their HR Business Partners.<sup>10</sup> The supervisor is responsible for working collaboratively with the employee to establish SMART goals, assess performance and provide job coaching.

The line of business leadership holds multiple levels of consensus sessions each year to review the performance ratings for their organization. The consensus sessions include the organization's HR business partner. The applicable Vice President has to review all ratings of one, two or five. The consensus sessions do not produce many rating changes.<sup>11</sup>

The HR Department reviews the distribution of PAS ratings but does not review the ratings assigned to most employees. The HR Department reviews all ratings of one, two or five.

### **Ratings Distribution**

**Supervisors are not using the full range of performance ratings.** The following table shows the employee ratings distribution for 2007.

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<sup>7</sup> Interview with Karen Francks, PHI HR Manager Performance Process & Technology

<sup>8</sup> Response to Discovery, OC-402. Employee check list for mid-year review.

<sup>9</sup> Interview with Karen Francks, PHI HR Manager Performance Process & Technology

<sup>10</sup> Interview with Karen Francks, PHI HR Manager Performance Process & Technology

<sup>11</sup> Interview with Karen Francks, PHI HR Manager Performance Process & Technology



<b>Rating</b>	<b>Description</b>	<b>Number</b>	<b>Percent</b>
1	Unsatisfactory	0	0
2	Needs Improvement	18	1
3	Meets Expectations	1,334	75
4	Exceeds Expectations	412	23
5	Significantly Exceeds Expectations	20	1
<b>Total</b>		<b>1,784</b>	<b>100</b>

Source: Response to Discovery, OC-402.

Supervisors are not using the full range of ratings. The HR Department would like supervisors to assign more scores of two and five.<sup>12</sup> Supervisors need to do a better job of differentiating levels of performance in the evaluations. The HR compensation group wants tougher PAS grading.<sup>13</sup> Managers are reluctant to assign low scores because they want to avoid difficult performance discussions with their subordinates. The HR Department has a goal of increasing the number of one, two and five ratings.<sup>14</sup>

Some companies specify the number of low and high ratings a supervisor must assign. The HR Department does not favor a forced distribution of ratings.<sup>15</sup> One of HR's goals in 2008 was investigating alternatives to forced distributions.<sup>16</sup>

### **Linkage to Pay**

**The performance ratings are only loosely linked to pay.** The PAS ratings are only loosely linked to pay. The PAS ratings are not reflected in PHI's incentive pay plan.<sup>17</sup> The PAS ratings are considered in the annual base pay increases given to non-union employees.<sup>18</sup> PHI typically includes a base pay increase of about three percent in its budget. Supervisors are expected to stay within that budget. Granting a larger pay increase to a high performer reduces the pay increases received by the other employees included in the supervisors' budget. It is up to the supervisor to distribute their pay increase budget to employees on an equitable basis. The budget does not provide much room for differentiating salary based on performance.<sup>19</sup>

Linking pay to performance is a current industry trend. The HR Department would like to establish a stronger link between pay and performance.<sup>20</sup> The linkage between performance and pay is discussed in more detail in the compensation section of this Chapter.

<sup>12</sup> Interview with Karen Francks, PHI HR Manager Performance Process & Technology

<sup>13</sup> Interview with Mike Sullivan, PHI Manager Compensation and Benefits.

<sup>14</sup> Response to Discovery, OC-1183.

<sup>15</sup> Interview with Karen Francks, PHI HR Manager Performance Process & Technology

<sup>16</sup> Response to Discovery, OC-585, 2008 Strategic Plan for the Performance Process & Technology group.

<sup>17</sup> Response to Discovery, OC-592.

<sup>18</sup> PAS scores do not impact the base pay of Union employees.

<sup>19</sup> Interview with Mike Sullivan, PHI Manager Compensation and Benefits.

<sup>20</sup> Interview with Mike Sullivan, PHI Manager Compensation and Benefits.

## Management Discipline Policy

**PHI is implementing a new management discipline policy.** PHI is currently implementing a new management discipline policy.<sup>21</sup> The policy promotes fair and consistent disciplinary actions across all of PHI's lines of business. PHI uses a catalog of approximately 200 infraction codes to classify and track violations of employee conduct standards.<sup>22</sup> The policy provides for the following hierarchy of disciplinary actions depending on the severity the violation:

- Coaching
- Documented verbal warning
- Written warning
- Decision-making leave
- Termination.

Decision-making leave is a one day paid suspension to provide the employee with time to decide whether they will continue working for PHI. Management disciplinary data is tracked in the Precedents Tracking System. When violations occur, that system allows PHI to generate reports showing the disciplinary actions taken for similar violations in the past.<sup>23</sup>

ACE's IBEW local utilizes a progressive disciplinary process. All disciplinary actions, including warnings, are documented on an employee interview form.<sup>24</sup>

## Consultant Reviews

**PAS receives generally favorable reviews from consultants.** NorthHighland found that PHI's performance management process was headed in the right direction, but would benefit from better goal alignment and additional training for supervisors.<sup>25</sup> NorthHighland noted that PHI had adopted a best practices approach to performance management that required supervisors to be accountable for employee feedback and development.

NorthHighland recommended more training for supervisors on the following subjects.<sup>26</sup>

- Aligning employee SMART goals with corporate and departmental objectives.
- Making distinctions between different levels of employee performance.
- Providing effective feedback to employees.
- Managing poor performers.

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<sup>21</sup> Response to Discovery, OC-403.

<sup>22</sup> Response to Discovery, OC-403. Each infraction code has a definition, required elements, affecting factors and general factors. The required elements, affecting factors and general factors also have tracking codes.

<sup>23</sup> Response to Discovery, OC-403. Those reports are referred to as "like and similar" reports.

<sup>24</sup> Response to Discovery, OC-403.

<sup>25</sup> Response to Discovery, OC-744. NorthHighland Talent Management Report, page 13 (September 2007 Board Retreat Presentation).

<sup>26</sup> Response to Discovery, OC-744. NorthHighland Talent Management Report, page 13 (September 2007 Board Retreat Presentation).

PHI retained another consultant, APT, Inc., to review PAS in 2007.<sup>27</sup> APT concluded that PAS incorporated best practices in virtually all respects. APT's overall assessment of PAS was very favorable. Positive findings included:

- Individual employees goals were linked to larger organizational goals and the employee's job.
- Employees have a significant role in goal setting and evaluating their own performance.
- The PAS training, job aids and dashboard were excellent.
- Employee ratings were calibrated through the line of business consensus sessions.
- Improvements made in response to the annual user surveys demonstrated a continuous improvement process.
- The HR Business Partners provided strong support to the line organizations.

APT recommended making the currently voluntary PAS training for supervisors mandatory. APT also recommended conducting goal calibration sessions with managers at the beginning of the annual cycle to improve consistency in goal setting.<sup>28</sup>

The HR Department does not agree that supervisor training should be mandatory. The training is available on the internet if the supervisors want to use it. The HR Department does not want to mandate activities on to the supervisors.<sup>29</sup>

### **Opportunities for Improvement**

**Several opportunities exist for improving the performance evaluation process.** PAS distributes responsibility for goal setting and performance evaluation to supervisors across PHI's entire organization. That decentralized approach requires effective oversight and training.

The HR Department views its role as providing tools and education. The HR Department does not take an active role in overseeing goal setting, performance evaluation, job coaching or employee development plans. As a result, the HR Department does not have the information needed to identify potential process improvements. The HR Department should increase its oversight and analysis of the performance management process.

The HR Department does not monitor individual employee SMART goals. HR does not attempt to identify SMART goals that are ineffective. HR does not review SMART goals to determine if they elevate measurability over substance. Those types of judgements are left up to the supervisors.<sup>30</sup>

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<sup>27</sup> Response to Discovery, OC-401, APT stands for applied psychological techniques.

<sup>28</sup> Response to Discovery, OC-401.

<sup>29</sup> Interview with Karen Francks, PHI HR Manager Performance Process & Technology.

<sup>30</sup> Interview with Karen Francks, PHI HR Manager Performance Process & Technology.

NorthHighland recommended additional goal setting training for supervisors. APT recommended calibration sessions during the goal setting process to increase consistency among the supervisors. The HR Department should initiate a review of the SMART goals adopted in 2009 to identify training needs and opportunities to make the goals more consistent and effective.

The HR Department does not review employee development plans. The HR Performance Process & Technology group had a goal in 2008 of analyzing the employee development plans to extract trends and identify training needs and strategies.<sup>31</sup> The HR Department should establish a process for analyzing the employee development plans.

PHI should consider alternatives for differentiating performance outside of the PAS process. For example, PHI might want to implement a high performer recognition program for the top 20 percent of its workforce. Another alternative is a performance improvement program for a fixed percentage of employees with mandatory job coaching and enhanced performance monitoring and assessment.

The on-line employee profiles can provide useful information for workforce planning and succession management. Employees are strongly encouraged to complete their on-line resumes. PHI should make completion mandatory for all management employees.

**PHI should implement mandatory performance evaluation training for supervisors and managers.** PHI's supervisors are not using the full performance rating range. In 2007, almost all employees received a rating of three or four.

NorthHighland recommended additional training for supervisors on differentiating between different levels of employee performance. APT recommended making the training mandatory. The distribution of PAS ratings demonstrates that PHI's current supervisor training is ineffective. PHI should enhance its training for supervisors and make the training mandatory.

## **Compensation**

The HR Compensation Group is responsible for developing compensation policies, strategies and programs.<sup>32</sup> The group also responsible for the day-to-day administration of PHI's compensation programs, including the incentive pay plan.<sup>33</sup> The Compensation Group is not responsible for executive compensation. Executive compensation is discussed in Chapter 8.

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<sup>31</sup> Response to Discovery, OC-585. 2008 Performance Process & Technology Strategic Plan, July 30, 2008 Update.

<sup>32</sup> Response to Discovery, OC-75, Manager's Guide to Compensation, page 9.

<sup>33</sup> Interview with Mike Sullivan, HR Manager Compensation & Benefits.

The Compensation Group reports to the Manager of Compensation and Benefits and has a headcount of four positions. Compensation policy matters are addressed by PHI's Compensation Committee. The Compensation Committee meets monthly.<sup>34</sup>

The HR Business Partners are responsible for communicating compensation plans and programs to the line departments. The HR Business Partners consult with the managers in the departments to ensure that compensation policies are applied consistently and fairly.<sup>35</sup>

PHI classifies employees as union or management. All non-union employees are classified as management.<sup>36</sup> PHI has branded its overall management employment proposition as the Total Value Program. The primary elements of the Total Value Program are:<sup>37</sup>

- Base Salary<sup>38</sup>
- Incentive Pay
- Benefits
- Employee Development
- Work Environment.

The Total Value Program is for management employees only. Union wages and benefits are set through collective bargaining. The discussion of compensation in this Chapter focuses on management employees.

Pepco Energy Services and Conectiv Energy Supply have their own compensation plans. PES and CESI employees are excluded from the Total Value Program and the PHI annual incentive pay plan.

## Compensation Policy

**PHI's policy is to pay at the market median.** PHI's overall compensation philosophy is to provide compensation opportunities that are aligned with overall Company performance, business strategies and pay practices in the relevant labor markets.<sup>39</sup>

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<sup>34</sup> Response to Discovery, OC-412. The Committee has four members: the Vice President People Strategy and HR, the three Managers from the HR Department (Manager Compensation & Benefits, Manager Compensation and Manager of the HR Business Partners Consulting Group). OC-75.

<sup>35</sup> Response to Discovery, OC-75, Manager's Guide to Compensation, page 10.

<sup>36</sup> All non-union employees are classified as management regardless of their overtime pay status under the Fair Labor Standards Act (exempt or non-exempt).

<sup>37</sup> Response to Discovery, OC-75, Manager's Guide to Compensation, page 7.

<sup>38</sup> Management employees are not paid for overtime hours worked to complete their normal work assignments. Management employees can receive overtime pay for outage restoration efforts or special projects. However, that overtime must be approved in advance by their supervisors. Overtime is payable in the form of compensatory time at the discretion of management. Overtime is not a significant component of total management labor costs. Some management employees receive shift differentials for working outside of normal business hours. Managers receive additional holiday pay only if they are assigned to work on the holiday by their supervisors. Response to Discovery, OC-75, Manager's Guide to Compensation, pages 26 to 28.

<sup>39</sup> Response to Discovery, OC-408.

PHI's compensation strategy is designed to:<sup>40</sup>

- Attract, retain and motivate employees.
- Provide a framework for equitably compensating employees.
- Provide competitive pay opportunities, consistent with maintaining an appropriate cost structure.
- Provide the flexibility to address business needs.
- Recognize and reward employee performance.
- Recognize PHI's overall business performance.
- Provide employees with meaningful opportunities for development.

PHI's policy is to pay base salaries consistent with the median salaries paid by other companies for comparable positions in the relevant labor markets.<sup>41</sup> For most positions, PHI compares its salaries to those paid by other similarly sized electric utilities.<sup>42</sup>

PHI increases national salary survey results by five percent to account for the higher cost of labor in PHI's region. PHI's employment centers are Washington, D.C., Wilmington Delaware, Atlantic City and Salisbury Maryland. The following table compares salary levels in those four locations to the national average.

<b>Location</b>	<b>Index</b>
Washington D.C.	107
Wilmington, DE	107
Atlantic City, NJ	111
Salisbury, MD	93
National Average	100
Source: Response to Discovery, OC-406, Total Value News Issue 1, 2004.	

PHI's base pay salary structure includes sixteen salary grades. Positions are assigned to the salary grade with the mid-point closest to the median location adjusted market salary for the position.<sup>43</sup>

The "compa-ratio" metric shows the relationship between base salaries and the market by comparing actual base salaries to the applicable salary grade mid-point.<sup>44</sup> The following table

<sup>40</sup> Response to Discovery, OC-407.

<sup>41</sup> Response to Discovery, OC-407 and interview with Mike Sullivan, PHI Manager of Compensation & Benefits. PHI sets mid-points of salary grades at the 50<sup>th</sup> percentile level reported in salary surveys.

<sup>42</sup> Response to Discovery, OC-75, Manager's Guide to Compensation, page 13. PHI's "comparator" group is other electric utilities that are similar in size and location to PHI. PHI uses more general industry salary survey results for positions that draw talent from a variety of industries, such as finance or information technology. Interview with Mike Sullivan, PHI Manager of Compensation & Benefits.

<sup>43</sup> Response to Discovery, OC-75, Manager's Guide to Compensation, page 12.

<sup>44</sup> The compa-ratio is calculated by dividing the employee's actual base salary by the mid-point for their salary grade.

shows the composite compa-ratios for PHI's Power Delivery and Corporate Services management employees.

Year	Power Delivery	Corporate Services
2006	97.1	99.8
2007	97.3	99.8
2008	97.6	99.3
Source: Response to Discovery, OC-418.		

The overall compa-ratios are consistent with the market. Compa-ratios below 95 trigger concerns that pay levels are too low.<sup>45</sup>

According to PHI, its compensation levels and programs meet its needs and compare favorably to industry practice.<sup>46</sup> PHI's primary employee recruiting and retention advantages are its positive work environment and employee benefits. PHI's pay levels are competitive as demonstrated by its relatively low employee voluntary turnover rates.<sup>47</sup> Almost every job applicant who receives a job offer from PHI accepts the offer. That demonstrates that PHI's starting salaries are competitive.<sup>48</sup>

PHI's annual incentive plan payout levels are typical of the electric utility industry.<sup>49</sup> PHI participates in an annual benchmarking survey of employee benefits. The value of PHI's management employee benefits is approximately **[BEGIN CONFIDENTIAL]**  
**[END CONFIDENTIAL]**.<sup>50</sup>

PHI's total compensation offering is in line with the median value offered by other electric utilities, adjusted for geographic location.

### **Position Evaluation Process**

#### **PHI's compensation structure focuses on evaluating positions, not individual employees.**

The Compensation Group is responsible for assigning positions to the sixteen pay grades. The pay grades have minimum and maximum salary levels. The line department supervisors are responsible for setting the salaries of the individuals they supervise within the applicable range.

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<sup>45</sup> Interview with Mike Sullivan, PHI Manager of Compensation & Benefits.

<sup>46</sup> Interview with Mike Sullivan, PHI Manager of Compensation & Benefits.

<sup>47</sup> Turnover rates are addressed in Chapter 21. PHI does not analyze turnover by department or work location. PHI conducts exit surveys of terminating employees to determine why they resigned from PHI. However, the Compensation Group does not review the results of the exit surveys. Interview with Mike Sullivan, Manager of Compensation & Benefits.

<sup>48</sup> Interview with Mike Sullivan, HR Manager Compensation & Benefits.

<sup>49</sup> Interview with Mike Sullivan, PHI Manager of Compensation & Benefits.

<sup>50</sup> Response to Discovery, OC-76 (restricted). Employee benefits are discussed in the next section of this Chapter.

The pay grade maximum salary is always fifty percent higher than the minimum. That range is designed to allow the flexibility to address the employee's individual experience, skills and performance levels. The fifty percent range allows employees to progress to higher salary levels as they gain experience. Individual performance is recognized by moving employee through the salary range with annual merit pay increases.<sup>51</sup>

Positions are assigned to the salary grade with the mid-point closest to the position's median market salary, with limited exceptions.<sup>52</sup> The salary grade mid-points are spaced uniformly apart to allow positions to be matched to a mid-point that is within five or six percent of the median market salary.<sup>53</sup>

The salary grade minimum corresponds to a compa-ratio of 80 percent. Starting salaries for new hires are generally set between the salary grade minimum and the mid-point to allow room for pay increases as the employee gains experience. PHI currently has thirteen employees with salaries equal to the minimum for their pay grade.<sup>54</sup>

The salary grade maximum corresponds to a compa-ratio of 120 percent. Employees at the maximum are "red-circled" and are not eligible for base salary increases. PHI currently has nine employees with salaries equal to the maximum for their pay grade.<sup>55</sup>

The Compensation Group conducts a comprehensive review of the assignment of positions to pay grades every four or five years.<sup>56</sup> In between those comprehensive reviews, the Compensation Group:

- Reviews salary grade assignments for a sample of 40 to 50 positions annually.
- Reviews salary grade assignments for positions requested by line department managers.
- Assigns new positions to salary grades.

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<sup>51</sup> Response to Discovery, OC-407.

<sup>52</sup> Most positions are assigned to the salary grade with the mid-point closest to the median market salary. The salary grade assignments for a few positions are adjusted for internal equity reasons or based on value of the work to PHI. None of those positions are adjusted by more than one salary grade. Interview with Mike Sullivan, PHI Manager of Compensation and Benefits and response to Discovery, OC-75, Manager's Guide to Compensation, page 13.

<sup>53</sup> Grade one is the lowest grade. The mid-points for the salary grades increase by ten percent per grade from two through four and twelve percent per grade from 5 through 14. Grade 15 is 14 percent higher than grade 14. Grade 16 is twenty percent higher than grade 15. Response to Discovery, OC-75.

<sup>54</sup> Response to Discovery, OC-419. PHI has one employee with a salary below the minimum (for performance reasons).

<sup>55</sup> Response to Discovery, OC-419. PHI also has one employee with a salary above the maximum. That employee was reclassified from a higher grade. The employee's pay is frozen until it falls below the maximum.

<sup>56</sup> Response to Discovery, OC-410. The most recent comprehensive review was conducted in 2004.



The annual benchmarking sample covers approximately 20 percent of PHI's employee population each year. In 2007, the sample included 45 positions.<sup>57</sup> PHI collects base salary and total cash compensation data for each position. PHI reviews the non-base pay component for consistency with its incentive plan payout levels.<sup>58</sup>

During the first six months of 2008, the Compensation Group reviewed salary grade assignments for 11 new positions and 43 positions requested by line departments.<sup>59</sup>

The position evaluations focus on determining the median market salary for the position. PHI relies primarily on the Towers Perrin Middle Management Survey - Energy Services Report for market data.<sup>60</sup> PHI restricts the evaluations to well-established stable benchmarking surveys to prevent employees and managers from "shopping around" for the highest reported market salary for their positions.<sup>61</sup>

Positions that are within 10 percent of their current salary grade mid-point are judged to be appropriately graded. PHI takes a cautious approach to changing salary grades for existing positions. Grades are not changed based on a single year's survey results.<sup>62</sup>

Positions that fall outside of the 10 percent band are flagged for review in the following year and are changed if they are consistently outside the band over a two or three year period.<sup>63</sup> Only six of the 43 position evaluations requested by line managers in the first six months of 2008 resulted in salary grade changes.<sup>64</sup>

Managers generally only request position evaluations when they think the position should have a higher salary. As a result, the requested evaluations have an upward selection bias.<sup>65</sup>

PHI's written procedures require the managers to submit a justification memo, position description and organization charts to the Compensation Group when an position evaluation is requested.<sup>66</sup> The actual process was more informal in 2007 and 2008 and the required

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<sup>57</sup> Response to Discovery, OC-411. The positions are selected from the list of 150 positions reviewed in 2004 because those positions provide broad coverage of PHI's workforce.

<sup>58</sup> Interview with Mike Sullivan, PHI Manager of Compensation & Benefits. PHI does not incorporate employee benefits values into the evaluations because it is not practical to normalize results for differences in employee benefits.

<sup>59</sup> Response to Discovery, OC-414.

<sup>60</sup> Response to Discovery, OC-410. Towers Perrin prepared the EEI annual salary benchmarking survey for many years before it was discontinued. As a result, the Towers Perrin survey has good electric utility participation. Interview with Mike Sullivan, PHI Manager of Compensation & Benefits.

<sup>61</sup> Interview with Mike Sullivan, PHI Manager of Compensation & Benefits. Other salary survey sources used by PHI include Watson Wyatt, Hewitt and Mercer. Response to Discovery, OC-75.

<sup>62</sup> Response to Discovery, OC-410 and interview with Mike Sullivan, PHI Manager of Compensation & Benefits.

<sup>63</sup> Response to Discovery, OC-410.

<sup>64</sup> Response to Discovery, OC-414.

<sup>65</sup> Interview with Mike Sullivan, PHI Manager of Compensation & Benefits.

<sup>66</sup> Response to Discovery, OC-75, Manager's Guide to Compensation.

documentation was not typically submitted. The formal process should be followed.<sup>67</sup> The documentation required by the procedures will be prepared on a prospective basis.<sup>68</sup>

### Base Pay Increases

**PHI's merit pay increases averaged 3.65 percent per year in 2007 and 2008.** PHI changes base salary levels once a year. The salary changes are referred to as the annual merit pay increase and reflect both performance and inflation.

Executive leadership authorizes an overall merit pay increase budget based on industry surveys of pay increase intentions. The 2007 merit increase budget of 3.6 percent of base salary reflected the average of four surveys.<sup>69</sup> The 2008 merit increase budget was 3.7 percent.

The overall merit increase budget is rolled into the budgets for individual supervisors. The supervisors are responsible for equitably distributing their merit increase budgets to the employees they supervise.<sup>70</sup> The supervisors are not allowed to exceed the overall merit pay increase budget for their areas.<sup>71</sup>

PHI provides the supervisors with a spreadsheet tool to distribute the merit increase budget to individual employees. The tool lists each employee in the supervisors' budget and shows the employee's salary, PAS score and compa-ratio. The tool allows the supervisor to assign a percentage pay increase to each employee and automatically calculates the remaining amount available for distribution under the budget.

The instructions provided to the supervisors include a matrix of suggested increases based on the employee's compa-ratio and PAS scores. The matrix for the March 1, 2008 merit increase is shown below.

PAS Rating	Description	Compa-Ratio		
		Low	Medium	High
5	Significantly Exceeds	5 to 6.5	4.5 to 6.0	3.5 to 5.0
4	Exceeds Expectations	4.5 to 6.5	4 to 5.5	3 to 4.5
3	Meets Expectations	3.5 to 5.5	3 to 4.5	2.5 to 4.0
2	Improvement Needed	0.5 to 1.0	0.5 to 1.0	0 to 0.5
1	Unsatisfactory	0	0	0

Source: Response to Discovery, OC-420. Note: Overall merit increase budget was 3.7 percent.

Approximately 98 percent of PHI management employees receive a PAS rating of three or four. For employees with low to medium compa-ratios, a PAS rating of four means a one percent

<sup>67</sup> Interview with Mike Sullivan, PHI Manager of Compensation & Benefits.

<sup>68</sup> Response to Discovery, OC-590.

<sup>69</sup> Response to Discovery, OC-277. The four surveys were World at Work, HayGroup, Comp Resources and Salary.com.

<sup>70</sup> Interview with Mike Sullivan, PHI Manager of Compensation & Benefits.

<sup>71</sup> Response to Discovery, OC-420, Merit Program Guidelines for March 1, 2008 Process, Page 3.

higher increase than a rating of three. For employees with a high compa-ratio, the difference is only one-half percent.

Granting a large merit pay increase to a high performer requires corresponding decreases in the merit increases received by the other employees included in the supervisor's budget. Alternatively, granting a low pay increase to a poor performer results in higher pay increases for everyone else in the group.

Overall merit pay increase budgets in the range of 3.5 percent do not provide much flexibility to differentiate pay based on performance.<sup>72</sup>

PHI increases the pay grade mid-points annually. That increase is referred to as the salary structure adjustment and does not immediately impact base salaries.<sup>73</sup> The annual salary structure adjustments are based on industry surveys of salary structure adjustment intentions.<sup>74</sup> The salary structure adjustments were 2.6 percent in 2007 and 2.9 percent in 2008.<sup>75</sup>

## Promotions

### **Promotions have gradually shifted management employment to higher pay grades.**

Employees can advance to higher pay grades through two types of promotions. Progressive promotions occur within predetermined career paths.<sup>76</sup> Progressive promotions do not require a vacancy in a position at the higher salary grade.<sup>77</sup> Progressive promotions are based on factors such as performance, time in the position and ability to perform at a higher level.<sup>78</sup>

Advancement promotions fill a vacancy at a higher pay grade. Advancement promotions are filled through the job posting staffing process.<sup>79</sup>

The following table shows the promotions granted by ACE's Regional Operations in 2006 and 2007.

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<sup>72</sup> Interview with Mike Sullivan, PHI Manager of Compensation & Benefits.

<sup>73</sup> The salary structure adjustment reduces the compa-ratio because it increases the mid-point without changing the base salaries paid to employees.

<sup>74</sup> Response to Discovery, OC-410.

<sup>75</sup> Response to Discovery, OC-277.

<sup>76</sup> PHI has a database of career paths. The career paths consist of a list of jobs on the career path. The career paths were centralized into a database as part of the 2004 compensation integration project and have not changed much since then. Interview with Mike Sullivan, PHI Manager of Compensation & Benefits.

<sup>77</sup> Progressive promotions do not require an internal job posting for the higher pay grade position. Progressive promotions are not filled through PHI's job posting staffing process.

<sup>78</sup> Response to Discovery, OC-75, Manager's Guide to Compensation, page 21.

<sup>79</sup> Response to Discovery, OC-75, Manager's Guide to Compensation, page 21.

**Table 22-6**  
**ACE Region Utility Operations**  
**Promotions - 2006 and 2007**

Type	2006	2007
Advancement	12	11
Progression	26	35
<b>Total</b>	<b>38</b>	<b>46</b>

Source: Response to Discovery, OC-421

The following table shows the promotions granted by the PHI Service Company's Corporate Services and Power Delivery organizations.

**Table 22-7**  
**PHI Service Company**  
**Corporate Services and Power Delivery**  
**Promotions - 2006 and 2007**

Type	2006	2007
Advancement	42	58
Progression	79	92
<b>Total</b>	<b>121</b>	<b>150</b>

Source: Response to Discovery, OC-421

Promotions can result in a gradual shift of employees to higher salary grades. PHI manages promotion creep through its budget process. Supervisors have to meet their overall budgets. If the supervisors grant too many promotions, they will not meet their budgets.<sup>80</sup>

The following table compares the number of positions by salary grade as of December 2005 and November 2008.

**Table 22-8**  
**PHI Management Positions**  
**By Salary Grade**  
**December 2005 Versus November 2008**

Salary Grade	2005	2008	Increase
1 to 6	131	134	3
7 to 11	1,250	1,197	(53)
12 to 14	347	482	135
15 and 16	57	56	(1)
<b>Total</b>	<b>1,785</b>	<b>1,869</b>	<b>84</b>

Source: Response to Discovery, OC-591

All of the growth in PHI's management employment is concentrated in salary grades twelve through fourteen. The percentage of PHI's management workforce in salary grades twelve and higher increased from 23 percent in 2005 to 29 percent in 2008. Salary grade twelve had a mid-point of \$101,900 in 2008.<sup>81</sup>

The 2009 comprehensive review of PHI's compensation program should assess whether the gradual shift of PHI employees into higher pay grades is justified by changes in work responsibilities.

<sup>80</sup> Interview with Mike Sullivan, PHI Manager of Compensation & Benefits.

<sup>81</sup> Response to Discovery, OC-75. The mid-point reflects base salary only. Salary Grade 12 also has an annual incentive plan target payout of 10 percent of base salary.

## 2009 Comprehensive Review

### **PHI plans to conduct a comprehensive review of its compensation programs in 2009.**

PHI's management compensation programs have not changed much since the Total Value Program was implemented in January 2005.<sup>82</sup> The Total Value Program was the result of a large effort to integrate legacy Pepco and Conectiv compensation and benefit programs.

Mercer, a human resources consulting firm, participated extensively in the design of the Total Value Program. Mercer recommended the current salary grade structure and the five percent market adjustment for geographical location.<sup>83</sup>

Mercer benchmarked 150 PHI positions against multiple market surveys and used the results to assign the positions to pay grades.<sup>84</sup> The 150 positions represented all major PHI employee groups and covered over fifty percent of PHI's management employees. Non-benchmark positions were slotted into pay grades based on comparisons to the benchmarked positions.<sup>85</sup> Mercer also assisted in the design of the new annual incentive plan included in the Total Value Program.

PHI plans to conduct a similar comprehensive review in 2009 to benchmark and update its compensation and benefits programs. PHI's base salary structure, structure adjustment process, merit increase process, incentive plan and other compensation programs will be reviewed to ensure that they are competitive and consistent with PHI's business objectives.<sup>86</sup> PHI anticipates that the 2009 review will include benchmarking approximately 150 positions.<sup>87</sup>

PHI anticipates completing the review in the third quarter of 2009. The changes resulting from the review will be implemented in 2010.<sup>88</sup> The comprehensive review provides a valuable opportunity to evaluate the design and performance of the programs implemented in 2005. The review also provides an opportunity to incorporate industry trends and best practices.

PHI's compensation program design may not be reviewed again until 2014.<sup>89</sup> The 2009 review should include a best practices analysis to guide the redesign of PHI's compensation programs.

## Incentive Pay

**The linkage between individual performance and incentive pay is very weak.** The Annual Incentive Plan (AIP) is PHI's only incentive pay plan for Corporate Services and Utility Operations employees. The AIP is limited to management (non-union) employees. Pepco

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<sup>82</sup> Interview with Mike Sullivan, PHI Manager of Compensation & Benefits.

<sup>83</sup> Response to Discovery, OC-406, Final 2005 Structure, Mercer Human Resources Consulting, and Interview with Mike Sullivan, PHI Manager of Compensation & Benefits.

<sup>84</sup> Response to Discovery, OC-406, Project Process Overview, Mercer Human Resources Consulting

<sup>85</sup> Response to Discovery, OC-406, Employee Meeting Presentation, September 2004, page 4.

<sup>86</sup> Response to Discovery, OC-589.

<sup>87</sup> Interview with Mike Sullivan, PHI Manager of Compensation & Benefits.

<sup>88</sup> Response to Discovery, OC-589.

<sup>89</sup> Based on a five year interval between comprehensive reviews.

Energy Services and Conectiv Energy Supply have their own incentive plans and do not participate in the AIP.

The purpose of the AIP is to motivate desirable behavior by rewarding performance that contributes to accomplishing PHI's business goals. The AIP rewards performance at the business unit (BU) level.<sup>90</sup> Individual performance is not recognized through the AIP.

Some companies recognize individual performance in their incentive pay plans. The AIP recognizes BU level performance, instead of individual performance, to promote the concept of teamwork.<sup>91</sup> Individual performance is recognized in the annual merit pay increases.

The AIP payouts serve as variable pay that can be suspended if PHI experiences poor overall financial results. AIP payouts are eliminated if income falls below specified threshold levels. Those threshold levels are referred to as earnings triggers.<sup>92</sup> The earnings trigger for Corporate Services business units is based on overall PHI income. The earnings trigger for Utility Operations business units is based on Utility Operations income.<sup>93</sup>

The AIP included 32 separate Corporate Services and Utility Operations business units in 2008.<sup>94</sup> PHI eliminated 14 of those business units in 2009 by moving the performance measurements to higher organizational levels.<sup>95</sup>

The business units generally correspond with departments in 2009. Examples of business units include Information Technology, Corporate Communications, Customer Care, Utility Operations and Asset Management.

The AIP payouts for individual employees are calculated by multiplying the employee's base salary, AIP target percentage and business unit (BU) multiplier. The following table shows the AIP payout for a hypothetical employee.

**Table 22-9  
AIP Payout Formula  
Hypothetical Employee**

Description	Value
Base Salary (A)	\$100,000
Employee's AIP Target percentage (B)	10
Payout at Target Level (A x B = C)	\$10,000
Business Unit Multiplier (D)	1.10
AIP Payout (C x D)	\$11,000
Source: Response to Discovery, OC-594 (restricted).	

<sup>90</sup> Response to Discovery, OC-75, Manager's Guide to Compensation, page 29.

<sup>91</sup> Interview with Mike Sullivan, PHI Manager of Compensation & Benefits.

<sup>92</sup> Response to Discovery, OC-594 (restricted), 2007 Summary - Annual Incentive Plan Results.

<sup>93</sup> Response to Discovery, OC-594 (restricted).

<sup>94</sup> Response to Discovery, OC-1195.

<sup>95</sup> Response to Discovery, OC-1118. PHI eliminated the tier 3 balanced scorecards for Customer Care, Utility Operations and Safety & Strategic Services in 2009.

The AIP target levels vary by salary grade. Mercer established the targets in 2004 at levels that were competitive within the electric utility industry.<sup>96</sup> The following table shows the AIP target percentages by salary grade.

<b>Salary Grade</b>	<b>Percent</b>
One Through Four	5
Five Through Seven	6
Eight Through Ten	8
Eleven and Twelve	10
Thirteen and Fourteen	12
Fifteen and Sixteen	15
Source: Response to Discovery, OC-75.	

The BU multipliers ranged from a low of 90 percent to a high of 115 percent in 2007.<sup>97</sup> The range in 2008 was 90 percent to 133 percent.<sup>98</sup>

The BU multipliers have two equally weighted components: the tier one multiplier and the tier two multiplier. The utility operations tier one multiplier reflects the results for the utility operations balanced scorecard.<sup>99</sup> The following table shows calculation of the utility operations tier one multiplier for 2007.

<b>Goal</b>	<b>Weight Percent</b>	<b>Result Index</b>	<b>Tier One Multiplier</b>
Increase Utility Earnings	40	1.4	56
Reduce O&M Expenditures	15	0.0	0
Reduce Capital Expenditures	10	1.5	15
Improve Customer Satisfaction Survey Results	5	0.0	0
Improve SAIDI Reliability Metric	5	0.0	0
Improve SAIFI Reliability Metric	5	0.0	0
Safety - Reduce Injuries	5	0.5	2
Prevent Fleet Accidents	5	0.0	0
Achieve Affirmative Action Goals	10	1.0	10
<b>Total</b>	<b>100</b>		<b>83</b>
Source: Response to Discovery, OC-593. Power Delivery Business Unit Results.			

The balanced scorecards include minimum, target and stretch values for each goal. The results indices range from zero to 150 percent depending on actual results for each goal. The results index is zero if actual results are worse than the minimum value. The results index is 0.5 if the actual results equal the minimum, 1.0 if the results equal the target and 1.5 if the actual results exceed the stretch value.

<sup>96</sup> Response to Discovery, OC-406, Employee Meeting Presentation, September 2004, page 7.

<sup>97</sup> Response to Discovery, OC-416. In 2005, the BU multiplier range was 78 percent to 116 percent.

<sup>98</sup> Response to Discovery, OC-1195.

<sup>99</sup> Balanced scorecards are prepared at the tier 1 and tier 2 levels. The Utility Operations balanced scorecard contains goals for the entire Utility Operations business. The individual business units within Utility Operations have their own separate (tier 2) balanced scorecards.

The 1.4 results index for the increase utility earnings goal indicates that utility income was above the target but slightly below the stretch goal. The 1.5 results index for the reducing capital expenditures goal indicates that utility operations capital expenditures were lower than the stretch goal.

The Corporate Services tier one multiplier is a weighted average of the Utility Operations, Conectiv Energy Supply (CESI) and Pepco Energy Services (PES) balanced scorecard results. CESI and PES are PHI's non-regulated businesses. The multiplier gives an 80 percent weight to Utility Operations and 10 percent weights to CESI and PES.<sup>100</sup>

The Tier two multipliers reflect the individual balanced scorecard results for each of the business units included in the AIP. The tier two balanced scorecard goals are specific to each business unit.<sup>101</sup> The scoring and calculation process follows the same format as the Utility Operations tier one multiplier.

Individual performance does not impact the employee's AIP payouts. The BU multiplier is the average of the tier one and tier two multipliers. All Utility Services employees are assigned the same tier one multiplier. All employees in a business unit have the same tier two multiplier.

Employees have on-line access to the balanced scorecard goals and results for their areas.<sup>102</sup> Monitoring the status of the balanced scorecard goals may motivate some employees to perform at a higher level. However, the linkage between individual performance and AIP payouts is very weak.

The following table shows the AIP Payouts for 2007 as a percentage of base salary.

Line of Business	Base Salary	AIP Payout	Percent
Corporate Services	\$62.1	\$6.3	10.2%
Power Delivery	88.8	7.6	8.6
<b>Total</b>	<b>150.9</b>	<b>13.9</b>	<b>9.2</b>
<small>Source: Response to Discovery, OC-595</small>			

<sup>100</sup> Response to Discovery, OC-593. The Corporate Services Tier 1 multiplier includes PES and CESI results because the Corporate Services departments provide services to PES and CESI. Interview with Mike Sullivan, PHI Manager of Compensation & Benefits.

<sup>101</sup> In 2007 and 2008 Customer Care, PD Operating Management and Safety & Strategic Services also had tier 3 balanced scorecards for areas within those departments. For example, the Call Centers had a tier 3 balanced scorecard. For employees in those areas, the tier 2 multiplier reflects the average of the department level (tier 2) balanced scorecard results and the area specific (tier 3) balanced scorecard results. Response to Discovery, OC-594 (restricted). PHI eliminated the tier 3 balanced scorecards in 2009. Response to Discovery, OC-1118.

<sup>102</sup> Response to Discovery, OC-594 (restricted), AIP Plan, page 5.



The average AIP payout rate was 9.6 percent in 2005. The AIP did not have any payouts in 2006 because the minimum earnings trigger was not met.<sup>103</sup>

**PHI should incorporate individual performance into the AIP.** Pay for performance is an industry trend. Pay for performance motivates performance by increasing the differentiation between high and poor performers in pay levels. The HR Department has an objective of moving more towards pay for performance.<sup>104</sup>

Some companies link incentive pay to individual employee performance ratings. NorthHighland recommended that PHI research options for aligning the AIP program to individual performance ratings to motivate performance.<sup>105</sup>

The AIP was developed in 2004. PHI did not incorporate individual performance into the AIP at that time for two reasons. First, it wanted to emphasize teamwork in the AIP. Second, the AIP payouts are subject to an earnings trigger. When earnings are bad, the AIP payout is zero. Recognizing individual performance in the AIP could result in high performers not receiving any additional compensation in years when the earnings trigger is not met.<sup>106</sup>

The purpose of the AIP is to motivate improved employee performance. The current linkage between performance and AIP payouts is insufficient to motivate employees. PHI's ability to recognize individual performance in merit pay increases is limited by the budgeting process.

The AIP appears to be the most viable mechanism for differentiating pay based on performance. The overall AIP payout levels are approximately 10 percent of base salary. That is sufficient to motivate behavior. The AIP payouts provide more flexibility to recognize fluctuations in performance than base salary because the payout levels are not cumulative from year to year.

PHI should modify the AIP to incorporate individual performance. Individual performance should be given at least a one third weight in the AIP payout formulas. Alternatively, PHI could reduce its AIP payout budget by one third and use those funds for an expanded employee rewards and recognition program.

Over 98 percent of PHI employees receive a PAS performance rating of three or four. That reduces the usefulness of PAS as a tool to differentiate performance. PHI should integrate its efforts to improve performance evaluation with the redesign of the AIP.

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<sup>103</sup> Response to Discovery, OC-595.

<sup>104</sup> Interview with Mike Sullivan, PHI Manager of Compensation & Benefits.

<sup>105</sup> Response to Discovery, OC-744. NorthHighland Talent Management Report, September 2007, page 13.

<sup>106</sup> Interview with Mike Sullivan, PHI Manager of Compensation & Benefits.

## Training

**PHI does not have an enterprise-wide training organization.** PHI does not have an enterprise-wide training organization or training committee.<sup>107</sup> The Utility Operations Department has a centralized Training & Procedures (“T&P”) Group.<sup>108</sup> PHI’s other Power Delivery and Corporate Services Departments are responsible for their own training.<sup>109</sup>

The T&P Group focuses on training for the following three organizations:<sup>110</sup>

- Regional Utility Operations
- Call Centers
- Billing & Collection.

The regional utility operations include the electrical craft workers and distribution system designers located in PHI’s four operating regions. PHI’s electrical craft apprenticeship program takes up more of the T&P Group’s time than any other area.<sup>111</sup>

The T&P Group does not develop or deliver training for PHI’s regional system control rooms. The T&P group develops courses for the Call Centers but does not deliver that training.

The T&P Group’s 2008 budget was \$5.3 million.<sup>112</sup> The Group’s headcount is shown below.

**Table 22-13**  
**Utility Operations Training & Procedures Group**  
**Employee Headcount**

Area	Headcount
Manager	1
Atlantic Region	6
Bay Region	5
New Castle Region	4
Pepco Region	4
Instructional Design & Development	7.5
Training Technologies	5
<b>Total</b>	<b>32.5</b>
Source: Utility Operations Training Organization Chart, March 31, 2008.	

<sup>107</sup> Interview with Tyler White, PHI Manager Utility Operations Training & Procedures Group.

<sup>108</sup> The Training & Procedures Group is located within the Safety & Strategic Services organization. Safety & Strategic Resources reports to the Senior VP of Utility Operations.

<sup>109</sup> The Corporate Services Departments have department specific training coordinators within their organizations. For example, the Information Technology Department has its own training coordinators.

<sup>110</sup> Interview with Tyler White, PHI Manager Utility Operations Training & Procedures Group. Regulatory compliance training is required by government agencies. The electric craft apprenticeship programs must meet federal and state requirements. OSHA, EPA, DOT, FERC, and NERC all have rules impacting training content and frequency. Response to Discovery, OC-434.

<sup>111</sup> Interview with Tyler White, PHI Manager Utility Operations Training & Procedures Group.

<sup>112</sup> Interview with Tyler White, PHI Manager Utility Operations Training & Procedures Group and 2008 Balanced Scorecard for Training, Financial Success Goal.

The Instructional Design & Development Section develops courses. The Training Technologies Section works on e-learning course development and delivery.<sup>113</sup> The course designers also work on standardizing PHI operating procedures as time permits. The Training Technology Group maintains PHI's operating procedures database.<sup>114</sup>

The T&P Group uses a mix of internally developed and vendor supplied courses. The Group has to prioritize the development of training courses because they cannot develop all of the potential courses. The Group wants to have a backlog of courses for development to keep a steady work flow for the designers. According to the T&P Group, it has adequate staffing to handle the workload. The Group has contracts for temporary designers if they are needed to meet peak workload demand.<sup>115</sup>

The T&P Group uses a hybrid approach of centralized development with decentralized delivery.<sup>116</sup> The regional groups deliver training. The regional groups are located in the regional operating centers. The Atlantic Region is located in ACE's Mays Landing facility.

The T&P Group has two classrooms, a computer room and two training yards at Mays Landing. The computer room has approximately 13 personal computers that can be used for e-learning. One of the training yards is indoors. The yards are equipped with a good stock of tools and equipment. PHI upgraded the pole corral and equipment at Mays Landing in recent years.<sup>117</sup>

**The T&P Group uses widely accepted industry approaches to design, deliver and assess training.** The T&P Group uses the Instructional System Design methodology<sup>118</sup> and the ADDIE model<sup>119</sup> to create learning solutions. Both are widely accepted industry approaches.<sup>120</sup>

The course designers work with subject matter experts in the client departments to develop courses. They rely on supervisor feedback to determine if the courses are complete and relevant. Training attends the regularly scheduled utility operations meetings to keep current on changes in procedures and new equipment added to the system.<sup>121</sup>

The selection of the training delivery method depends on: (1) the complexity of the material; (2) the extent to which the material has a physical nature (i.e. requires hands on training); and (3)

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<sup>113</sup> E-learning courses are courses delivered on-line over PHI's intranet.

<sup>114</sup> The data base is referred to as the Document Center.

<sup>115</sup> Interview with Tyler White, PHI Manager Utility Operations Training & Procedures Group.

<sup>116</sup> Response to Discovery, OC-279.

<sup>117</sup> Interview with Tyler White, PHI Manager Utility Operations Training & Procedures Group.

<sup>118</sup> The Instructional Systems Design approach includes the following steps: needs assessment, task analysis, learning objectives, assessment, development, try-out & revision, implementation and evaluation. Response to Discovery, OC-434.

<sup>119</sup> The ADDIE model stands for Analyze, Design, Develop, Implement & Evaluate.

<sup>120</sup> Interview with Tyler White, PHI Manager Utility Operations Training & Procedures Group.

<sup>121</sup> Interview with Tyler White, PHI Manager Utility Operations Training & Procedures Group.

the need for trainer interaction with the students. For some courses the trainer needs to observe the student to determine if they understand the material.

Initial training is typically done in the classroom so the instructor can evaluate the student. Refresher courses work well on-line. According to PHI, it is around the mid-point in the industry for the use of e-learning. PHI is not over-relying on internet training.<sup>122</sup>

The T&P Group uses the Kirkpatrick training evaluation model to assess course effectiveness. The Kirkpatrick model has three elements: (1) student satisfaction surveys, (2) participant testing; and (3) supervisor surveys. The supervisor surveys are conducted three to six months after training is completed to determine if the training objectives have been accomplished. The following table shows the Atlantic Region results for 2007.

Description	Student Survey	Test Results	Supervisor Survey
Number	162	209	8
Percent Satisfied	95	96	92
Source: Response to Discovery, OC-736.			

The course designers typically have degrees in education or instructional design. The T&P group stays current on industry best practices by actively participating in a number of industry groups. The T&P group has not undertaken an in-depth review of its training approach in at least five years.<sup>123</sup>

### **Apprenticeship Programs**

**ACE's electric craft apprenticeship programs have low drop-out rates.** ACE has apprenticeship programs in four disciplines: overhead line, buried distribution, substation and underground line. The programs are three years in length.<sup>124</sup> The apprentices enter and proceed through the program in groups referred to as classes. ACE's five most recent classes are shown on the following table.

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<sup>122</sup> Interview with Tyler White, PHI Manager Utility Operations Training & Procedures Group.

<sup>123</sup> Response to Discovery, OC-436. The T&P Group has not conducted any best practices reviews or participated in any benchmarking studies in recent years. Interview with Tyler White, PHI Manager Utility Operations Training & Procedures Group.

<sup>124</sup> Response to Discovery, OC-733. Three years is about the industry average length of time for an apprenticeship program. Interview with Tyler White, PHI Manager Utility Operations Training & Procedures Group.

<b>Program</b>	<b>Start Date</b>	<b>Entrants</b>	<b>Drop-Outs</b>
Buried Distribution	Nov. 2004	4	1
Overhead Line	Sept. 2006	8	1
Underground	May 2007	2	0
Overhead Line	Sept. 2007	14	2
Buried Distribution	Aug. 2008	5	0
<b>Total</b>		<b>33</b>	<b>4</b>
Source: Response to Discovery, OC-733. Drop-outs as of December 2008.			

The programs include classroom and on-the-job training (OJT). PHI purchased the overhead line program from an affiliate of the Tampa Electric Company and customized the courses for PHI procedures.<sup>125</sup> The overhead line program includes 71 modules.<sup>126</sup>

The apprentices receive OJT while working with ACE's regular crews. The crew supervisor is required to expose the apprentice to a list of critical tasks during OJT. The apprentices are evaluated by the supervisor every three months. The training instructors periodically go to the work sites and do field evaluations during OJT.<sup>127</sup>

The biggest challenges in electrical craft training are the quality of the hiring pool and generational differences. Many young people are not exposed to mechanical work before leaving high school. Some entrants need remedial training.<sup>128</sup>

ACE's apprenticeship programs have low drop-out rates compared to other utilities.<sup>129</sup> ACE requires applicants to complete a two-day outdoor pre-qualification test. The test exposes applicants to the working conditions experienced by outdoor electrical craft workers prior to entering the apprenticeship program. That reduces the drop-out rate.

ACE recently worked out an agreement with its IBEW local that requires new hires to work for six months in a helper position prior to entering the apprenticeship program. That should also reduce the drop-out rate.<sup>130</sup>

## **Knowledge Center**

**PHI has a web-based Learning Management System.** PHI acquired a web-based learning management system (LMS) in 2002. The system is a standard application provided by Meridian Knowledge Solutions, LLC ("Meridian). Meridian is a leading learning technologies vendor. Meridian's LMS installations have over five million users at more than 250 companies and

<sup>125</sup> Interview with Tyler White, PHI Manager Utility Operations Training & Procedures Group.

<sup>126</sup> Response to Discovery, OC-434. The module numbering goes up to 82. However, some of the module numbers are reserved for future use.

<sup>127</sup> Interview with Tyler White, PHI Manager Utility Operations Training & Procedures Group.

<sup>128</sup> Interview with Tyler White, PHI Manager Utility Operations Training & Procedures Group.

<sup>129</sup> Interview with Tyler White, PHI Manager Utility Operations Training & Procedures Group.

<sup>130</sup> Interview with Tyler White, PHI Manager Utility Operations Training & Procedures Group.

government agencies.<sup>131</sup> PHI received a best-in-class installation award from Meridian in 2006.<sup>132</sup>

PHI's LMS is referred to as the Knowledge Center ("KC"). The KC tracks training requirements and course completion by individual. The KC focuses on mandatory training.<sup>133</sup>

The KC provides:

- An individual page for each employee showing the employee's mandatory training courses and the status of each course.
- Notifications to employees and their supervisors when training is overdue.<sup>134</sup>
- Management reports that list employees who have not completed their mandatory training.

The KC allows the T&P Group to track training course utilization. The KC tracked over 75,000 course completions in 2007.<sup>135</sup>

The KC provides web access to e-learning courses. Web access allows "just in time" delivery of on-line courses so they can be completed when time is available. The computer centers in the regions allow field personnel to complete training when inclement weather prevents them from working outside.

The KC currently has a course list of 584 courses.<sup>136</sup> The following table shows Overland's classification of the courses by function.<sup>137</sup>

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<sup>131</sup> Meridian corporate web site - Meridianksi.com.

<sup>132</sup> Response to Discovery, OC-737.

<sup>133</sup> Interview with Ron Godwin, PHI Manager of HR Business Solutions.

<sup>134</sup> Interview with Tyler White, PHI Manager Utility Operations Training & Procedures Group.

<sup>135</sup> Response to Discovery, OC- 436. If an employee completes five courses during the year that counts as five course completions.

<sup>136</sup> Response to Discovery, OC-435. Excludes placeholders for courses that have not been developed yet.

<sup>137</sup> Overland classified the courses based on their titles only. The functional classifications should be considered approximations. Response to Discovery, OC-435.

<b>Function</b>	<b>On-line</b>	<b>Classroom</b>	<b>On the Job</b>	<b>Total</b>
Pepco Only Distribution Designers	57	4	73	134
Other Distribution Designers	54	0	0	54
System Operations Centers	100	0	0	100
Customer Care	61	36	0	97
Electrical Craft	39	32	0	71
Safety	36	1	0	37
Emergency Preparedness	14	9	0	23
General Management	14	8	1	23
SAP - Enterprise Accounting	2	13	0	15
Hazardous Materials	14	0	0	14
Other	9	7	0	16
<b>Total</b>	<b>400</b>	<b>110</b>	<b>74</b>	<b>584</b>

Source: Response to Discovery, OC-435.

PHI has separate courses for Pepco in several of the functions. That significantly increases the total number of courses.

The distribution system designers are located in each of PHI's four regions. The system operations courses focus on PHI's regional system control rooms. The courses are required by NERC and PJM.<sup>138</sup> The customer care courses include the billing, collection and call center functions. At least 30 of the customer care courses are Pepco specific.

The electric craft courses include PHI's apprenticeship programs. Many of the courses are specific to either Pepco or ACE/Delmarva. The electrical craft courses include two Field Ambassador courses developed in 2005.<sup>139</sup> The purpose of those courses is to improve customer satisfaction by training field personnel to be more customer friendly.<sup>140</sup>

Emergency preparedness includes courses on storm response second roles and disaster recovery.<sup>141</sup> At least nine of the courses are Pepco specific. The second role training covers 911 call takers, 911 call coordinators, crew guides, damage patrollers, wires down inspectors and patroller drivers.<sup>142</sup>

The general management courses include the four day foundations of supervision classroom course<sup>143</sup> and the Management-Action-Response-Checklist (MARC) training provided to managers and supervisors on union relations.

<sup>138</sup> NERC is the North American Reliability Council.

<sup>139</sup> One of the courses is classroom and the other is on-line. Response to Discovery, OC-435.

<sup>140</sup> Response to Discovery, OC-279. All field personnel are required to take the Field Ambassador courses.

<sup>141</sup> Disaster recovery training includes courses on being a floor coordinator and providing HVAC support.

<sup>142</sup> The second role training applicable to ACE consists of one on-line course for each of the roles listed above and a classroom course for damage patrollers. Response to Discovery, OC-435.

<sup>143</sup> The foundations of supervision course is described in the Leadership and Employee Development Section of Chapter 21.

The general management courses also include three courses addressing the employee Performance Accountability System (PAS)<sup>144</sup> and on-line courses on employee expense reporting and corporate credit card use. Other general titles include introduction to electricity, basic Pepco facts, motivating yourself, work life balance and typing skills.

The SAP courses are aimed at managers and supervisors. Five of the courses address the SAP Preventative Maintenance (PM) module. Others address cost center reporting, budgeting, internal orders, requisitions and HR reporting.

The KC is focused on the Customer Care and Utility Operations organizations. The KC does not include courses for the Asset Management and Planning Department and Corporate Services Departments such as Accounting & Finance, Information Technology and Human Resources.<sup>145</sup> PHI has a license with Skillsoft for on-line general management courses. The Skillsoft courses are not included in the KC.<sup>146</sup>

**PHI recognizes the need to implement a more enterprise-wide approach to training.**

PHI transferred ownership of the KC to the HR Business Solutions Group in 2008.<sup>147</sup> The transfer was made to allow a broader enterprise-wide approach to on-line learning.<sup>148</sup>

PHI is currently considering upgrading the KC to Meridian's flagship LMS product, Meridian Global. The upgrade would allow Corporate Services Departments to add an e-learning element to their learning strategies. The upgrade is tentatively planned for 2010.<sup>149</sup>

Meridian Global allows greater use of vendor supplied courses. Meridian Global permits hyperlinks between the KC and training course vendor web-sites. The hyperlinks allow employees to complete courses hosted on the vendor web-sites and populate the KC with course results.<sup>150</sup>

**Training Organizational Model**

**PHI should evaluate its training organizational model.** Large corporations can choose between the following training organization models.

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<sup>144</sup> The PAS courses consist of two classroom courses and one on-line course. The on-line course is Introduction to the Performance Accountability System. The classroom courses are Coaching & Feedback and Writing Effective Performance Appraisals.

<sup>145</sup> Interview and KC walk-through with Ron Godwin, PHI Manager HR Business Solutions. The KC does include the general management courses described previously.

<sup>146</sup> Interview and KC walk-through with Ron Godwin, PHI Manager HR Business Solutions. Skillsoft provides on-line courses in general management areas such as effective writing skills and team building. PHI has a license which covers 240 users.

<sup>147</sup> Prior to the transfer, the Utility Operations T&P Group was the owner of the KC.

<sup>148</sup> Response to Discovery, OC-748 and Interview with Ron Godwin, PHI Manager HR Business Solutions.

<sup>149</sup> Response to Discovery, OC-748. The upgrade is contingent on the outcome of the current analysis and funding availability.

<sup>150</sup> Interview with Tyler White, PHI Manager Utility Operations Training & Procedures Group.



- Decentralized - each business unit is responsible for developing and delivering its own training.
- Centralized - a central corporate organization is responsible for most training activities.
- Federated - a small central shared services organization provides training governance and tools to decentralized training organizations.

Under the federated model, a corporate core training group serves as a center of training excellence. The core group sets standards, leads the corporate training committee, promotes the use of best practices and manages enterprise-wide training technology platforms and vendors. The core group also develops and delivers enterprise-wide training. The business units assess training needs within their own organizations and develop and deliver their own business unit specific training with guidance and assistance from the core team.<sup>151</sup>

According to one 2006 study, 55 percent of large organizations use the federated model and 37 percent use the centralized model.<sup>152</sup> The trend in general industry is to move towards the centralized model. Technology is a key catalyst in the shift towards centralization.<sup>153</sup> According to PHI, the predominate model in the electric utility industry is to have training embedded in the Utility Operations Department.<sup>154</sup>

PHI currently uses the decentralized model. PHI does not have an enterprise-wide training organization or training committee. The scope of the Utility Operations Training and Procedures Group is limited to regional utility operations, call centers and billing and collection. PHI's other departments are responsible for developing, delivering and managing their own training. For example, the following areas are largely outside of the scope of the Training and Procedures Group.

- Engineering and System Planning (Asset Management)
- Information Systems
- Finance and Accounting
- Human Resources
- Supply Chain (Procurement)
- Legal, Regulatory and Internal Audit.

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<sup>151</sup> Striking a Balance with Shared Services, Scotiabank Establishes a Federated System for Global Learning, Bersin & Associates, April 2006.

<sup>152</sup> Striking a Balance with Shared Services, Scotiabank Establishes a Federated System for Global Learning, Bersin & Associates, April 2006.

<sup>153</sup> Grand Central Training, T+D Magazine, May 2005 (part 1) and July 2005 (part 2). American Society For Training & Development. Examples of major corporation using the centralized approach include Boeing, Cingular Wireless, and Harley Davidson.

<sup>154</sup> PHI comments on Overland Draft Audit Report. As opposed to placing training in a Corporate Services Department such as Human Resources.

The decentralized areas include over 1,000 employees. PHI's decentralized approach lacks enterprise-wide governance and coordination. PHI's approach produces organizational training silos that do not optimize resource utilization.

Training skill sets and best practices apply across functional areas. Centralizing the training function allows the use of consistent governance and technical standards and reduces costs through resource sharing. Benefits of centralization include:

- Better alignment with corporate goals
- Consistent standards and policies.
- PHI-wide prioritization of training needs.
- Economies of scale in training processes resulting in overall cost reductions.
- Cross-functional sharing of best practices, industry contacts and experience.
- Sharing training content and technology platforms across organizational lines.
- PHI-wide coordination of resource acquisition and development.
- Improved training communications and reporting.
- Integration of training with workforce planning, employee development and succession planning programs.

Centralization promotes a unified corporate culture by delivering a common training experience to employees in different business units. Managers receive the same messages and can speak the same language across the enterprise.<sup>155</sup>

The centralized model reduces costs by eliminating redundancies caused by having multiple training groups. A centralized training database provides an enterprise-wide view of training demand. Centralized procurement provides the leverage to negotiate lower prices and ensures that the enterprise-wide view is considered in acquisitions of vendor products.<sup>156</sup>

Centralized training groups work with designated subject matter experts within their client organizations to identify training needs and solutions. PHI does not currently monitor participation in off-site training, conferences and seminars on a centralized basis. All PHI non-union employees have annual PAS development goals. The centralized training group could review PAS development goals and external training costs to identify training needs and opportunities.

The primary disadvantage of a centralized model is less flexibility to tailor training to the preferences of individual departments.<sup>157</sup> Many business units resist centralization. They argue that a corporate training staff will not understand their specific training needs and will not

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<sup>155</sup> Grand Central Training, T+D Magazine, May 2005 (part 1). American Society For Training & Development.

<sup>156</sup> PHI spent \$1.4 million on vendor supplied training in 2007. Response to Discovery, OC-438.

<sup>157</sup> Response to Discovery, OC-748.

respond in a timely manner to changes in their training requirements.<sup>158</sup> The federated model addresses those issues by leaving needs assessment and training prioritization in the hands of the business units.

Employee training is critical to PHI's success.<sup>159</sup> PHI's current decentralized approach may not reflect industry best practices or advances in learning technologies.

PHI recently transferred the KC to HR to promote an enterprise-wide approach to training. HR is considering upgrading the KC in 2010. The KC changes provide an opportunity to reassess PHI's overall training strategy.

PHI should review industry best practices and evaluate the advantages and disadvantages of using the federated or centralized training organizational models.

### **Operating Procedures**

**PHI should accelerate its efforts to standardize operating procedures.** Historically, each of PHI's four operating regions wrote and maintained separate operating procedures.<sup>160</sup> The T&P Group develops and maintain separate courses for each of the operating regions because they have different procedures. Standardizing procedures would reduce training costs because the same training courses could be used in all the regions.<sup>161</sup>

PHI has a goal of standardizing the operating procedures within its regional utility operations.<sup>162</sup> During 2007 and 2008 PHI developed the following system-wide procedures:

- Safety Manual
- Permit & Tagging
- Incident Response Patrollers.<sup>163</sup>

The T&P Group developed a system-wide procedures management process in 2008.<sup>164</sup> The new process governs the preparation, control, approval, and maintenance of operating procedures. The procedures project included an inventory of existing procedures.

The T&P Group currently has one person working on standardizing operating procedures. All of the procedures have sunset dates that trigger periodic reviews. The procedures are

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<sup>158</sup> Grand Central Training, T+D Magazine, July 2005 (part 2). American Society For Training & Development.

<sup>159</sup> Response to Discovery, OC-434.

<sup>160</sup> Response to Discovery, OC-734. PHI includes ACE, Delmarva and Pepco. ACE and Pepco have one operating region. Delmarva has two regions, Bay and New Castle.

<sup>161</sup> Interview with Tyler White, PHI Manager Utility Operations Training & Procedures Group.

<sup>162</sup> T&P Group 2007 and 2008 Balanced Scorecards.

<sup>163</sup> Incident Response Patrollers survey and assess damage after storms as part of the outage restoration process. See Chapter 16.

<sup>164</sup> Response to Discovery, OC-734.

standardized as they come up for review. There will always be a large number of procedures to standardize.<sup>165</sup>

The resources currently assigned to the procedures standardization effort are inadequate. PHI should accelerate its efforts to standardize operating procedures.

## **Labor Relations**

This section addresses PHI's relationship with its unions. The IBEW represents PHI's electric craft workers.<sup>166</sup> PHI has separate IBEW locals and contracts for each of its three utilities.

PHI's labor relations philosophy contains the following key elements:<sup>167</sup>

- Strive to be fair.
- Treat each other with respect.
- Be trustworthy.
- At all times behave in a way that is consistent with PHI values and exemplifies the highest ethical standards.
- Explain reasons behind position.
- Keep an open mind.
- Keep lines of communication open.
- Understand that neither the Union or Management is the enemy.
- Keep a long-term focus.

PHI's philosophy is intended to increase its chances to succeed as a business. If the company succeeds, so do its employees. PHI sees its labor relations philosophy as an extension of its core values: safety, accountability, integrity, diversity and excellence.<sup>168</sup> Keeping a long-term focus helps PHI work constructively with its unions to accomplish its business objectives.

**PHI strives to maintain open communications with its unions.** PHI seeks to keep the lines of communications with its unions open to avoid unnecessary disputes and surprises. PHI seeks a cooperative relationship with its unions built on trust and good faith.<sup>169</sup>

PHI maintains close day-to-day contact on a regional level with its unions regarding issues that may arise. Open communications help to prevent an "us versus them" attitude. Representatives of ACE's IBEW local agree that ACE and the union have good daily communications.<sup>170</sup>

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<sup>165</sup> Interview with Tyler White, PHI Manager Utility Operations Training & Procedures Group.

<sup>166</sup> IBEW is the International Brotherhood of Electrical Workers.

<sup>167</sup> Response to Discovery, OC-554.

<sup>168</sup> Response to Discovery, OC-554.

<sup>169</sup> Response to Discovery, OC-554.

<sup>170</sup> Interviews with Charles Hill, IBEW Local 210 Business Manager and John Boulden, IBEW Local 1238 Business Administrator.

PHI holds communications meetings with its unions twice a year. During those meetings, PHI executives explain its business objectives and plans.<sup>171</sup> PHI is up-front with its unions about its business plans to avoid surprising its unions with changes at the last minute.

PHI holds monthly safety meetings with union leadership and employees. PHI and its unions have a Joint Health Care Committee that reviews benefits issues and costs.

**PHI provides adequate labor relations training to managers and supervisors.** PHI has a **[BEGIN CONFIDENTIAL]**

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<sup>175</sup> **[END]**

**CONFIDENTIAL]**

PHI provides adequate labor relations training to its supervisors and managers. PHI should work to keep all levels of management aware of National Labor Relations Board case developments and federal court decisions that may impact the scope and application of matters such as “Weingarten” rights.<sup>176</sup>

**PHI has good constructive relationships with its unions.** According to PHI, it has good constructive relationships with all of its unions.<sup>177</sup> According to representatives of the ACE and Delmarva IBEW locals, their union has always had a good constructive relationship with PHI.

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<sup>171</sup> Response to Discovery, OC-554.

<sup>172</sup> Response to Discovery, OC-553 (restricted).

<sup>173</sup> Response to Discovery, OC-553 (restricted).

<sup>174</sup> Response to Discovery, OC-553 (restricted).

<sup>175</sup> Response to Discovery, OC-553 (restricted).

<sup>176</sup> The U.S. Supreme Court held in Weingarten (NLRB v. Weingarten, 420 U.S. 251, 88 LRRM 2689) (1975) that employees have the right to have union representation at investigatory interviews.

<sup>177</sup> Interview with William Wolverton, PHI Manager of Strategic Labor Relations.

According to the union representatives, ACE treats its employees with dignity and respect and is a good company to work for.<sup>178</sup>

ACE's unions have never called a strike. There has never been a work stoppage for ACE employees.<sup>179</sup> ACE has not been a party to any National Labor Relations Board matters.<sup>180</sup>

ACE has a low volume of union grievances. Historically, not more than fifteen or twenty grievances are filed each year. Most of the grievances involve interpretation of contract language. All of the grievances filed in 2007 and earlier have been resolved. During 2008, grievances were filed by ten union employees.<sup>181</sup>

From time to time, PHI gives some ground on issues in the short-term to advance its long-term interests. In the long-run, that approach obtains better cooperation, avoids disputes and is in the best interests of the union, company and ratepayers. According to PHI, it has great respect for its union leaders and it believes the feeling is mutual.<sup>182</sup>

ACE's IBEW local is constructive on employee benefits and training matters.<sup>183</sup> ACE's union agreed to several work rule changes that increased productivity in its 2005-2006 contract negotiations with ACE.<sup>184</sup>

PHI's labor relations philosophy has resulted in good constructive relationships with its unions.

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<sup>178</sup> Interviews with Charles Hill, IBEW Local 210 Business Manager and John Boulden, IBEW Local 1238 Business Administrator.

<sup>179</sup> Response to Discovery, OC-551 and interview with William Wolverton, PHI Manager of Strategic Labor Relations.

<sup>180</sup> Response to Discovery, OC-555 and OC-556. Interview with Charles Hill, IBEW Local 210 Business Manager.

<sup>181</sup> Response to Discovery, OC-552 and interview with William Wolverton, PHI Manager of Strategic Labor Relations.

<sup>182</sup> Response to Discovery, OC-554 and interview with William Wolverton, PHI Manager of Strategic Labor Relations.

<sup>183</sup> Interviews with Mike Sullivan, PHI Manager of Compensation and Benefits and Tyler White, PHI Manager Utility Operations Training & Procedures Group.

<sup>184</sup> Response to Discovery, OC-458.

## Chapter 23. HR Employee Benefits and Productivity Analysis

This Chapter addresses the following human resources functions.

- Employee Benefits
- Productivity Analysis

PHI's other human resources functions are addressed in Chapters 21 and 22.

The employee benefits section focuses on the areas with the highest costs, health care and post-retirement benefits. PHI recognizes the need to improve its productivity assessment capabilities. PHI's new enterprise information management and business intelligence strategy has the potential to significantly improve PHI's productivity analysis process.

### Summary of Findings

This Chapter contains the following findings and recommendations.

1. PHI's strategy is to provide competitive employee benefits while focusing on cost containment. PHI's current benefits plans and policies were implemented in 2005. PHI plans on conducting a comprehensive review of its benefits plans and policies in 2009.
2. PHI's employee benefits cost over \$125 million a year. During 2007, PHI's benefits expenditures included \$36 million for active employee medical, \$37 million for retiree medical, \$25 million for pension costs, and \$11 million for the savings plan.<sup>1</sup>
3. PHI's benefit costs are modestly higher than the average for its peer group. PHI participates in a benchmarking group with seventeen other large electric utilities. The value of PHI's management benefits exceeded the group average by 4.7 percent in 2007. The value of ACE's union benefits exceeded the group average by 6.3 percent.
4. PHI has a goal of consolidating its medical plans in 2009. PHI currently has nine different medical plans for active employees. The large number of plans and carriers creates unnecessary administrative costs and complexity. PHI has a goal of consolidating the plans down to three basic options administered by one carrier. Consolidating the plans would reduce administrative fees and provide leverage to negotiate larger discounts from medical services providers. PHI plans on re-bidding all of its medical plans in 2009.

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<sup>1</sup> Active medical is \$44 million total less \$8 million in employee contributions.

5. PHI is implementing an integrated health care strategy. The strategy reduces costs and increases productivity by encouraging healthy lifestyles and providing appropriate health care before health conditions worsen and become more expensive.
6. PHI implemented medical claims analysis, case management and disease management programs in 2007. The data warehouse provides the data and tools PHI needs to focus its cost containment efforts on the patients and conditions with the highest costs. The case management program takes a holistic integrated approach to managing the medical needs of patients with serious health conditions.
7. PHI is expanding its efforts to promote healthy lifestyles. PHI is promoting healthy lifestyles by providing individual health risk assessments, education and incentives to employees.
8. PHI is expanding its employee benefits communications and education programs. A 2008 employee survey identified opportunities to reduce PHI's medical costs through improved consumer education and communications. PHI is expanding the communications and education content in its employee benefits web-sites and newsletter.
9. Retiree medical is not a cost effective employee benefit. **[BEGIN CONFIDENTIAL]**

**[END CONFIDENTIAL]**

10. PHI's exposure to retiree medical cost increases is limited by cost caps. The cost caps trigger increases in retiree contributions as costs increase. The cost caps will not be increased for inflation. As a result, retirees will bear an increasing share of their medical costs over time.
11. PHI traditional defined benefit pension plan covers its entire workforce. The alternative is a defined contribution plan. According to PHI, defined contribution plans are only marginally less expensive for companies with low turnover, such as PHI.
12. PHI expects its pension costs to increase by \$56 million in 2009. PHI expects its 2009 pension costs to be \$80 million. That represents an increase of 233 percent over the 2008 costs of \$24 million. The increase was caused by \$403 million in investment losses experienced by PHI's pension trust fund in 2008. The losses significantly eroded the funding status of PHI's pension plan. PHI plans to make a voluntary contribution of \$300 million to its pension trust in 2009 to restore part of the loss.



13. PHI's retirement savings plan design is consistent with industry practice. PHI's retirement savings plan includes most employees and is sometimes referred to as the 401(k) plan.
14. PHI's productivity analysis approach is decentralized. PHI does not have a centralized group to oversee productivity measurement. The leadership of each department is responsible for assessing employee productivity within their own organization. The departments use a variety of methods to monitor productivity. PHI's current productivity assessment process lacks adequate oversight, governance and cross-functional integration.
15. PHI recognizes the need to improve its productivity assessment capabilities. PHI currently has an information poor environment. PHI's operational and financial data is currently contained in multiple data bases located throughout the Company. Extracting and analyzing data across platforms is difficult and time consuming. PHI adopted an enterprise information management (EIM) and business intelligence (BI) strategy in 2008 to improve its decision making and operational efficiency. EIM and BI have the potential to significantly improve PHI's productivity assessment process.

## **Recommendations**

1. PHI should work with its unions to consolidate its medical plans. Consolidating PHI's medical plans would reduce costs and administrative complexity. Pepco's IBEW local agreed to medical plan consolidation in 2004. PHI should work with its ACE and Delmarva IBEW locals to eliminate plans that are not cost effective.
2. PHI should consider increasing the monthly contributions paid by pre-medicare participants in its retiree medical plans. Pre-medicare participants in PHI's retiree medical plans pay significantly lower contributions than those required by other electric utilities. PHI's contribution requirements are inconsistent with industry practice.
3. The Operations Department should implement an internal benchmarking program. The Operations Department does not compare productivity in ACE's four districts to productivity in Delmarva and Pepco districts. The large scope of PHI's operations provides a significant opportunity for internal benchmarking. Comparing productivity across the three utilities would facilitate the replication of best practices and the standardization of operating procedures.

## **Employee Benefits**

The HR Benefits Group is responsible for designing, implementing and administering benefits programs. The group manages PHI's relationships with benefits vendors. The Benefits Group has eleven authorized positions. Two of the employees manage PHI's disability program.<sup>2</sup>

The PHI Benefits Administrative Board address policy matters and employee benefits appeals. The administrative board is comprised of high level PHI executives and meets monthly.<sup>3</sup>

PHI has joint health care committees with each of its unions.<sup>4</sup> PHI's unions understand the challenges of controlling medical costs and have expressed a desire to work proactively and collaboratively with PHI on health care issues.<sup>5</sup>

Benefits administration is outsourced to AON. AON provides a call center to respond to inquiries from benefits plan participants and process changes in status.<sup>6</sup> Pension plan administration is outsourced to Vanguard.

### **Strategy**

**PHI's strategy is to provide competitive employee benefits while focusing on cost containment.** PHI's current benefits strategy includes the following goals.<sup>7</sup> **[BEGIN CONFIDENTIAL]**

8

<sup>9</sup> **[END**

**CONFIDENTIAL]**

PHI is still dealing with the integration of the legacy benefit plans that were in place prior to the 2002 Conectiv and Pepco merger. PHI's union benefits are subject to collective bargaining.

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<sup>2</sup> Interview with Mike Sullivan, PHI Manager of Compensation & Benefits.

<sup>3</sup> Response to Discovery, OC-423.

<sup>4</sup> The committees meet bi-monthly.

<sup>5</sup> Response to Discovery, OC-599, 2008 PHI Benefits Strategy, page 17.

<sup>6</sup> The call center is referred to as the benefits service center.

<sup>7</sup> Response to Discovery, OC-599, PHI 2008 Benefits Strategy, page 4.

<sup>8</sup> Interview with Mike Sullivan, PHI Manager of Compensation & Benefits.

<sup>9</sup> Response to Discovery, OC-599, PHI 2008 Benefits Strategy, page 27.

ACE, Delmarva and Pepco all have different union contracts. Each union contract has different retirement and medical plan terms and options.

The large number of plans increases the complexity of benefits administration and creates internal equity issues. The large number of medical plans reduces PHI's ability to obtain discounts from medical services providers. PHI's vision is one company - one process. PHI has a goal of consolidating and standardizing its medical and retirement plans.<sup>10</sup>

PHI developed and implemented new medical and retirement plans for management employees in the 2004 compensation integration project. PHI plans on conducting a comprehensive review of its benefits plans and policies in 2009.<sup>11</sup> The 2009 review will include rebidding PHI's medical plan contracts. The bid results will be used to evaluate the feasibility of consolidating medical plans.<sup>12</sup>

### Costs and Benchmarking

**PHI's employee benefits cost over \$125 million a year.** PHI's 2007 benefit costs are shown below by major category.

Category	Amount
Non-Retirement	52
Pension	25
Savings Plan	11
Other Post-Retirement Benefits	39
<b>Total</b>	<b>127</b>
Source: Response to Discovery, OC-425 and PHI 2008 10-K Report, pages 192 and 196.	

The following table shows PHI's non-retirement benefit costs for active employees and their dependents.

<sup>10</sup> Response to Discovery, OC-599, PHI 2008 Benefits Strategy, page 5.

<sup>11</sup> Interview with Mike Sullivan, PHI Manager of Compensation & Benefits.

<sup>12</sup> Response to Discovery, OC-589.

**Table 23-2**  
**PHI Non-Retirement Benefits Costs**  
**Active Employees**  
**2006 to 2007**  
Dollars in Millions

Benefit Type	2005	2006	2007
Medical	46	45	44
Dental	5	5	4
Life / Accident Insurance	2	3	3
Disability	5	3	6
Vision	1	1	1
Miscellaneous	2	2	2
Employee Contributions	(7)	(7)	(8)
Total	54	52	52

Source: Response to Discovery, OC-425

PHI's workforce decreased during that period. The following table shows the non-retirement benefit costs per employee.

**Table 23-3**  
**PHI Non-Retirement Benefits Costs**  
**Per Employee**  
**2005 to 2007**

Benefit Type	2005	2006	2007
Medical	8,878	8,961	9,128
Dental	852	941	871
Life / Accident Insurance	397	581	601
Disability	1,047	761	1,315
Vision	190	217	299

Source: Response to Discovery, OC-425. Note: Gross cost without credit for employee contributions.

PHI was able to hold its medical cost increases below industry trends in 2006 and 2007 by shifting more participants to HMO plans. PHI also had favorable claims experience in 2007.<sup>13</sup> Additional cost containment initiatives included:<sup>14</sup>

- New medical plans for PHI management and Pepco union employees in 2005.
- New prescription drug plan featuring a three tier formulary (generic, preferred brand and non-preferred brand) with lower co-pays for generic, preferred brands and mail order pharmacy utilization.
- Increased medical plan deductibles and prescription drug co-pays.
- Increased medical plan contributions paid by employees with a goal of reaching 80/20 cost sharing.
- Rebid the dental contract in January 2007, resulting in savings of approximately \$1 million over three years.<sup>15</sup>
- Changed life insurance carriers in January 2007, resulting in approximately \$5 million in savings over four years.<sup>16</sup>

<sup>13</sup> Interview with Mike Sullivan, PHI Manager of Compensation & Benefits.

<sup>14</sup> Response to Discovery, OC-424.

<sup>15</sup> Response to Discovery, OC-599, PHI 2008 Benefits Strategy, page 18.

<sup>16</sup> Response to Discovery, OC-599, PHI 2008 Benefits Strategy, page 18.

- Renegotiated the prescription drug contract in January 2008, resulting in \$10 million in savings over three years.<sup>17</sup>

Other post-retirement benefits consist primarily of retiree health care. PHI provided the following breakdown of its retiree benefits expenditures.<sup>18</sup>

**Table 23-4**  
**PHI Retiree Medical and Life Insurance Benefits Expenditures**  
**2005 to 2007**  
Dollars in Millions

Benefit Type	2005	2006	2007
Medical	36	34	37
Life Insurance	4	4	4
<b>Total</b>	<b>40</b>	<b>38</b>	<b>41</b>

Source: Response to Discovery, OC-426

The following table shows those costs on a per retiree basis.

**Table 23-5**  
**PHI Retiree Medical and Life Insurance Benefits Expenditures Per Retiree**  
**2005 to 2007**

Benefit Type	2005	2006	2007
Medical	8,683	8,010	8,538
Life Insurance	926	933	1,002
<b>Total</b>	<b>9,608</b>	<b>8,943</b>	<b>9,540</b>

Source: Response to Discovery, OC-426

PHI contained retiree medical expenditures by moving all retirees to Preferred Provider Organization (PPO) or Health Maintenance Organization (HMO) medical plans.<sup>19</sup> PHI incorporated a medicare carve-out provision into its retiree medical plans and implemented retiree contribution requirements for some retiree groups. The new federal medicare prescription drug benefit also reduced retiree medical costs.

**PHI's benefits costs are modestly higher than the average for its peer group.** [BEGIN CONFIDENTIAL] [END CONFIDENTIAL] is PHI's primary source for employee benefits benchmarking information.<sup>20</sup> PHI is included in a comparison group with 17 other large electric utilities.<sup>21</sup>

The [BEGIN CONFIDENTIAL] [END CONFIDENTIAL] has separate comparison groups for management and union benefits. The value of PHI's management benefits exceeded

<sup>17</sup> Response to Discovery, OC-599, PHI 2008 Benefits Strategy, page 18.

<sup>18</sup> Other than pension expenditures. Note: table above reflects expenditures, not the periodic cost accrual determined under FAS 106. The prior table reflected FAS 106 costs.

<sup>19</sup> Response to Discovery, OC-427.

<sup>20</sup> Interview with Mike Sullivan, PHI Manager of Compensation & Benefits.

<sup>21</sup> Response to Discovery, OC-598 (restricted). The group includes American Electric Power Corporation, Constellation Energy, FirstEnergy and Southern Company.



The PHI PPO and PHI HMO plans are the basic plans for management employees. Those plans have standard designs that are administered by multiple competing medical insurance carriers.<sup>26</sup> PHI's costs under the plans reflect the actual claims for the participants plus an administrative fee that includes the carrier's profit.<sup>27</sup>

The PHI PPO and PHI HMO plans were developed as part of the 2004 benefits integration project. PHI eliminated indemnity plans for management employees at that time.<sup>28</sup>

The PHI HMO plan provides very limited out-of-network coverage. Employees chose the HMO plan because it has lower deductibles and copays.<sup>29</sup> The PHI HMO plan is not available to ACE union employees.

The Coventry, Aetna, and BCBS plans are only available to ACE and Delmarva union employees. PHI's policy is to set employee contributions equal to 20 percent of each plan's costs. The Aetna PPO and BCBS indemnity plans have higher costs and require higher employee contributions. Fewer employees select those plans because of the higher employee contributions levels.<sup>30</sup>

The Aetna PPO and BCBS indemnity plans are expensive. PHI would like to eliminate those plans.<sup>31</sup> Eliminating plans is subject to collective bargaining. The unions have been reluctant to agree to eliminating plans.

The Kaiser and Horizon HMOs have good coverage networks in their local areas. The plans include both management and union employees. PHI did not eliminate management employees from the Kaiser and Horizon HMOs in the 2004 integration project because the participants were used to the plans and the costs were reasonable at that time.<sup>32</sup>

The large number of plans and carriers creates unnecessary administrative costs and complexity. The Benefits Group has a goal of reducing the number of medical insurance vendors through consolidation. The goal is to reduce down to the following three basic options administered by one carrier.<sup>33</sup>

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<sup>26</sup> Aetna, Coventry and Mamsi are the vendors for the PHI PPO plan. Aetna, Coventry and Optimum Choice are the vendors for the PHI HMO plan. Employees select the carrier they prefer during the annual open enrollment process.

<sup>27</sup> Claims costs are estimated for the current year and trued up in the following year.

<sup>28</sup> Response to Discovery, OC-599, PHI 2008 Benefits Strategy, page 10.

<sup>29</sup> Interview with Mike Sullivan, PHI Manager of Compensation and Benefits.

<sup>30</sup> Interview with Mike Sullivan, PHI Manager of Compensation and Benefits.

<sup>31</sup> Interview with Mike Sullivan, PHI Manager of Compensation and Benefits.

<sup>32</sup> Interview with Mike Sullivan, PHI Manager of Compensation and Benefits. Keeping the plans avoided the disruption of changing plans for the employees. The high cost of the plans in 2007 may be a result of market power created by their extensive provider networks in the local market areas.

<sup>33</sup> Response to Discovery, OC-599. PHI 2008 Benefits Strategy, page 29 and interview with Mike Sullivan, PHI Manager of Compensation and Benefits.

- PHI PPO.
- PHI HMO.
- A high deductible plan coupled with a health savings account.<sup>34</sup>

Consolidating the plans into three basic options could reduce administrative fees and provide leverage to negotiate larger discounts from medical services providers.<sup>35</sup> The potential for reducing administrative fees through consolidation is substantial. The potential for larger discounts from medical services providers is more difficult to estimate.<sup>36</sup> Increasing the network discounts by one percent would reduce PHI's costs by about \$500,000 a year.

PHI plans on re-bidding all of its medical plans in 2009. The process must be complete by October 2009 so the new contracts can be incorporated into PHI's annual benefits open enrollment process.<sup>37</sup> The re-bidding has the following objectives:<sup>38</sup>

- Cost efficiency.
- High quality service for plan participants.
- Reducing costs through plan and vendor consolidation.
- Minimizing disruption to participants.
- Maintaining access to current medical services providers.
- Driving coordination between vendors.
- Adding meaningful performance standards to the contracts.
- Engaging vendors in a long-term partnership.
- Driving participant accountability for health and health care decisions.
- Integrating healthcare with wellness, disability and safety.

PHI wants to implement value based plan designs that encourage the use of preventative care to reduce long-term costs.<sup>39</sup> PHI plans to increase participant co-insurance obligations to promote consumer ownership of health care decisions.<sup>40</sup>

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<sup>34</sup> The high deductible plans are referred to as "consumer driven health care plans".

<sup>35</sup> Response to Discovery, OC-599. PHI 2008 Benefits Strategy, page 29 and interview with Mike Sullivan, PHI Manager of Compensation and Benefits.

<sup>36</sup> Interview with Mike Sullivan, PHI Manager of Compensation and Benefits.

<sup>37</sup> Response to Discovery, OC-599. PHI 2008 Benefits Strategy, page 29 and Interview with Mike Sullivan, PHI Manager of Compensation and Benefits.

<sup>38</sup> Response to Discovery, OC-589.

<sup>39</sup> Response to Discovery, OC-424 and Interview with Mike Sullivan, PHI Manager of Compensation & Benefits. Value based designs includes eliminating co-pays and deductibles for health screenings and providing incentives for participation in health risk assessments.

<sup>40</sup> Response to Discovery, OC-599 PHI 2008 Benefits Strategy, page 29. Co-insurance refers to the participant's co-pay requirements for medical services. Consumer driven health care plans reduce medical services utilization and costs through higher co-insurance and education.



PHI intends to include more performance guarantees and other cost control design features in the contracts.<sup>41</sup> PHI wants increased coordination between the primary medical plan carriers and the prescription drug and mental health carve-out carriers.<sup>42</sup>

The bid evaluation process will include a full review of PHI's medical plan design. The request for proposals provides the bidders with the opportunity to propose innovative cost saving designs. PHI will re-evaluate its medical benefits strategy after reviewing the structures proposed by the bidders.<sup>43</sup>

The bidders can bid on all or part of PHI's participant population. The bidding options are designed to demonstrate the potential savings that can be obtained through plan consolidation.<sup>44</sup>

**PHI should work with its unions to consolidate its medical plans.** Consolidating PHI's medical plans would reduce costs and administrative complexity. PHI's largest union, the Washington DC IBEW local, agreed to medical plan consolidation in 2004.<sup>45</sup> PHI should work with its ACE and Delmarva IBEW union locals to eliminate plans that are not cost effective.

PHI has a strong problem solving relationship with its unions. The unions have indicated a desire to work proactively and collaboratively with PHI on health care issues. PHI and the unions have successfully negotiated several health care changes in recent years.<sup>46</sup> PHI will address the consolidation issue with its ACE and Delmarva unions in 2009 through the joint PHI/union health care committees. PHI is optimistic that those discussions will produce positive results.<sup>47</sup>

PHI's plans to re-bid its medical contracts are commendable. The re-bidding process represents an important opportunity to consolidate and standardize the medical plans. PHI should place a high priority on accomplishing those goals in 2009.

### **Integrated Health Care Strategy**

**PHI is implementing an integrated health care strategy.** PHI is implementing an integrated health care strategy that reduces costs and increases productivity by encouraging healthy

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<sup>41</sup>Response to Discovery, OC-599. PHI 2008 Benefits Strategy, page 5.

<sup>42</sup> Interview with Mike Sullivan, PHI Manager of Compensation & Benefits and Response to Discovery, OC-589.

<sup>43</sup> Interview with Mike Sullivan, PHI Manager of Compensation & Benefits.

<sup>44</sup> The bidders will submit prices for individual components of PHI's scope of work and a consolidated bid for the entire scope. The difference between the consolidated bid and the sum of the component bids should demonstrate the savings available through consolidation. Interview with Mike Sullivan, PHI Manager of Compensation & Benefits.

<sup>45</sup> Response to Discovery, OC-431. Local 1900 participates only in the PHI HMO, PHI PPO and Kaiser HMO plans. Response to Discovery, OC-599, PHI 2008 Benefits Strategy, page 17.

<sup>46</sup> Response to Discovery, OC-599, PHI 2008 Benefits Strategy, page 17.

<sup>47</sup> Response to Discovery, OC-589.

lifestyles and providing appropriate care before health conditions worsen and become more expensive. The strategy includes:<sup>48</sup>

- Promoting a culture of health through engagement with employees.
- Encouraging employees to take ownership of their health care decisions.
- Moving from treatment based programs to prevention based programs.
- Monitoring health care metrics to manage and prevent chronic diseases.

Employees pay a portion of their health care costs through contributions, deductibles and co-pays. No one wants chronic medical problems. Promoting healthy lifestyles and managing health risks is in everyone's best interests.<sup>49</sup> PHI's employee engagement strategy includes providing education, tools and incentives to enable employees to take ownership of their overall health and medical decisions.

Wellness programs are an important part of PHI's integrated strategy. Wellness programs focus on promoting healthy lifestyles by providing individual health risk assessments, education and incentives to employees.

Wellness programs are a major industry trend.<sup>50</sup> Wellness programs reduce medical claims by proactively managing the participant's health in an integrated and holistic manner. Wellness programs improve productivity by reducing stress and work absences caused by illness.

PHI has a two tiered wellness program strategy.<sup>51</sup> The first tier consists of medical claims analysis, case management and disease management. The second tier consists of preventative programs.

**PHI implemented medical claims analysis, case management and disease management programs in 2007.** PHI implemented a new claims data warehouse application in December 2007. The data warehouse includes all PHI's medical claims in one data base. Prior to implementing the data warehouse, PHI had separate claims files for each of its medical insurance carriers.

The data warehouse is used to monitor claims, identify opportunities for cost savings and monitor vendor contract performance.<sup>52</sup> The data warehouse provides the data and tools PHI needs to focus its efforts on the participants and medical conditions with the highest costs.<sup>53</sup>

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<sup>48</sup> Response to Discovery, OC-599, PHI 2008 Benefits Strategy, page 27.

<sup>49</sup> Response to Discovery, OC-424, Cardio Pilot Presentation.

<sup>50</sup> Interview with Mike Sullivan, PHI Manager of Compensation & Benefits.

<sup>51</sup> Response to Discovery, OC-424, PHI Wellness Initiatives Presentation.

<sup>52</sup> Response to Discovery, OC-424.

<sup>53</sup> Interview with Mike Sullivan, PHI Manager of Compensation & Benefits.

The data warehouse is a standardized product offering by InforMed, a medical technology and management services company.<sup>54</sup> The data warehouse is a seamless web-based application hosted by InforMed that enables detailed analytics and reporting.<sup>55</sup> Standard reports include:

- Age and gender analysis.
- Top procedures.
- Top providers.
- Claimants over \$10,000.
- Major diagnostic categories.
- Costs by field of practice.
- Trending analysis.

In most health plans, ten percent of the participants generate about 75 percent of the costs.<sup>56</sup> The data warehouse provides tools needed to identify and manage high cost patients.

The data warehouse includes predictive modeling tools that forecast medical and prescription drug costs based on experience. Emerging cost trends are identified by comparing the forecasts to actual costs. The Benefits Group added a position to analyze the data.<sup>57</sup> PHI will use the data to evaluate the 2009 medical plan bids and redesign its contracts.

InforMed also provides case management services to PHI.<sup>58</sup> The case management services take a holistic integrated approach to managing the medical needs of participants with serious health conditions.

InforMed's case management role is providing advice and information to the patients and their regular doctors. InforMed promotes coordination between the participant's multiple medical services providers. InforMed does not serve as a medical services utilization gatekeeper.

The case management services are provided by nurse practitioners with at least five years of experience.<sup>59</sup> The nurse practitioners are supervised by physicians employed by InforMed.

The following table shows the case management participants by category as of November 2008.

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<sup>54</sup> InforMed's corporate web-site is Informed-llc.com. InforMed is a relatively small company located in Annapolis Maryland. PHI medical insurance carriers provide a data feed to InforMed. Interview with Mike Sullivan, PHI Manager of Compensation & Benefits.

<sup>55</sup> Response to Discovery, OC-424, InforMed Overview. The data warehouse includes a robust ad hoc report search engine that allows users to develop customized financial and clinical reports.

<sup>56</sup> Response to Discovery, OC-424, InforMed Overview.

<sup>57</sup> Interview with Mike Sullivan, PHI Manager of Compensation & Benefits. The costs of the data warehouse are relatively low. The initial implementation cost was approximately \$10,000 and the ongoing data warehouse and analytical fees are approximately \$120,000 a year. Response to Discovery, OC-596.

<sup>58</sup> InforMed began providing case management services to PHI in August 2007. Response to Discovery, OC-599, 2008 Benefits Strategy.

<sup>59</sup> Interview with Mike Sullivan, PHI Manager of Compensation and Benefits.

<b>Category</b>	<b>Participants</b>
Active Employees	35
Dependents of Active Employees	40
Retirees <sup>60</sup>	47
Dependents of Retirees	44
Long-Term Disability	13
<b>Total</b>	<b>179</b>
Source: Response to Discovery, OC-596.	

The current case management enrollment represents about 1 percent of the participants in PHI's medical plans.<sup>61</sup> Participation is voluntary. Most employees who are offered case management accept. The feedback from participants has been positive. Very few drop out of the program. Employees view case management as an additional benefit program. PHI's unions support the program.<sup>62</sup>

The feedback from the patients' regular physicians has been good. They like the electronic medical record that InforMed provides for each patient. According to PHI, case management does not increase its exposure to litigation because the participants' regular doctors remain in charge of their health care.<sup>63</sup>

InforMed also provides disease management services. Disease management includes:

- Tracking medication use for chronic conditions to ensure that participants are taking their medications.
- Tracking procedures to ensure that participants are getting appropriate preventative care check-ups.

The HR Benefits Group plans on increasing PHI's utilization of InforMed's disease management services.<sup>64</sup>

InforMed charges PHI approximately \$650,000 a year.<sup>65</sup> About 80 percent of the costs are for case management, disease management and medical management. Case management is billed on an hourly basis. That eliminates InforMed's incentive to increase profits by under staffing the case management function.<sup>66</sup>

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<sup>60</sup> Retirees and dependants over the age of 65 are not allowed to participate in case management because medicare significantly reduces PHI's cost exposure for that group.

<sup>61</sup> PHI's medical plans for active employees and retirees have about 18,000 participants.

<sup>62</sup> Interview with Mike Sullivan, PHI Manager of Compensation and Benefits.

<sup>63</sup> Interview with Mike Sullivan, PHI Manager of Compensation and Benefits.

<sup>64</sup> Interview with Mike Sullivan, PHI Manager of Compensation and Benefits.

<sup>65</sup> Response to Discovery, OC-596. Charges for the first 10 months of 2008 were \$539,163. That equates to an annualized spending level of approximately \$650,000.

<sup>66</sup> Interview with Mike Sullivan, PHI Manager of Compensation and Benefits

PHI spends approximately \$75 million a year on medical claims for active employees, retirees and their dependents, net of participant contributions.<sup>67</sup> The InforMed charges are a little less than one percent of PHI's annual medical spending.

PHI expects the claims data warehouse, case management and disease management services to eventually reduce its medical costs.<sup>68</sup> However, it is too early to measure savings.<sup>69</sup>

InforMed's costs are reasonable when compared to the potential savings. PHI claims analysis and case management initiatives are commendable. PHI should continue to actively monitor and evaluate InforMed's services in 2009 and 2010 to optimize its savings.

**PHI is expanding its efforts to promote healthy lifestyles.** PHI has the following programs to promote healthy lifestyles for active employees:

- Free voluntary health assessments offered on-site every two years.
- Free annual flu shots.
- Free annual blood sugar (glucose) and cholesterol testing.
- \$100 annual rebates for health club or weight loss program membership.
- Host on-site weight watchers program.
- Smoking cessation program.

The voluntary health assessments are provided by a contractor, Cardio-Kinetics, Inc.<sup>70</sup> The assessments cost about \$140 per participant and include:<sup>71</sup>

- Heart risk factor review.
- Sub-maximal (low stress) ECG and aerobic fitness assessment.<sup>72</sup>
- Body fat analysis.
- Back screening.<sup>73</sup>
- Muscular fitness evaluation.
- Flexibility screening.
- Smokerlizer test.<sup>74</sup>

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<sup>67</sup> Response to Discovery, OC-425 and OC-426 data for 2007.

<sup>68</sup> PHI's preliminary forecast of first year case management savings was \$700,000. Response to Discovery, OC-599, PHI 2008 Benefits Strategy, page 18.

<sup>69</sup> Interview with Mike Sullivan, PHI Manager of Compensation and Benefits.

<sup>70</sup> Cardio-Kinetics corporate web-site is [cardiokinetics.com](http://cardiokinetics.com).

<sup>71</sup> Interview with Mike Sullivan, PHI Manager of Compensation and Benefits and Response to Discovery, OC-424, PHI Wellness Initiatives Presentation.

<sup>72</sup> This is a treadmill electrocardiogram test but the highest treadmill speed is lower than a regular ECG.

<sup>73</sup> The back screening consists of flexibility testing. None of the tests involve x-rays or scans. Back problems are a significant problem for the outside workforce. The back screening includes answering employee questions about back pain.

<sup>74</sup> The employees exhale into the smokerlyzer device. The device measures the employee's carbon dioxide and oxygen levels.

The participants receive a results profile and exercise prescription. Approximately 25 to 30 percent of employees participate in the health assessments. The participation rates are about the same for management and union employees and across age groups.<sup>75</sup> The health assessments increase employee awareness of their medical risks and can result in immediate medical referrals.

The \$100 weight loss program rebate can be used to pay part of the cost of the on-site weight watchers program. PHI initiated the smoking cessation program in August 2008. The program includes telephonic counseling, nicotine replacement therapy and prescription drug cost at no cost to the participant.<sup>76</sup> Persuading employees to participate in the smoking cessation program is difficult. As of December 2008, the program had about 35 participants.<sup>77</sup>

PHI conducted a Cardio Wellness Pilot in 2008. The pilot was designed to improve the participant's health through assessment, exercise, diet and health coaching. The initial Cardio Wellness pilot was limited to 347 participants at two PHI locations.

The health coaches were provided by Cardio-Kinetics. The health coaches developed a health plan for each participant. The participants were provided cash incentives of \$400 for successfully completing the program. Non-incentive costs were approximately \$300 per participant.<sup>78</sup>

The individual participant results were completely confidential. Cardio-Kinetics determines incentive eligibility and does not disclose personal medical information to PHI.<sup>79</sup> Cardio-Kinetics does report blind data to PHI showing the improvement in health metrics such as blood-pressure, cholesterol and weight loss.

The pilot was completed in late 2008. PHI will track the participants' medical claims and sick days over the next two to three years to measure the impact of the program on medical costs and productivity.<sup>80</sup> Approximately 70 percent of the original participants completed the pilot. The employees were enthusiastic and responded well to the cash incentives.<sup>81</sup>

PHI is conducting a second Cardio Wellness Pilot in 2009. The second pilot is limited to approximately 150 participants at a facility in Wilmington, Delaware. PHI reduced the cash incentives in the second pilot to \$200 per participant based on the response in the first pilot.

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<sup>75</sup> Interview with Mike Sullivan, PHI Manager of Compensation and Benefits.

<sup>76</sup> Response to Discovery, OC-424.

<sup>77</sup> Interview with Mike Sullivan, PHI Manager of Compensation and Benefits.

<sup>78</sup> Response to Discovery, OC-424, Cardio Wellness Pilot Presentation.

<sup>79</sup> Response to Discovery, OC-424, Cardio Wellness Pilot Presentation.

<sup>80</sup> Response to Discovery, OC-424, Cardio Wellness Pilot Presentation and interview with Mike Sullivan, PHI Manager of Compensation & Benefits.

<sup>81</sup> Interview with Mike Sullivan, PHI Manager of Compensation & Benefits.

PHI is considering expanding its retiree wellness programs.<sup>82</sup> PHI's proactive use of wellness programs to reduce medical claims costs is commendable.

**PHI is expanding its employee benefits communications and education programs.** PHI conducted a survey of 683 employees in 2008. The survey focused on medical benefits consumer behavior and understanding. The survey was developed by an industry group, the Benefits Roundtable.<sup>83</sup> The survey results were benchmarked against the responses of 15,000 participants from other companies.

The benchmarking results indicate an opportunity to increase consumer ownership of health care decisions. The survey classified the respondents into the following types of health care consumers.

*Table 23-8*  
**PHI Health Care Consumer Survey Results**  
**Consumer Types**  
**Percentages of Employees**

Type	PHI	Benchmark
Uninformed Consumers	44	43
Nearly Informed Consumers	49	49
Informed Consumers	7	8
<b>Total</b>	<b>100</b>	<b>100</b>
Source: Response to Discovery, OC-430, Informed Consumer Survey, page 7.		

Informed consumers are self-reliant and have a deep knowledge of how to effectively use health care. They take ownership of their health care decisions and effectively communicate with health care professionals. They are aware of health care issues. They know how to find health care information and understand their benefit plans.<sup>84</sup>

The survey results indicate an opportunity to reduce PHI's medical costs through consumer education and communications. The Benefits Roundtable estimates that moving an employee from the nearly informed to the fully informed category saves \$500 in annual health care costs.<sup>85</sup>

The survey indicated the following overall employee satisfaction levels for PHI's health plans.

<sup>82</sup> Response to Discovery, OC-599, 2008 Benefits Strategy, page 30.

<sup>83</sup> Response to Discovery, OC-430. The Benefits Roundtable is part of the Corporate Executive Board.

<sup>84</sup> Response to Discovery, OC-431, Informed Health Care Consumer Survey Results, July 2008, page 4.

<sup>85</sup> Response to Discovery, OC-431, Informed Health Care Consumer Survey Results, July 2008, page 6.

<b>Type</b>	<b>PHI</b>	<b>Benchmark</b>
Satisfied & Very Satisfied	52	50
Neutral	42	44
Dissatisfied & Very Dissatisfied	6	7
Total	100	100
Source: Response to Discovery, OC-430, Informed Consumer Survey, page 31.		

Employee satisfaction with PHI's on-line benefits communications tools and resources was below the benchmark group average.

The study produced the following key recommendations:<sup>86</sup>

- Improve health and benefits communications and education. Improve on-line resources and tools.
- Reduce costs by encouraging the use of nurse-lines as a first step when symptoms appear before making an appointment with a medical provider.
- Reduce costs by promoting preventative care.
- Improve patient-provider interaction. Encourage patients to talk with physicians about their health history, treatment costs, treatment risks and medications.

PHI implemented two new websites for benefits plan participants in August 2008. Prior to that time, PHI's on-line resources could only be accessed at work using PHI's intranet.<sup>87</sup> The new websites can be accessed from home.<sup>88</sup> That provides round the clock access and allows spouses and other dependents to be more involved in benefit plan decisions.<sup>89</sup>

The PHIpeople website contains general HR information including news, policies and forms. The myPHIbenefits website is tailored to individual participants. The myPHIbenefits website includes answers to frequently asked questions and allows participants to view their current benefits elections, options and plan summaries from home.<sup>90</sup>

The Benefits Group plans on adding additional tools to the web-sites, including a web-MD type product that provides general medical information about specific diseases.<sup>91</sup>

<sup>86</sup> Response to Discovery, OC-431, Informed Health Care Consumer Survey Results, July 2008, page 2.

<sup>87</sup> Response to Discovery, OC-586.

<sup>88</sup> The sites are password protected. Retirees have access to the new websites. Previously, retirees did not have on-line access to PHI's benefits information.

<sup>89</sup> Interview with Mike Sullivan, PHI Manager of Compensation & Benefits.

<sup>90</sup> Response to Discovery, OC-586.

<sup>91</sup> Response to Discovery, OC-597.



PHI conducted its 2009 benefits open enrollment process on-line using the myPHIbenefits website. Employee reaction to the new websites has generally been positive. Approximately 55 percent of union employees and 70 percent of management employees have used the sites.<sup>92</sup>

PHI is expanding its communication and education efforts through the use of the websites and its ValueNews newsletter. PHI's prescription drug vendor, CareMark, mails a personalized iBenefit report to each medical plan participant annually. The report includes the participant's prescription drug history for the year and highlights opportunities for savings through the use of generic drugs or mail order pharmacies.<sup>93</sup>

PHI is not currently planning on offering a nurseline. Nurselines are expensive.<sup>94</sup> PHI will re-evaluate the use of nurselines in the future.<sup>95</sup>

### **Retiree Medical**

**Retiree medical is not a cost effective employee benefit.** Retirees participate in the following medical plans.<sup>96</sup>

- PHI PPO
- PHI HMO
- Kaiser HMO
- Horizon HMO
- Kaiser Medicare Plus
- Horizon Medicare Blue
- Aetna Golden Choice

Most retirees select the PHI PPO plan.<sup>97</sup> Medicare eligible retirees can chose from three medicare supplement plans.<sup>98</sup>

Retiree medical care is expensive. The following table shows the average annual claims cost for participants in PHI's retiree medical plans.

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<sup>92</sup> Response to Discovery, OC-597.

<sup>93</sup> Response to Discovery, OC-597.

<sup>94</sup> Interview with Mike Sullivan, PHI Manager of Compensation & Benefits.

<sup>95</sup> Response to Discovery, OC-597.

<sup>96</sup> Response to Discovery, OC-431.

<sup>97</sup> Interview with Mike Sullivan, PHI Manager of Compensation & Benefits and Response to Discovery, OC-981, 2008 SFAS 106 Actuarial report page 16.

<sup>98</sup> The medicare supplement plans will continue even if PHI is successful in its goal of consolidating the other medical plans.

<b>Age Group</b>	<b>PPO</b>	<b>HMO</b>
Age 55 to 64	7,247	7,736
Age 65 and over	3,795	6,542
Source: Response to Discovery, OC-981, 2008 SFAS 106 Actuarial Report, Page 15.		

Retiree medical costs are expected to increase in the future. PHI forecasts medical inflation of 8.0 percent in 2009.<sup>99</sup>

Approximately 70 percent of retirees have a spouse in the plan when they retire.<sup>100</sup> The average pre-medicare couple in the PHI PPO plan has total medical claims of \$14,494. Medical claims paid by the PHI plan fall significantly when the participants become eligible for medicare.<sup>101</sup>

Only about 25 percent of employers subsidize retiree medical benefits.<sup>102</sup> Reducing or eliminating retiree medical benefits is a major industry trend.<sup>103</sup> The current recession has accelerated the trend. Many large corporations view reducing retiree medical subsidies as one of the best ways to cut costs. According to a recent Standard & Poor's report "reductions have become not only common but expected, with the only question being how much of a reduction in benefits or an increase in cost will be directly placed on individuals."<sup>104</sup>

**[BEGIN CONFIDENTIAL]**

**[END CONFIDENTIAL]**

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<sup>99</sup>Response to Discovery, OC-981, 2008 SFAS 106 Actuarial report page 12. The medical inflation rate is expected to steadily fall to 5.0 percent in 2015 and stay at that level for subsequent years.

<sup>100</sup> Estimated from information on page 15 of the 2008 PHI SFAS 106 Actuarial Report.

<sup>101</sup> The retiree medical plans have a medicare carve-out. Under the carve-out, PHI medical insurance is secondary to medicare. The amount paid by PHI is determined in a two step process. First the amount that would be paid in the absence of medicare is determined. Then the medicare reimbursement is deducted from that amount. Response to Discovery, OC-981, 2008 SFAS Actuarial Report, page 24.

<sup>102</sup> Response to Discovery, OC-76 (restricted), AON Benefits Survey, question 11.

<sup>103</sup> Response to Discovery, OC-599, PHI 2008 Benefits Strategy, page 25.

<sup>104</sup> S&P 500 2008: Pensions And Other Post Employment Benefits, Standard & Poor's, June 2, 2009, pages 16 and 17.

<sup>105</sup> Interview with Mike Sullivan, Manager of Compensation & Benefits.

<sup>106</sup> The retirees can purchase medical coverage at full cost from PHI. IBEW Local 1900 is the Pepco union. Local 1900 is PHI's largest union.

<sup>107</sup> Interview with Mike Sullivan, Manager of Compensation & Benefits.

PHI does not intend to eliminate retiree medical subsidies for employees who were hired prior to 2005. PHI made a commitment to those employees during their working years to provide retiree medical benefits. That commitment is the sole reason for continuing retiree medical subsidies. PHI would eliminate retiree medical subsidies entirely if not for that historical commitment.<sup>108</sup>

Management employees hired after 2004 are not eligible for retiree medical subsidies. ACE and Delmarva union employees hired after 2004 are eligible if they meet the age and service requirements when they retire. That disparity will discourage union supervisors from accepting promotions to management positions.

Eliminating and reducing retiree benefits has been a major trend in the United States for many years. Employees must work at PHI until they are 55 years old to become eligible for retiree medical. Most employees hired after 2004 are decades away from becoming eligible.<sup>109</sup>

The “historical commitment” to post-2004 hires is weak and may not justify subsidizing retiree medical benefits for those employees. PHI’s unions have demonstrated a willingness to negotiate constructively on retiree medical benefits. PHI should work with its ACE and Delmarva unions to address retiree medical issues pertaining to employees hired after 2004.

**PHI’s exposure to retiree medical cost increases is limited by cost caps.** Total claims costs for eligible participants are shared between PHI and the retirees through monthly retiree contributions, deductibles and co-payments. PHI implemented retiree medical cost caps for some retiree groups to limit its share of the costs. Many S&P 500 companies have implemented retiree medical cost caps in recent years.<sup>110</sup>

The cost caps trigger increases in retiree contributions as costs increase. The cost caps will not be increased for inflation.<sup>111</sup> As a result, the retirees will bear an increasing share of the medical plan costs over time.

The cost caps are stated as annual dollar amounts per participant and vary by retiree group and vintage. The cost cap for one medicare eligible group of retirees is \$4,200. If the average claims cost for that group exceeds \$4,200 in a year, retiree monthly contributions are increased so that PHI’s share of the group’s cost averages \$4,200 per participant.<sup>112</sup>

The following table shows the cost caps for the various employee groups.

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<sup>108</sup> Interview with Mike Sullivan, Manager of Compensation & Benefits.

<sup>109</sup> In addition to working until age 55, the employees must also have 10 years of experience at PHI. All of the post-2004 hires are at least five years away from eligibility.

<sup>110</sup> S&P 500 2008: Pensions And Other Post Employment Benefits, Standard & Poor’s, June 2, 2009, page 12.

<sup>111</sup> Response to Discovery, OC-600.

<sup>112</sup> All of the group participants pay the same monthly contribution amounts. Participants with high claims pay the same contribution amounts as participants with low claims.

<b>Heritage Company</b>	<b>Retirement Date</b>	<b>Age 55 to 64</b>	<b>Age 65 &amp; Over</b>
ACE	Before 1996 <sup>113</sup>	None	None
ACE	1996 to 2007	11,226	3,554
ACE	After 2007	11,226	4,100
Delmarva	Before 1995 <sup>114</sup>	None	None
Delmarva	After 1994	8,700	4,100
Pepco	Before 2005	None	None
Pepco	After 2004	10,000	4,200
PHI Management	After 2004	10,000	4,200

Source: Response to Discovery, OC-981, 2008 PHI SFAS 106 Actuarial Report, pages 20 and 23.

The ACE Caps for post-65 retirees were triggered in 2005, 2006 and 2007.<sup>115</sup> None of the other caps have been triggered to date.<sup>116</sup>

Some ACE and Delmarva employee groups do not have cost caps. However, the participants in those groups are generally medicare eligible which significantly reduces PHI's cost exposure. Pepco does not have cost caps for participants who retired prior to 2005. Most pre-2005 retirees will probably be medicare eligible before those caps are triggered.

The retiree medical caps effectively limit PHI's exposure to retiree medical cost increases for pre-medicare participants. The cost caps will gradually increase the share of retiree medical costs paid by the retirees.

**PHI should consider increasing the monthly contributions paid by the pre-medicare participants in its retiree medical plans.** PHI's policy is to set contributions for pre-medicare participants equal to the contributions paid by active employees in the same medical plan. The monthly contribution for the PHI PPO plan is \$125 for an employee with one dependent. The pre-medicare couples in that plan pay a monthly contribution of \$125. The contributions for medicare eligible retirees equal one-half the active employee contribution level.<sup>117</sup>

PHI sets the pre-medicare contributions equal to the active employee contributions because the retirees were used to paying that amount as employees. There is no other rationale for that policy.<sup>118</sup>

<sup>113</sup> Actual cut off date was April 1, 1996.

<sup>114</sup> Actual cut off date was July 1, 1995 for management and local 1238 and January 1, 1996 for local 1307.

<sup>115</sup> PHI comments on Overland Draft Audit Report. The caps were triggered for medicare eligible retirees who retired between 1996 and 2007.

<sup>116</sup> Interview with Mike Sullivan, PHI Manager of Compensation & Benefits.

<sup>117</sup> Pepco retirees do not pay any monthly contribution if they retired prior to 1994. Delmarva retirees pay lower fixed amounts if they retired prior to 1995.

<sup>118</sup> Interview with Mike Sullivan, PHI Manager of Compensation & Benefits.

The contribution policy results in pre-medicare participants paying a lower overall share of their medical costs than active employees. PHI's policy is to set active employee contributions equal to 20 percent of plan costs. Pre-medicare couples in the PPO plans have average claims of \$14,494 a year and pay annual contribution of \$1,500. Those contributions only recover ten percent of the their claims costs.

Pre-medicare couples in the HMO plans have average annual claims costs of \$15,472 and pay annual contributions of \$1,020 a year.<sup>119</sup> Those contributions only recover seven percent of their claims costs.

Medicare eligible couples in the PPO plan pay contributions of \$62.50 a month. Those contributions recover 20 percent of their total claims costs. Providing a larger subsidy to early retirees than to medicare eligible retirees is inconsistent with PHI's workforce planning objectives.

PHI's contribution policy is inconsistent with industry practice. **[BEGIN CONFIDENTIAL]**

**[END CONFIDENTIAL]** PHI's 20 percent policy for active employees implies a contribution of \$242 per month. The current contribution level for those couples is only \$125 per month.

PHI is not aware of any legal restrictions that limit its ability to increase retiree medical contributions.<sup>122</sup> PHI's historical commitment to providing retiree medical benefits does not include limiting retiree contributions to levels that are below industry practice. The historical commitment does not prevent equitable cost sharing between PHI and the participants. PHI should consider a policy of requiring retirees to pay contributions equal to at least 25 percent of the average claims costs for their group. The new contribution policy should be implemented in 2010.<sup>123</sup>

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<sup>119</sup> The active employee contribution for the HMO plan is \$85 a month for an employee and one dependent. Response to Discovery, OC-598 (restricted).

<sup>120</sup> Response to Discovery, OC-598 (restricted). Three of the members of PHI's peer group do not have retiree medical benefits.

<sup>121</sup> Average for all 15 utilities including PHI.

<sup>122</sup> Response to Discovery, OC-600.

<sup>123</sup> This policy will only impact contributions for a few years. After that, the benefit caps will increase contributions to levels above 25 percent as medical inflation causes retiree medial claims to rise.

## Pension

**PHI's traditional defined benefit pension plan covers its entire workforce.** PHI has a traditional defined benefit pension plan. The alternative is a defined contribution plan.<sup>124</sup> Six of the utilities in PHI's benefits comparison group have defined benefit plans for management employees. The other twelve had defined contribution plans.<sup>125</sup>

According to PHI, defined contribution plans are only marginally less expensive for companies such as PHI that have low employee turnover. The PHI Benefits Group does not favor defined contribution pension plans.<sup>126</sup>

PHI's pension plan had 4,819 active employee participants as of January 2008.<sup>127</sup> That represented virtually all of PHI's permanent workforce. The plan has 4,687 current benefit recipients. The recipients average 71 years of age and receive an average benefit of \$15,210 per year.<sup>128</sup>

The pension plan includes six different sub-plans that apply to different groups of employees. The benefits formulas and early retirement penalties are different for each of the sub-plans. The multiple sub-plans add unnecessary complexity and create inequities between employee groups. PHI should work to standardize the terms of the pension plan sub-plans.

The ACE sub-plan encourages early retirements and is inconsistent with PHI's work force planning objectives. That issue is discussed in detail in the work force planning section of Chapter 21.

PHI implemented a new sub-plan for management employees and Pepco union employees hired after 2004.<sup>129</sup> The new sub-plan is similar to the previous plan for those employees, but has a modestly less generous benefits formula.<sup>130</sup>

**PHI expects its pension costs to increase by \$56 million in 2009.** PHI's pension costs were \$24 million in 2008.<sup>131</sup> PHI expects its 2009 pension costs to be \$80 million.<sup>132</sup> That represents

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<sup>124</sup> Under defined contribution plans the Company credits a specified percentage of the employee's salary to the employee's tax deferred pension account. Investment income is credited to the account at a specified annual rate (for example the 30 year treasury yield). The employee can elect to receive a lump sum distribution of their account when they terminate employment, or they can receive the value in the account through an annuity.

<sup>125</sup> Response to Discovery, OC-598 (restricted). The total of six includes PHI. Note: The data in Response to Discovery, OC-598 is somewhat inconsistent with the data for individual utilities reported on the tables attached to the S&P Pensions and Other Post Employment Benefits Report (June 2, 2009). If the Response to Discovery, OC-598 data is incomplete or inaccurate, PHI should provide corrected data in its comments to this report.

<sup>126</sup> Interview with Mike Sullivan, PHI Manager of Compensation & Benefits.

<sup>127</sup> Response to Discovery, OC-981, 2008 Pension Actuarial Report, page 6.

<sup>128</sup> Response to Discovery, OC-981, 2008 Pension Actuarial Report, page 11.

<sup>129</sup> Response to Discovery, OC-428.

<sup>130</sup> Interview with Mike Sullivan, PHI Manager of Compensation & Benefits.

<sup>131</sup> PHI 2008 10-K, page 192. Includes costs capitalized as part of the cost of construction projects.

<sup>132</sup> Response to Discovery, OC-982.

an increase of 233 percent. The increase was caused by investment losses in PHI's trust fund in 2008.

The fair value of the assets in PHI's pension trust was \$1.6 billion as of December 2007. The trust had \$403 million in investment losses in 2008.<sup>133</sup>

The 2008 losses increase PHI's net periodic pension cost in two ways. First the losses reduce the trust's assets. As a result, investment income will be lower in 2009 and future years. Second, the losses are deferred and amortized over the remaining service lives of the active employees included in the plan.<sup>134</sup> That amortization is included in pension costs in 2009 and future years.

The losses equaled 25 percent of the trust's 2008 beginning market value. The losses do not appear to be the result of an overly risky investment policy. PHI's actual investments returns were nine percent in 2007 and twelve percent in 2006.<sup>135</sup> The Standard & Poor's 500 equity index had a negative overall return of 37 percent in 2008. The market value of the assets held in S&P 500 company pension trusts fell by an average of 27 percent in 2008.<sup>136</sup>

As of December 2007, PHI's asset allocation was 60 percent equity, 33 percent debt and 7 percent alternative investments.<sup>137</sup> According to PHI, its risk posture was slightly below average relative to other pension plans.<sup>138</sup> The average equity allocation for S&P 500 companies was 61 percent in 2007.<sup>139</sup>

PHI's current target asset allocation is shown below.

<b>Category</b>	<b>Percent</b>
Equity	60
Debt	30
Other	10
<b>Total</b>	<b>100</b>
Source: 2008 PHI 10-K, page 194 and Response to Discovery, OC-982.	

PHI assumes its pension trust assets will earn an investment return of 8.25 percent in its pension cost calculations. The investment return assumption reflects the target asset allocation.

<sup>133</sup> The loss amount includes both realized and unrealized losses. PHI 2008 10-K, page 191.

<sup>134</sup> Response to Discovery, OC-981, 2008 PHI Actuarial Report, page 16.

<sup>135</sup> Response to Discovery, OC-981, 2008 PHI Actuarial Report, page 4.

<sup>136</sup> S&P 500 2008: Pensions And Other Post Employment Benefits, Standard & Poor's, June 2, 2009, page 4.

<sup>137</sup> 2008 PHI 10-K page 194. Alternative investments include private equity and real estate funds. Response to Discovery, OC-602.

<sup>138</sup> 2008 PHI 10-K page 194.

<sup>139</sup> S&P 500 2008: Pensions And Other Post Employment Benefits, Standard & Poor's, June 2, 2009, page 8.

PHI's equity allocation was 50 percent as of December 2008.<sup>140</sup> The average for S&P 500 companies was 44 percent as of December 2008.<sup>141</sup> The average pension investment return assumption was 7.95 percent for S&P 500 companies as of December 2008.<sup>142</sup> PHI should assess its asset allocation targets and investment return assumption to confirm they reflect consistent and appropriate levels of investment risk.

The losses significantly eroded the funding status of PHI's pension plan. The following tables shows the funding status as of December 2007 and 2008.

<b>Description</b>	<b>2007</b>	<b>2008</b>
Projected Benefit Obligation	1,701	1,753
Plan Assets	1,631	1,123
Percent Funded	96	64
Source: PHI 2008 10-K, page 191 and Response to Discovery, OC-981, 2008 Actuarial Report, page 4.		

The average pension funding percentage for S&P 500 companies was 78 percent as of December 2008.<sup>143</sup> PHI plans to make a voluntary contribution of \$300 million to its pension trust in 2009.<sup>144</sup> That contribution would increase the December 2008 funding percentage to 81 percent.

PHI retiree medical plan funding was also adversely impacted by the 2008 stock market declines. PHI funds a portion of its other post-employment obligations, including retiree medical, through contributions to trust funds. The following table shows the funding status for those benefits as of December 2007 and 2008.

<b>Description</b>	<b>2007</b>	<b>2008</b>
Benefit Obligation	620	653
Plan Assets	234	192
Percent Funded	38	29
Source: PHI 2008 10-K, page 191.		

<sup>140</sup>2008, PHI 10-K page 194.

<sup>141</sup>S&P 500 2008: Pensions And Other Post Employment Benefits, Standard & Poor's, June 2, 2009, page 8.

<sup>142</sup>S&P 500 2008: Pensions And Other Post Employment Benefits, Standard & Poor's, June 2, 2009, page 5.

<sup>143</sup> S&P 500 2008: Pensions And Other Post Employment Benefits, Standard & Poor's, June 2, 2009, page

5.

<sup>144</sup> 2008 PHI 10-K, page



The average OPEB funding percentage was 20 percent as of December 2008 for the 293 S&P 500 companies that offer retiree medical benefits.<sup>145</sup>

## Savings Plan

**PHI's retirement savings plan design is consistent with industry practice.** In addition to its pension plan, PHI has a retirement savings plan that includes almost all employees. The retirement savings plan is often referred to as the 401(k) plan.<sup>146</sup> The plan allows employees to make tax deductible contributions to personal tax deferred investment accounts. The plan is administered by Vanguard and has 66 investment options.<sup>147</sup>

PHI employees invest approximately 10 percent of their base pay in the savings plan.<sup>148</sup> For management employees, PHI matches the employee investments on a dollar for dollar basis up to three percent of base salary. PHI provides a fifty percent match for the next three percent of base salary. PHI does not provide any matching for contributions exceeding six percent of base salary.<sup>149</sup>

The matching for ACE and Delmarva union employees is modestly less generous. PHI provides a fifty percent match up to six percent of base salary for those employees.<sup>150</sup> PHI should consider standardizing the matching between management and union employees as part of its overall approach to revising its retirement benefit plans.

The PHI matching contributions are made in PHI common stock to encourage employee ownership of PHI stock. The participants can transfer the matching amounts to other investment options immediately.<sup>151</sup>

The savings plan had assets of \$402 million as of mid-December 2008, with fourteen percent invested in PHI common stock.<sup>152</sup> Total savings plan assets declined by 28 percent in 2008.<sup>153</sup> The 2008 stock market declines provided an opportunity to educate employees about financial planning.<sup>154</sup>

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<sup>145</sup> S&P 500 2008: Pensions And Other Post Employment Benefits, Standard & Poor's, June 2, 2009, page 10.

<sup>146</sup> Response to Discovery, OC-432. Value News 2008 Enrollment Guide For Management Employees, page 22.

<sup>147</sup> Response to Discovery, OC-428. Most of the options are stock and bond mutual funds. Other options include PHI common stock and a money market fund.

<sup>148</sup> Interview with Mike Sullivan, PHI Manager of Compensation & Benefits.

<sup>149</sup> Response to Discovery, OC-428.

<sup>150</sup> Response to Discovery, OC-75, Retirement Savings Plan, Summary Plan Provisions.

<sup>151</sup> Response to Discovery, OC-428.

<sup>152</sup> Response to Discovery, OC-603 (restricted).

<sup>153</sup> Through December 17, 2008. Response to Discovery, OC-603 (restricted).

<sup>154</sup> Interview with Mike Sullivan, PHI Manager of Compensation & Benefits.

PHI's matching contributions totaled \$12 million in 2008.<sup>155</sup> The matching percentages and thresholds used by PHI are used by many other companies. The PHI retirement savings plan design is consistent with industry practice.<sup>156</sup>

**Productivity Analysis**

**PHI's productivity analysis approach is decentralized.** PHI uses a decentralized approach to productivity analysis. PHI does not measure productivity at an enterprise level because of differences in the nature of the work performed by its various organizations.<sup>157</sup> The leadership of each department is responsible for analyzing employee productivity within their organization.<sup>158</sup>

PHI does not have a centralized group to oversee productivity measurement processes or standards.<sup>159</sup> PHI does not provide guidance to its departments on calculating metrics or measuring productivity. The Power Delivery business unit does not have any written guidelines for productivity metrics.

PHI does not maintain a catalog of the key performance indicators used by its departments. PHI participates in some industry benchmarking surveys. However, those surveys do not focus on employee productivity.<sup>160</sup>

Power Delivery and Corporate Services departments use a variety methods to monitor employee productivity. The following table summarizes the methods used by Corporate Services departments.

Department	Approach / Metrics
Strategic Planning	Balanced Scorecard, Budgets, PAS Goals
Finance	Balanced Scorecard, Budgets, PAS Goals
Controller	Supervisor Oversight, PAS Goals
Internal Audit	Balanced Scorecard, Audit Plan, PAS Goals
Information Systems	Service Level Metrics
Human Resources	HR Dashboard, Balanced Scorecard, PAS Goals, Management Tracking System

Source: Response to Discovery, OC-451.

The IT Department uses approximately 30 service level metrics. The service level metrics focus on service quality and are described in more detail in Chapter 24.

<sup>155</sup> PHI 2008 10-K, page 196.

<sup>156</sup> Response to Discovery, OC-76 (restricted), AON Benefits Survey, questions 25, 31 and 33. Also OC-598 (restricted).

<sup>157</sup> PHI's balanced scorecard process provides some insight into productivity at a Departmental level. The balanced scorecards are prepared at a departmental level and typically include six to eight financial and other goals.

<sup>158</sup> Response to Discovery, OC-455.

<sup>159</sup> Interview with Karen Francks, PHI HR Manager Performance Process & Technology, Jeff Mittler, Manager ACE Regional Resources and Sandra Fisher, Manager Distribution Engineering Group.

<sup>160</sup> Response to Discovery, OC-73.

The following table shows the productivity approaches used by Asset Management groups.

<b>Table 23-16 Asset Management Productivity Assessment Approach</b>	
<b>Group</b>	<b>Approach / Metrics</b>
System Planning	Project Status Tracking System
Transmission Planning	Manual Project Tracking System
Distribution Engineering	Designer Productivity Report, Dashboard
Transmission & Substation Engineering	Supervisor Oversight, Budgets
System Protection & Communications	Supervisor Oversight, Budgets
Reliability Group	Supervisor Oversight, Budgets
Environmental Services	Supervisor Oversight, Budgets
Project Management & Budgeting	Supervisor Oversight, Budgets
Source: Response to Discovery, OC-451.	

The distribution engineering designer productivity report tracks the number of jobs and the capital dollars processed by each designer. The report shows jobs and capital dollars per hour of work for each designer. The distribution engineering dashboard includes metrics on meeting scheduled completion dates, budget versus actual spending, unit costs for new services installations, and material requisition accuracy.<sup>161</sup> The System Planning group’s Project Status Tracking System reports estimated versus actual hours worked by project.<sup>162</sup>

The approaches used by the Utility Operations Department are shown below.

<b>Table 23-17 Utility Operations Productivity Assessment Approach</b>	
<b>Area</b>	<b>Approach / Metrics</b>
System Operations Center	Supervisor Oversight, PAS Goals
Regional Operations	Metrics Dashboard, Supervisor Oversight
Source: Response to Discovery, OC-451.	

Systems Operations includes system operators and work dispatchers. Those employees perform repetitive shift work on a 24 hour a day schedule. PHI should implement metrics to assess productivity in that area.

ACE Region dashboard shows fifteen metrics by district.<sup>163</sup> The metrics address:

- Budget versus actual headcount.
- Budget versus actual costs.
- Percentage of training and safety meetings completed on inclement weather days.
- Estimated versus actual hours for construction projects.
- Overtime rates.

<sup>161</sup> Interview with Karen Francks, PHI HR Manager Performance Process & Technology, Jeff Mittler, Manager ACE Regional Resources and Sandra Fisher, Manager Distribution Engineering Group.

<sup>162</sup> Response to Discovery, OC-451.

<sup>163</sup> Response to Discovery, OC-1184. The report heading is Atlantic Region Metrics.

- Preventative maintenance project completion rate.
- Street light repairs completed within five days.
- Trouble, meter and street light jobs completed per day.
- Unit costs for installation of new services.

The Operations Department also prepares monthly Principal Process/Productivity Measures reports showing the following metrics for each of PHI's three regions.<sup>164</sup>

- Outage orders completed per month and average cost per order.
- Corrective orders completed per month and average cost per order.
- Vegetation management actual versus planned.
- Maintenance on critical items actual versus planned.
- Priority feeder work actual versus planned.

The PHI Operations Department has a monthly team meeting to review the metrics. The ACE Region also has weekly team meetings. According to the ACE Regional Resources Manager, productivity levels are similar in all four of ACE's districts.<sup>165</sup> The ACE region does not compare productivity in the four ACE districts to levels in Delmarva and Pepco districts.

The following table shows the approaches used by Safety and Strategic Services Departments.

**Table 23-18**  
**Safety & Strategic Services**  
**Productivity Assessment Approach**

Departments	Approach / Metrics
Vehicle Resource Management	Preventative Maintenance and Vehicle Availability Metrics
Supply Chain	Storeroom Throughput and Inventory Accuracy Metrics
Safety	Field Observations, Safety Meetings and Safety Investigations Metrics
Facilities & Real Estate	Supervisor Oversight
Security	Supervisor Oversight
Training	Supervisor Oversight.

Source: Response to Discovery, OC-451.

The fleet metrics are discussed in more detail in Chapter 25, Other Support Services.

The following table shows the productivity assessment approaches used in Customer Care Departments.

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<sup>164</sup> Response to Discovery, OC-1184. There are three process reports: (1) resource area performance; (2) operate the system; and (3) construct and maintain the system. Corrective maintenance orders are orders for follow up work to outage orders. It is work that does not have to be processed immediately. The Principle Process/Productivity Reports also have safety and reliability metrics and repeat some of the financial and productivity metrics found on the ACE Region dashboard.

<sup>165</sup> Interview with Karen Francks, PHI HR Manager Performance Process & Technology, Jeff Mittler, Manager ACE Regional Resources and Sandra Fisher, Manager Distribution Engineering Group.

Departments	Approach / Metrics
Meter Services	Hours Per Job and Revenue Protection Metrics
Billing Services	Accuracy and Timeliness Metrics
Call Centers	Metrics, Variance Analysis, Call Monitoring
Credit Collection & Remittance	Collection Metrics, Manual Remittance Processing Time
Source: Response to Discovery, OC-451.	

Customer Care has a monthly report on Key Performance Indicators.<sup>166</sup> The customer care metrics are discussed in more detail in Chapter 20. The call center key metrics include:

- Percentage of calls answered in 30 seconds.
- Percentage of calls resolved in first call.
- Percentage of calls abandoned.
- Customer satisfaction survey responses

Responsibility for measuring and assessing productivity is left to the individual Corporate Services and Power Delivery Departments. PHI does not have an overall strategy for productivity assessment and has not developed standards or guidelines to ensure consistency between departments. PHI's current productivity assessment process lacks adequate oversight, governance and cross-functional integration.

### **Business Intelligence Strategy**

**PHI recognizes the need to improve its productivity assessment capabilities.** PHI's operational and financial data is currently contained in multiple databases located throughout the business. Extracting and analyzing data across platforms is frequently difficult and time consuming. PHI is dependent on analysts to prepare key performance metrics. The analysts extract data from standard reports in SAP and other systems and load the information into excel spreadsheets for further processing. The analysts are frequently not able to provide the information on a timely and consistent basis because of resource constraints.<sup>167</sup>

PHI adopted an enterprise information management (EIM) and business intelligence (BI) strategy in 2008 to improve its decision making and operational efficiency.

EIM is a set of best practices for managing the information lifecycle from producer to consumer. EIM is a framework of common information management capabilities used across the enterprise.<sup>168</sup>

<sup>166</sup> Response to Discovery, OC-560.

<sup>167</sup> Response to Discovery, OC-770, SAP Flexible Reporting Tool, Project Charter, page 3.

<sup>168</sup> Response to Discovery, OC-764, PHI EIM and BI Strategy, page 6.

BI is the process of transforming data into information that supports strategic planning by enabling employees at all levels to access, interact with, and analyze data to manage the business and improve performance and operating efficiency.<sup>169</sup>

Information is one of PHI's most strategic assets. Currently that asset is underutilized. The EIM/BI strategy will leverage PHI's investment in information by strategically aligning people, processes and projects to save money and increase operational efficiency.<sup>170</sup> The EIM/BI enterprise approach reduces the total cost of meeting PHI's information needs.<sup>171</sup>

PHI currently has an information poor environment. The EIM/BI mission is to create an information rich culture at PHI. Mature EIM and BI concepts are new to PHI. Implementing BI requires a new way of information-centric thinking for PHI.<sup>172</sup>

A key aspect of PHI's strategy is establishing a governance program for efficiently managing information processes. PHI's EIM/BI strategy incorporates the concepts of "SCORE."

- Standardize processes.
- Consolidate data sources.
- Optimize information accessibility.
- Reduce organizational information silos.
- Enforce data integrity and quality.

Data quality includes the concept of Data Stewardship. That concept includes establishing clear responsibility for data ownership and a common set of information definitions and rules.<sup>173</sup>

BI links operational, financial and performance data together to enable better decision making. BI extracts and combines data from existing transactional systems and places the data into a staging area for analysis and reporting. PHI is using SAP's Business Information Warehouse (SAP BW) product for some SAP specific queries and reports.<sup>174</sup> However, PHI is exploring other alternatives for warehousing data involving operational systems.<sup>175</sup>

BI enables cross-functional and cross-system analysis and reporting. Reporting is currently application and module specific using fixed report formats with minimal user interactions. Under BI, analysis and reporting crosses applications and is interactive with users. BI allows a large

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<sup>169</sup> Response to Discovery, OC-764, PHI EIM and BI Strategy, page 5.

<sup>170</sup> Response to Discovery, OC-764, PHI EIM and BI Strategy, page 15.

<sup>171</sup> Response to Discovery, OC-764, PHI EIM and BI Strategy, page 20.

<sup>172</sup> Response to Discovery, OC-764, PHI EIM and BI Strategy, page 30.

<sup>173</sup> Response to Discovery, OC-764, PHI EIM and BI Strategy, page 17.

<sup>174</sup> PHI acquired SAP BW in 1999 and upgraded to version 7.0 in 2008. PHI also expanded its server capacity in 2008 to address SAP BW needs. Response to Discovery, OC-764, PHI EIM and BI Strategy, page 8.

<sup>175</sup> PHI comments on Overland Draft Audit Report.

number of users to analyze the data without impacting the performance of the existing transactional systems.<sup>176</sup>

The benefits of BI include:<sup>177</sup>

- Ability to extract relevant data from multiple applications and databases.
- On-demand analysis and reporting capability.
- Expanded analysis capabilities.
- Dashboard style real time reporting.
- Exception “alert” reporting based on pre-defined business rules.
- Stable repository for historical data.

BI allows managers to access data and create personalized reports at their desks through internet portals. BI provides managers and employees with self-service capability using a standardized set of analysis and reporting tools including:

- Dashboards that refresh automatically
- Formatted reports and report templates
- Ability to perform calculations on reports
- Hyper-links to underlying data and reports (drill-down capability)
- Search capability
- Data filters and sorting
- Multi-pass and conditional queries
- Hierarchies
- Trend and other statistical analysis
- Predictive analysis and simulations
- Graphics
- Exception reporting alerts based on pre-defined business rules
- Broadcasting reports to employee lists
- Save queries and data in retrievable documents.

Mature EIM programs include special BI competency centers (BICC) that establish standards, manage the information infrastructure and replicate best practices. The BICCs are cross-departmental organizations staffed with internal consultants who manage the requests and questions of other departments.<sup>178</sup>

The BICC promotes repeatable best practices through the efficient application of a standard BI methodology. The BICC effectively commoditizes and compartmentalizes the management and delivery of information through the use of standards.

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<sup>176</sup> Response to Discovery, OC-747, NorthHighland SAP Business Warehouse Overview.

<sup>177</sup> Response to Discovery, OC-764.

<sup>178</sup> Response to Discovery, OC-764, PHI EIM and BI Strategy, page 18.

The BICC defines the BI vision, controls funding, establishes standards, builds the technological blueprint, develops user skills and manages programs. The BICC also manages the data catalog. The data catalog is a searchable table that lists the description, location, owner and uses of source data.

PHI's EIM and BI strategy recommended establishing a BICC. PHI will investigate and develop the BICC concept further in the second half of 2009.<sup>179</sup> PHI also plans on developing information design and use standards in 2009.

PHI's EIM and BI strategy in 2008 was to use proof-of-concept projects to establish governance standards and demonstrate the potential benefits of BI.<sup>180</sup> The following BI projects were completed in 2008.<sup>181</sup>

- Upgrade SAP Business Warehouse to Netweaver 7.0.
- Utility Operations Flexible Reporting - Financial.
- Utility Operations Flexible Reporting - Process View.
- Budget System Interfaces and Reporting.

PHI issued a request for proposals to acquire a BI platform application in January 2009.<sup>182</sup> The RFP was sent to the top seven BI platform vendors. PHI selected MicroStrategy as its enterprise BI platform in August 2009 after a detailed study of the BI market, vendor demonstrations and a web auction.<sup>183</sup>

MicroStrategy is a leading independent BI solution provider.<sup>184</sup> MicroStrategy has been used in large BI deployments at companies such as PPL, Southern California Edison, eBay, McDonald's, GEICO, and Yahoo.<sup>185</sup> MicroStrategy's independent status increases flexibility in conjunction with applications provided by other vendors. MicroStrategy scored high in the areas of price and functional/technical capabilities.

PHI is installing MicroStrategy's latest release.<sup>186</sup> The product has high scalability, fast performance, easy but flexible report creation capabilities, advanced analytical capabilities and strong security.<sup>187</sup>

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<sup>179</sup> Response to Discovery, OC-1202, PHI Enterprise BI Initiative, Presentation to BI Steering Committee, February 11, 2009. OC-772.

<sup>180</sup> The primary purposes of the proof-of-concept projects are education and proof-by-example.

<sup>181</sup> Response to Discovery, OC-1205.

<sup>182</sup> Response to Discovery, OC-771.

<sup>183</sup> PHI comments on Overland Draft Audit Report and response to request for additional information.

<sup>184</sup> MicroStrategy is not owned by an IT megavendor such as IBM, SAP, Microsoft or Oracle. PHI comments on Overland Draft Audit Report.

<sup>185</sup> PPL Corporation is the parent company of PPL Electric Utilities (formerly Pennsylvania Power and Light).

<sup>186</sup> MicroStrategy 9.

<sup>187</sup> PHI comments on Overland Draft Audit Report, response to request for additional information.



Two BI projects are scheduled for completion in early 2010.<sup>188</sup>

- Call Center Performance Management Reporting System
- Asset Reliability Metrics

Three more BI projects are scheduled for 2010.

- Field Force Management Metrics
- Work Management Metrics
- DOE Stimulus Grant Reporting.

Other BI projects, such as the HR dashboard and Customer Care initiatives, will be prioritized by the BI Management Group as resources become available from projects already scheduled.<sup>189</sup>

The BI projects are designed to reduce manual processing and improve the timeliness of reporting. Reducing manual processing allows the analysts to spend more time on higher value analytical tasks. The projects will improve access to data and expand PHI's capabilities to analyze the data.<sup>190</sup> The projects will be completed based on prioritization and funding availability.<sup>191</sup>

EIM and BI have the potential to significantly improve PHI's productivity assessment process. The current process is cumbersome and inefficient. The current process does not provide distributed access to useful information.

EIM and BI can be implemented relatively quickly. PHI estimates that most of the work would be completed within two years.<sup>192</sup> PHI's preliminary rough estimate of the two year implementation cost is \$2.4 million. The primary implementation costs are temporary staffing and consultants.

EIM and BI provide an opportunity to convert PHI into a metrics driven information rich culture. EIM and BI represent a set of industry best practices. PHI should continue its efforts to implement EIM/BI in 2010.

### **Internal Benchmarking - District Operations**

**The Operations Department should implement an internal benchmarking program.** The Operations Department does not compare productivity in ACE's four districts to productivity in

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<sup>188</sup>PHI comments on Overland Draft Audit Report, response to request for additional information.

<sup>189</sup>PHI comments on Overland Draft Audit Report, response to request for additional information.

<sup>190</sup> Response to Discovery, OC-767.

<sup>191</sup> Response to Discovery, OC-1202, PHI Enterprise BI Initiative, Presentation to BI Steering Committee, February 11, 2009.

<sup>192</sup> Eighty percent of PHI's information needs that are currently in the planning stage could be met in 18 to 24 months. A steady and stable environment would be attained within the third year. Response to Discovery, OC-764, PHI EIM and BI Strategy, page 6.

Delmarva and Pepco districts.<sup>193</sup> The large scope of PHI's operations provides a significant opportunity for internal productivity benchmarking. Comparing productivity levels across the three utilities would facilitate the replication of best practices and the standardization of operating procedures.<sup>194</sup>

Dimensions for benchmarking include:

- Geographical Location (district)
- Organization/Employee Group (Troubleman, Overhead lineman, etc)
- Activity Type (outage orders, maintenance orders, construction)
- Resource Type (headcount, vehicles, cost, hours)
- Output Quality (reliability, completion durations, backlogs).

The benchmarking should include overall productivity indicators for each significant employee group, including headcount to customer ratios.

The metrics should be calculated on a per customer and per feeder mile basis to normalize for differences in district size. Differences in working conditions compromise the comparability of productivity metrics. Internal benchmarking analysts have the benefit of direct access to subject matter experts within each of the participating districts.

PHI Utility Operations should implement an internal benchmarking program that compares and analyzes employee productivity across ACE, Delmarva and Pepco districts.

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<sup>193</sup> ACE's four districts are Cape May, Glassboro, Pleasantville and Winslow.

<sup>194</sup> Standardizing operating procedures reduces training costs and facilitates resource sharing during storm events.

## Chapter 24. Support Services - Information Technology

Information Technology (IT) is housed in PHI Service Company and is one of its largest corporate support functions.

### Summary of Findings

1. In most cases, the IT department met or exceeded audit period Service Level Expectation targets. The IT department maintained approximately 30 service level expectation (SLE) metrics to measure the quality, reliability and time efficiency of various IT services and systems performance. Target performance for SLEs is established by a committee that includes members of the IT department and representatives of the “client” departments that IT serves. Some of the targets are set based on industry benchmark data, including IBM’s “best in class” data. Generally, the department met or exceeded its SLE targets during the audit period.
2. Most of PHI’s major information systems are 10 years old or less and most are either new or have been upgraded within the past five years. However, the legacy customer service systems used by ACE / DPL and Pepco were found in 2005 to be inadequate and in need of integration and replacement. Thus far, no action has been taken to implement a more modern, integrated customer service information system. Overland did not perform a detailed analysis to determine whether PHI’s information systems were up to date. However, a study performed by a team composed of both PHI IT employees and an outside consulting firm, TMG, found that the legacy customer service systems were out of date and in need of replacement. The team found the most viable solution was a commercial, off-the-shelf system. The study found a number of the legacy systems’ components to be either “unsatisfactory” or “failing.” The “C3” system used by ACE and DPL fared somewhat better than the CIS system used by Pepco. To date, PHI has not committed to replacing and integrating the legacy customer service systems. The IT department’s current intention is to replace the system sometime between 2011 and 2014, after the anticipated implementation of automated meter reading.
3. Post merger integration enabled PHI to reduce pre-merger IT budget and staffing levels by about 25%. Most of the staffing reduction occurred prior to our audit period. The budget increased in 2007 due mainly to the transfer of Business Systems and Customer Care “core systems” groups moved from the Power Delivery Utility Operations organization. Adjusted for these transfers, the budget has been flat for several years.
4. Recent IT department business plans seem to indicate that staffing and training budgets are inadequate to provide necessary core systems support while also managing new projects. The 2007/2008 business plan (November, 2006) noted “deep reductions in proposed projects” and stated that the budget has “eliminated initiatives needed to support IT strategies.” The 2008 / 2009 business plan (November, 2007) noted that “the

increased number and business importance of projects led by the Blue Print for the Future and utility integration are driving risks over the plan period” and that “[u]nless these risks are managed we could fail to meet plan objectives.” It cited the need for 26 additional staff to meet plan objectives. It is not possible, given the level of analysis we performed, for Overland to determine whether the concerns expressed are valid, are lobbying by the IT department for a bigger slice of a fixed O&M budget pie, or something in between. As for new projects, as stated above, it is clear that a 2005 study performed in part by an outside consultant determined that the legacy customer service systems should be replaced and integrated, and that as of 2009, this has yet to receive approval and funding.

5. PHI IT does not make use of project management organizations (PMOs) to oversee the development and implementation of large scale projects. A benchmarking study done by the Hackett Group notes that PHI IT does not use PMOs for large-scale project management. The study cites the use of a PMO as a best practice, and noted that PMOs were employed by 70% of the companies in the study peer group.

## **Recommendation**

1. Perform an assessment of the benefits and costs of forming a project management organization (PMO) to oversee development and implementation of large scale projects. A PMO can instill project management discipline by providing project management guidance, ensuring adherence to standardized processes and methodologies, and providing a centralized source for managing project timelines, resources and skills. A benchmarking study performed by the Hackett Group noted that the use of a PMO was a best practice and that PMOs were utilized by IT departments in 70% of peer group companies included in the study. We recommend IT perform a qualitative (project management pros and cons) and quantitative (cost / benefit) analysis to consider whether it makes sense for PHI to adopt a PMO in its IT organization. We also recommend that ACE provide a copy of the results of this analysis to the NJBPU.

## **IT Organization and Budget**

PHI's IT function is headed by Kenneth Cohn, Chief Information Officer (CIO). He reports to Joseph Rigby, PHI's Chief Operating Officer. Cohn also held this position during the audit period.

IT has reduced its staffing and budget in the years since Conectiv and PHI merged as it moved from a “dual geographic-centric model into a single function-centric model.”<sup>1</sup> Most of the savings relating to integration occurred prior to the audit period, primarily in 2003. Just prior to

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<sup>1</sup> Response to Discovery, OC-990 PHI IT Business Plan, 2007-2008, pp 10-11. PHI notes that IT achieved staffing reductions of 25% from pre-merger levels by early 2004.

the merger Conectiv and Pepco IT had a combined O&M budget of \$123 million and staffing of 378 full time equivalents (FTEs). By 2004, this was reduced to \$93 million, with staffing reduced to 284 FTEs. The budget remained flat in 2005 and 2006 at \$93 million. In 2006, the organization was realigned to include mail insertion and business systems analysis, which had been part of Utility Operations. The realigned budget for 2006, with these transfers, was \$112 million. The budget approved in 2007 was \$107 million.

In 2005 and at the beginning of 2006, the IT function included approximately 260 employees. By 2007, with the transfer of Customer Care Core Systems and Power Delivery Business Systems groups from Utility Operations, headcount increased to approximately 340. At the end of 2007 IT consisted of the following groups and headcount<sup>2</sup>:

- Infrastructure (70 employees) - This group consists of three sub-groups: Workstations, Application Integration and Network. It supports workstations and laptops, corporate email, phones, software distribution, application integration and the network (servers, internet, storage, remote access and firewall security).
- Power Delivery Business Systems (35 employees) - As described by ACE, this group consists mainly of business analysts who develop and enhance utility operations systems and applications, maintain relationships with vendors, assess and report data, and support Utility Operations business processes. In 2007 the group moved into the IT function from Utility Operations. Systems include Outage Management (OMS), Mobile Dispatch (MDS), Geospatial Information (GIS), Graphical Work Design (GWD), and the Workforce (WFMS) and Maintenance (MMS) Management systems.
- IT Services (40 employees) - Subgroups include Client Support and IT Security / Business Alignment. Client Support runs the help desk (the contact point for IT users) and provides on-site (field) support (installations, moves, adds, changes, repairs). Security / Business Alignment maintains security-related policies and standards, assesses security and conducts IT SOX compliance, emergency preparedness, and IT budgeting and procurement.
- Customer Care Core Systems (30 employees) - CCCS supports and maintains billing and telephone systems. The Customer Care Core Systems subgroup develops business requirements, designs, tests and implements application changes to the customer information systems. The Telephony Support subgroup provides maintenance and support to the customer service telephone system (voice response unit and related systems).
- Customers Systems (70 employees) - This is composed of three subgroups. Enterprise Systems Engineering manages and maintains the IBM mainframe that runs the ACE /

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<sup>2</sup> Response to Discovery, OC-698. Employee counts are rounded.

DPL and Pepco customer information systems (CIS). Computer Operations schedules, executes and monitors CIS functions and runs the process of producing and distributing customer bills. Customer Care Systems supports and maintains Pepco's CIS. On the ACE / DPL side, programming support for the CIS system is outsourced to IBM. The group grew in 2007 when 7 employees from the bill insertion function were moved from the Utility Operations group into the IT department.

- IT Applications (90 employees) - This group develops, maintains and supports corporate applications other than the customer systems. These include SAP, which supports Finance and Accounting, Human Resources and Supply Chain activities; PowerPlant, the utility asset management system; Outage Management, Mobile Dispatch and Geospatial Information. The primary position is the Applications Analyst, who interfaces with business analysts in the Power Delivery Business Systems Group and system end users. Subgroups include SAP Functional Development and Support; SAP Technical Development and Support; Power Delivery Development and Support and Corporate Systems Development and Support.

In 2007 Corporate Facilities transferred responsibility for network-attached copiers to IT, but this did not require a change in organization and headcount, which remained mostly unchanged through 2008.<sup>3</sup>

## **IT Resources and Information Systems**

Key hardware managed and maintained by the IT function consists of the following<sup>4</sup>:

- An IBM Mainframe computer and peripherals used to support both the Pepco and ACE/DPL customer information systems.
- Desktop and laptop computers - IT is responsible for maintaining approximately 3,400 desktop and 1,400 laptop computers.
- Wide area and local area network and servers - IT supports three corporate data centers connected via WANs and LANs. These connect approximately 565 Windows and 225 Unix-based servers.
- Radios, cell phones and BlackBerry units - Nearly 1,000 radios, including vehicle-installed, hand-helds, and various others, are assigned to ACE. About 330 cell phone and BlackBerry units are assigned to ACE.
- Field force automation units (mobile dispatch terminals) - Approximately 200 of these devices, which communicate job information between field and office, are assigned to ACE.

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<sup>3</sup> Response to Discovery, OC-990 PHI IT Business Plan, 2008-2009, p.11.

<sup>4</sup> Response to Discovery, OC-700

Major corporate information systems used by or serving ACE include<sup>5</sup>:

- C3 and Navigator - C3 is the ACE/DPL mainframe-based customer service system supported by IBM. It provides billing, customer information, rate change implementation and reporting. C3 interfaces with various subsystems (meter records, meter reading management and collection tracking). It was implemented in 1999 and has not undergone a major upgrade. Navigator is the graphical user interface for the C3, implemented in 2001. It displays customer information, including customer history and outage status and supports trouble ticket generation. Pepco has a separate customer information system. The two systems are not currently integrated and will not be in the near future, although PHI indicated there are long-range plans to create a single customer system.<sup>6</sup>
- Geospatial Information System - GIS is a General Electric product used to model, map and track facilities and equipment, including transmission and distribution facilities. It interfaces with the Outage Management System. Essentially, it is a geographically oriented database of T&D equipment. PHI implemented GIS in 2001 and upgraded it in 2004.
- Graphical Work Design - GWD is a GIS application from Cook Hulbert. It is used for facility and construction design and editing. It allows users to create work sketches, perform engineering calculations. It is integrated with the GIS and Work Management Systems. GWD was implemented in 2001 and upgraded along with GIS in 2004.
- Mobile Dispatch System - MDS is a field force automation application that electronically replaces the printed copy of a field work order. It interfaces with C3 and OMS to receive work orders. It is also used to validate and send work completion information to update host systems, produce SAP time sheets and produce field performance reporting. MDS was implemented in 1999 and upgraded in 2007.
- Outage Management System - During the audit period the OMS used by ACE was a General Electric application. OMS receives customer trouble reports and provides information for crew dispatch. It includes a database that contains customer information, the electrical network configuration of feeders, transformers and the location of switches, fuses and taps. OMS analyzes trouble reports to pinpoint the source of outages. The GE-based OMS was implemented in 2001 and upgraded in 2005. PHI is in the process of migrating ACE and DPL from the GE system to the Oracle/SPL-based system currently used by Pepco.<sup>7</sup> This began in 2008 and is scheduled to be completed in 2009.

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<sup>5</sup> Response to Discovery, OC-699 supplemental

<sup>6</sup> Telephone interview, Noel Underwood, PHI IT, March 26, 2009

<sup>7</sup> Response to Discovery, OC-1007

- Work Force Management System - WMIS manages the distribution system design and construction process. It schedules work requests, tracks equipment and materials and forecasts resource usage. WMIS was implemented in 1998 and upgraded in 2007. A study is planned for 2009 to consider replacing WMIS with SAP.
- SAP - SAP is a vendor-licensed enterprise resource and planning system (also known generically as an enterprise accounting system). It is the primary information system for financial accounting, human resources, payroll and materials and maintenance management. SAP provides a general ledger and related financial accounting functions, cost center, project and payroll accounting, FERC reporting, accounts payable, purchasing, inventory, personnel administration and plant maintenance. It was installed in 1997 and upgraded in 2006. There are no plans to replace SAP.
- PowerPlant - This is an asset management accounting system containing PHI's plant ledger (continuing property records). It supports mass and specific asset accounting. It interfaces with SAP and WMIS. PowerPlant was implemented in 2008.
- Load Profiling and Settlement System - The LPSS Billing Expert is a specialized billing application for non-standard bills. It was implemented in 1999 and upgraded in 2006 to integrate load profiling and settlement for all three PHI utilities. The upgrade included development of a new automated interface with the ACE/DPL billing system.
- Telephone Voice Response Unit - The telephone VRU, an Avaya system, includes a platform that allows customers to perform self-service transactions (bill reprint, bill payment and customer information updates) over the phone. It also directs inbound call traffic in the customer call center. It was implemented in 2006.
- Nexus Customer Self Service - This system, from vendor Aclara, is an internet-based self-service application. In addition to performing the functions permitted by the VRU, Nexus can provide energy consumption information and advice on how to minimize bills. It was implemented in 2006.

## **Business Plans and Staffing Levels**

A review of IT business plans for the years 2005 through 2008 shows that IT has tried to reconcile operational requirements and the implementation of new technology with budget constraints. The plans contain a section called "Gap / Risk Analysis and Resource Requirements" that reads as an appeal to upper management for increased resources. The Gap / Risk Analysis in the 2007-2008 Plan (November, 2006) notes the following:

To achieve such deep reductions, all proposed projects except 50% of high risk projects were cut. These cuts have eliminated initiatives needed to support IT strategies. For example:



- Reduction in knowledge transfer and new technology training
- Elimination of some scheduled renewal for key infrastructure ([computer] network switches and PBXs)
- Elimination of new technology pilots
- Elimination of security improvements

Allocation system core support and new projects compete for a limited pool of resources. Generally this has constrained resources for discretionary enhancements and leave[s] little to no contingency to address unforeseen regulatory enhancements or unknown requirements.<sup>8</sup>

In the 2008-2009 Plan (November, 2007), the “Gap / Risk Analysis” discussion included the following:

The increased number and business importance of projects led by the Blue Print for the Future and utility integration are driving risks over the plan period. Unless these risks are managed we could fail to meet plan objectives.

More Resources Needed - Current estimates are that 26 additional FTEs are required for Blue Print for the Future in 2008. Successfully on-boarding new resources to backfill for staff or perform a project role is a key to keeping projects on track and maintaining operations.

Limited Key Resources - The number of related Blue Print for the Future and integration projects may over-subscribe resources with special skills or knowledge. We have just started bringing projects online and struggle to fill project leadership positions.

Aging Workforce - The impact of the aging workforce will coincide with key projects. Maintaining legacy systems scheduled for replacement will be difficult if key resources with older technology knowledge leave. New projects may also be impacted if key functional resources are lost.<sup>9</sup>

We requested information about how many of the 26 additional FTEs discussed as being needed in the plan had been hired. PHI responded that “the 26 FTE estimate . . . was a high level representation of incremental project requirements above those that could be provided with existing IT complement. Positions were not added . . . A provision was made in the 2008 IT budget to cover the additional project requirements with contractors. Resources were acquired as needed and did not exceed the budget.”<sup>10</sup> Based on this, it does not appear that any of the additional positions requested by IT were approved. A detailed assessment to determine whether “risks” were adequately managed and “plan objectives” were met is beyond the scope of this audit; however, it is clear that IT did not receive the resources it requested during the audit period.

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<sup>8</sup> Response to Discovery, OC-990, PHI IT Business Plan - 2007-2008, November 21, 2006

<sup>9</sup> Response to Discovery, OC-990, PHI IT Business Plan - 2008-2009, November 20, 2007

<sup>10</sup> Response to Discovery, OC-1019

## **Integration of Pepco and ACE / DPL Customer Information Systems**

The most significant information systems that have not been integrated between ACE / DPL and Pepco are the customer information systems. In 2005 PHI hired an independent consultant, TMG Consulting, to work with PHI IT (on a team basis) to determine whether and how the Pepco CIS and ACE / DPL C3 systems should be integrated. Both are legacy systems running on the same PHI mainframe computer.<sup>11</sup> TMG interviewed employees, including CIS and C3 system users, examined the components of the legacy systems, compared various alternatives, and assessed the functionality of the system components using an industry standard functionality template.

One of the most significant things the TMG / PHI team determined was that the functionality of many of the components of the existing legacy systems was judged to be “failing.”<sup>12</sup> Overall, the functionality (functional fit) of the Pepco CIS system was scored at 59% (failing) and the ACE / DPL C3 system was scored at 67% (unsatisfactory).<sup>13</sup> By comparison, the functional fit of a typical leading CIS packaged application was scored at 90%. The team recommended that “PHI replace its existing system with either an outsourced, hosted or managed [commercial, off-the-shelf] CIS system.” It indicated that the next step was to issue an RFP to solicit the market and obtain real bids for the various options.”<sup>14</sup>

Although the recommendation to replace the CIS and C3 systems was made in 2005, the next step has not been taken, and PHI continues to operate customer information systems whose functionality is, according to the TMG / PHI team that studied it, significantly below industry standards. During a brief interview with Ken Cohn, PHI’s Chief Information Officer, we asked why the recommendations of the TMG / PHI team had not been pursued. Mr. Cohn indicated that subsequent to 2005, the smartgrid and automated metering became issues that could affect a CIS replacement.<sup>15</sup> According to Mr. Cohn, IT plans to revisit a plan to integrated CIS in the 2010 budget cycle, with the hope that vendors producing CIS systems can integrate automated metering technology into the systems in one to two years. It appears that PHI’s current plan is to replace both CIS systems (Pepco and ACE/DPL) in the 2011-2013 timeframe.

## **IT Performance Measurement**

**Balanced Scorecard** - We reviewed the 2007 and 2008 balanced scorecards for the IT function. The table below summarizes 2007 and 2008 targets and results.

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<sup>11</sup> Response to Discovery, OC-1018, Attachment, *A Blueprint for CIS Success*, June 3, 2005

<sup>12</sup> Components included account management, billing management, credit & collection management, customer choice, customer management, customer service, financial management, inventory management, usage management, rates management, service location and service order management, system design and technology management.

<sup>13</sup> Response to Discovery, OC-1018, *A Blueprint for CIS Success*, p.18

<sup>14</sup> Response to Discovery, OC-1018, *A Blueprint for CIS Success*, p.49

<sup>15</sup> Automated metering is in the testing and field acceptance state in Delaware, and possibly several years away in New Jersey. ACE plans in New Jersey are to deploy automated metering in a few pilot cities.

**Table 24-1**  
**PHI Information Technology**  
**Balanced Scorecard Customer and Financial Success Targets & Results (1)**

Year / Category	Weight	Target (Plan)	Result	Assessment
<b>2008</b>				
<b>Customers</b>				
Corporate Application & Integration Projects completed by target or 12/31/2008	10%	5 of 7	2 of 7	Missed
Information Technology Core Projects completed	15%	4 of 5	UNKNOWN (2)	UNKNOWN (2)
Blueprint for the Future & Customer-facing Projects	10%	4 of 6	4 of 6	Met
SLE and Performance Goal	15%	No results < threshold; 75% above	1 of 30 below threshold; 29 of 30 met or exceeded	Marginal
<b>Financial Success</b>				
Utility ops admin overhead relative to budget	5%	\$160M	\$159.7M	Met
Total IT O&M spend relative to budget	25%	\$114.6M	\$108.7M	Exceeded
Total IT capital spend relative to budget	5%	\$16.9M	\$14.1M	Exceeded
<b>2007</b>				
<b>Customers</b>				
IT Application Projects	15%	4 of 6	4 of 6	Met
Information Technology Renewal	15%	4 of 5	5 of 5	Exceeded
Complete CIS/MDM Requirements Definition Project	5%	By 6/8/2007	5/18/2007	Exceeded
IT SLE and Performance Goal	15%	No results < threshold; 75% above	1 at threshold 26 met or exceeded	Met
<b>Financial Success</b>				
Total IT O&M spend relative to budget	20%	100%	96.7%	Exceeded
Total IT capital spend relative to budget	5%	100%	94.4%	Exceeded
Implement Virtual IT Help Desk	5%	By 3/31/2007 w/ <\$100K savings	3/31/2007 w/ \$300K savings	Exceeded
Source: Response to Discovery, OC-71, 992, 993 & 996.				
(1) Excludes employee safety & diversity metrics. (2) Data response did not contain the result.				

Balanced scorecard results are used to determine payouts under PHI's Annual Incentive Plan. Generally, an overall result that meets targeted (budget plan) performance levels should correspond to a 100 percent of payout under the AIP based on a percentage of employee base pay. Exceeding targets results in more than 100% AIP payouts; while results below target result in less than 100%. The overall result for IT is based the sum of results for each category shown above after multiplying by the weight attached to each measurement.<sup>16</sup> As shown in the chart above, for the customer and financial areas, IT generally met or exceeded its balanced scorecard performance expectations.

**Service Level Expectations** - The nature of many IT services is such that they can be assessed quantitatively. During the audit period PHI IT maintained approximately 30 service level expectation (SLE) metrics to measure the quality, reliability and calendar efficiency of

<sup>16</sup> The items in the chart cover the "customer" and "financial success" components of balanced scorecard. In addition, there are "employee" components covering things such as safety and diversity, that we have not included. Results in the employee category contribute between 15% (2008) and 20% (2007) to overall balanced scorecard results.

various IT services and systems performance. As shown in the table above, SLEs contribute 15% of the overall weight to balanced scorecard results, which means they contribute directly to the AIP (variable) component of employee compensation.

IT's SLEs are developed by the IT department with input from the IT steering committee. The steering committee is composed of employees from PHI's IT department and key "clients" (employees in departments that use IT services). Targets and ranges are established for each SLE based either on historical experience or on external metrics such as IBM's "best-in-class" benchmarks. During the audit period SLEs covered the following areas:

- Services
  - Help desk phone response time, problem resolution and client satisfaction
  - Security request on-time delivery
  - Workstation installation, maintenance, adds, changes
  - Application integration, support & cycle on-time delivery
  
- System Performance
  - SAP
  - CIS and billing (C3 and Pepco)
  - OMS
  - Lotus Notes

Some of the SLEs can be compared from one year to the next during the audit period; however, many SLEs are subject to changes each year as the IT steering committee considers ways to improve measurements and to target activities and systems that "client" organizations deem important. For most SLEs, audit period performance exceeded targeted expectations. For example, in 2007, the IT department exceeded expectations for 21 of 29 SLEs we reviewed. The department met expectations for 7 of the remaining 8 SLEs, and was "marginal" (just under meeting expectations) for one of 29 SLEs. We found only one case during the three-year audit period in which a SLE measurement "failed to meet" expected service levels.<sup>17</sup>

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<sup>17</sup> Response to Discovery, OC-451, SLE results. In 2006, Lotus Notes (the corporate email system) experienced 111 "outage minutes." This was classified as "failed to meet" expectations. In 2007, the SLE was adjusted so that 150 outage minutes experienced in 2007 was considered to "meet" expectations.

**Table 24-2**  
**PHI Information Technology -**  
**2007 Service Level Expectations with 2005 & 2006 Comparison Statistics (where available)**

	YTD Dec. 2005		YTD Dec.2006		YTD Dec. 2007	
	Result	Target	Result	Target	Result	Target
<b>Help Desk</b>						
Avg. Time to answer (D.C. only '05 & '06)	12.9	Meets	11.8	Exceeds	7.4	Exceeds
Abandoned Calls	3.3%	Meets	6.3%	Meets	3.3%	Meets
Problem Resolution by priority:						
Urgent - resolved same day	100.0%	Exceeds	100.0%	Exceeds	100.0%	Exceeds
High - resolved same day	95.8%	Exceeds	96.5%	Exceeds	94.9%	Meets
Medium - resolved 2 days or less	97.4%	Exceeds	95.5%	Meets	92.9%	Meets
Low - resolved 4 days or less	97.0%	Exceeds	98.2%	Exceeds	97.8%	Exceeds
Survey response - client satisfied	95.3%	Meets	96.1%	Meets	97.8%	Exceeds
<b>Security Requests</b>						
LAN ID < 24 hours *	99.9%	Exceeds	97.3%	Exceeds	99.9%	Exceeds
Application Access <24 hours			99.6%	Exceeds	99.8%	Exceeds
Network Resource Access <24 hrs			NM		99.9%	Exceeds
<b>Application Service Delivery</b>						
On-time Integration Request	91.9%	Exceeds	93.7%	Exceeds	94.7%	Exceeds
On-time Support Requests	NM		NM		98.5%	Exceeds
On-time Cycles	NM		NM		99.6%	Exceeds
<b>System, App. &amp; Resource Availability</b>						
Storage Area Network workday outages	NM		NM		0	Exceeds
Lotus Notes workday outage minutes	34	Marginal	111	Fails	150	Meets
SAP Outages / Outage hours	0 / 0	Exceeds	2 / 2.5	Marginal	0 / 0	Exceeds
OMS Outages / Outage minutes	NM		NM		1 / 46	Exceeds
<b>ACE/ DPL C3 Customer Service System</b>						
System still in update at 7AM (late cycles)**	4	Meets	3	Meets	3	Meets
Outages lasting > 4 hours / outage mins.	NM / 150	Exceeds	NM / 606	Exceeds	0 / 2	Exceeds
Bill prints late	NM		5	Marginal	2	Meets
Bill insertions late	NM		NM		0	Exceeds
Online system response % < 1 sec.	95.1%	Exceeds	94.9%	Meets	96.6%	Exceeds
Source: Response to Discovery, OC-451						
NM = Not measured for the indicated period						
*2005 stat includes LAN ID and application access requests. ** 2005 measurement basis not comparable.						

SLE results contribute 15 percent of the weight in the balanced scorecard.

**Benchmark Data** - PHI provided data comparing its IT to the IT functions of other companies. The data was prepared by Gartner, Inc. High-level data (an executive summary) from a study prepared for PHI IT by the Hackett Group was also provided.

**Gartner Data** - The Gartner data focused mainly on IT staffing and spending. The key metric used by PHI is IT spending as a percentage of revenue. Comparison of the Gartner data to data developed by PHI internally (for PHI) show that from the beginning of the audit period through the forecast for 2008, PHI spent considerably less on information technology as a percentage of revenue than the Gartner industry average. This is summarized in the table below:<sup>18</sup>

<sup>18</sup> Response to Discovery, OC-994

**Table 24-3**  
**PHI Information Technology**  
**IT Spending as a Percentage of Revenue - IT Industry vs. PHI**

Source	Year	Benchmark	PHI
Gartner Energy Utility IT Spending	2005	2.42%	1.61%
Gartner Energy Utility IT Spending	2006	2.25%	1.42%
Gartner IT Spending and Staffing Report	2007	2.10%	1.77%
2008 Budget Forecast	2008	not available	1.98%

Source: Response to Discovery, OC-994

**Hackett Group Study** - In December, 2008, the Hackett Group completed benchmarking PHI's IT function against a peer group of 9 other U.S. utility holding companies.<sup>19</sup> The study utilized 2007 data. PHI was somewhat smaller than the peer group median in most measures of size and scope.<sup>20</sup> The study focused on a subset of PHI's total IT spending (about \$66 million out of a budget of \$110 million).<sup>21</sup> Data focused on 11 processes in four areas, as summarized in the table below.

**Table 24-4**  
**PHI Information Technology Benchmarking**  
**Major Functions and Processes Covered by the Hackett Benchmarking Study**

Technology Infrastructure	Application Mgt.	Planning & Strategy	IT Management & Administration
<b>Infrastructure Mgt</b> Operations Management Security Management Disaster Recovery Planning	<b>Application Maintenance</b> Application Support Enhancement Delivery Upgrade Execution	<b>IT Business Planning</b> Alignment Project Prioritization Communication	<b>Function Management</b> Function Oversight Personnel Management Policies and Procedures Oversight
<b>End User Support</b> Help Desk End User Training	<b>Application Development &amp; Implementation</b> Planning Constructing Implementing	<b>Enterprise Architecture</b> Governance Standards Management	
<b>Infrastructure Development</b> Planning Construct Implement		<b>Emerging Technologies</b> Technology Evaluation <b>Quality Assurance</b> Change Management <b>Risk Management</b> Audit and Compliance	

Source: Hackett Study, Response to Discovery, OC-995 (restricted).

<sup>19</sup> *Information Technology Benchmark Results Executive Briefing*, Response to Discovery, OC-995 (restricted)

<sup>20</sup> PHI was below the peer group median in terms of employees (about half the median number of employees), operating locations (less than half) and IT end users (about half). PHI was slightly above the median in terms of revenue, but this is because the study's revenue figures were based on total corporate revenue. In PHI's case, this includes revenue from Pepco Energy Systems (PES), the competitive retail affiliate. PES is small (less than 200 employees), and draws relatively little corporate IT expense, but due mainly to the pass-through of wholesale energy costs it has a very large revenue profile.

<sup>21</sup> Among the applications that were outside the scope of the study were PowerPlant, the SAP Asset Management and Work Planning modules, GIS, OMS and Energy Trading. The costs associated with these omitted applications should explain most or all of the difference between IT's total spending and the \$66 million included in the study.

The study showed that PHI was close to the peer group medians in most categories measured.

- PHI IT's overall cost per IT "end user" was very close to the peer group. Technology cost per employee was 22% higher than the peer group median.<sup>22</sup>
- PHI's IT staffing levels were somewhat below the peer group median.<sup>23</sup>
- PHI's IT's labor costs were relatively low for application management and relatively high for technology infrastructure compared with the peer group.
- PHI was comparable to the peer group in delivering projects on-time (83% for PHI vs. 85% for the peer group) and within budget (90% vs. 85% for the peer group).
- The level of accounting automation, measured by percentage of transactions performed electronically, varied but was lower in many categories than the peer group. Categories included: invoices (2% electronic), purchase orders (40% electronic), payments to vendors (20% electronic), customer remittances (98% were electronic - higher than the peer group), expense reports (0%), management reports (80% - higher than peers), employee records (90%) and employee benefit enrollment (100%).

Among the things that stood out in the Hackett study were the following:

- PHI has a higher ratio of managers to professionals (3 times more on a percentage basis) than the peer group and just a little more than half as many staff per manager as the peer group. In other words, PHI IT has a lot of managers.
- PHI IT does not make use of project management organizations (PMOs), either at the enterprise level or the IT project level. The study notes that it is a "best practice" to have all large scale projects controlled by PMOs. 70% of projects in the peer group were managed through a PMO and about 25% of the peer group had a "formal enterprise-wide" project management organization.
- The study found PHI used and adhered to standard definitions in the hardware, software and communications acquisition processes (somewhat better than peers), and noted that this was a best practice.
- Only 60% of PHI's development projects utilized a formal business case / cost-benefit analysis. The study noted that tracking delivery metrics (based on a business case) was a best practice.
- Although PHI utilizes and meets or exceeds nearly all of its service level expectation metrics, including those used to measure help desk performance, PHI IT resolved only 40% of help desk questions and issues on the first call. The peer group did significantly

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<sup>22</sup> Technology cost includes the cost of hardware, software and telecommunications and includes depreciation.

<sup>23</sup> However, only a subset (about two-thirds) of the IT employees discussed in the organization section of this chapter were counted in the Hackett study. Presumably, the same subset was covered in the peer group companies.

better. PHI IT experienced only a little more than half the calls, per IT end user, as its peers.



## Chapter 25. Support Services - Other

This chapter covers PHI's and ACE's management of the following support functions:

- Facilities and real estate
- Supply chain (purchasing)
- Vehicles and transportation equipment
- Corporate records
- Corporate security
- Legal
- Insurance and claims

### Summary of Findings

#### **Facilities and Real Estate Management**

1. Facilities and Real Estate Management is a sub-set of the Safety and Strategic Services organization. Grouped with such disciplines as Security and Document Services, the entire organization was comprised of approximately 130 employees in September 2008. Approximately half of these employees are assigned to a specific utility or facility (mostly Facilities Operations and Maintenance personnel) and the other half provide services to all of PHI.
2. ACE owned six operations facilities and leased four customer courtesy centers, its regional headquarters in Mays Landing, and two other offices as of November 30, 2008. ACE leased the May Landing complex from an affiliate, Atlantic Southern Properties, on a year-to-year basis. In addition to these occupied locations, ACE also owned or leased a number of vacant facilities. The most significant of these were either in the process of being sold or were being sub-leased in early 2009.
3. Employees in the Facility and Real Estate Management organization achieved a pay-out of 65 percent of target for meeting all 2008 customer-oriented performance goals but fell short of most safety and financial success goals established in the Annual Incentive Plan. These goals were not tied to a consolidated business plan. Expectations are that a top-down business plan with associated initiatives, service level expectations, and performance metrics will be in place in 2010.
4. Benchmarking data and company comparisons for Facilities Management were only available for the 2003-2005 timeframe. Based on its own comparisons, ACE did not compare favorably to the survey group, which was comprised of companies throughout North America in a variety of industries. However, we question whether any relevant conclusions can be drawn from these comparisons.

## Supply Chain

1. The Supply Chain organization is composed of two primary groups - the Logistics group and the Supply Chain and Sourcing group. While some employees support ACE solely, most provide services to either the entire Power Delivery group or the combined legacy Conectiv utilities (ACE and DPL). This organization is not responsible for the procurement of power supply.
2. Employees in the Supply Chain organization met or exceeded every performance goal established for the Annual Incentive Plan in 2008. However, these goals were not part of a consolidated business plan. Expectations are that a top-down business plan with associated initiatives, service level expectations, and performance metrics will be in place in 2010.
3. PHI's Supply Chain organization had the results of two benchmarking studies at its disposal from the last 3 years. Of the key performance indicators developed from the most recent study, PHI out-performed the multi-industry peer group in all but one metric.
4. Physical inventories conducted by Supply Chain employees and Internal Audit yielded no material discrepancies from 2005 through 2008.
5. The Supply Chain organization and other internal stakeholders have created a working group to oversee the automation of the Company's sourcing process. One recent example of the work of this group is the automation of construction management tools (e.g., the Service Request form).

## Vehicle Resources Management

1. ACE's transportation cost per customer was 14% lower in 2007 than an average of utilities from 46 utility holding companies studied by Utilimarc, a utility industry transportation consultant that performs fleet benchmarking.<sup>1</sup>
2. ACE's cost per fleet vehicle was 44% higher than PHI's overall average in 2007. This is primarily due to ACE's audit period fleet mix, which contained vehicles that were larger (more heavy duty) and therefore more costly than the average for the PHI fleet.<sup>2</sup> Although ACE's cost per vehicle was high, ACE had significantly more customers per

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<sup>1</sup> Responses to Discovery, OC-73, OC-1020 and OC-1057. Utilimarc, *Pepco Holdings, Inc, ACE 2007 Fleet Benchmark*. Utilimarc's study included 46 participants, most of which were utility holding companies with more than one operating company. We did not attempt to count the utilities in the study, but from the participants listed it is apparent that it included a substantial number of the investor-owned utilities in the U.S. We estimate it included between 75 and 100 individual operating utilities (including three within PHI).

<sup>2</sup> When compared with PHI, the following factors may be in play: 1) The PHI average includes DPL, which is an electric and gas utility. DPL's gas operations vehicles should be smaller and less costly, bringing the average cost down compare with ACE. 2) ACE operates in a more rural territory than largely urban and suburban Pepco. Pepco may have a less for larger, heavier duty buckets than ACE. 3) Fuel cost is affected not only by the larger average size of ACE's vehicles, but also by the fact that they are driven almost 25% more miles per year than the average PHI vehicle.

vehicle than either PHI as a whole or the average participant in the Utilimarc benchmark study. This translates to a lower-than-average transportation cost per customer for ACE compared with PHI and with the study participant average.

### **Records Management**

1. PHI has a corporate records policy covering most types of corporate records. The policy specifies storage, retention and disposal requirements. Records policy is a component of the business policies to which management employees must annually certify their knowledge.
2. ACE and PHI appear to have a practice, but not a policy, covering the retention and disposal of corporate email. It appears that the general practice is for IT to archive and retain corporate email that has not been deleted by employees from their mailboxes for 7 years. There is, however, no written policy requiring that this be done; furthermore, existing record retention policy applicable to “routine correspondence” (without regard to its electronic or paper format) suggests that most corporate email should be retained and then destroyed after five years. Nothing in records retention policy or in the email archive practice as described by ACE specifically covers the maintenance or deletion of corporate email correspondence by employees.
3. ACE does not maintain records of the results of its site visits to Nova Records Management, the company to which physical records storage, retrieval and disposal is outsourced.

### **Corporate Security**

1. Corporate Security policies and procedures appear to adequately address the security of revenue, people, facilities and other physical assets. Security policies cover the hiring and training of security personnel, inspection and audit of facilities, administrative and criminal investigations, theft of energy, government and regulatory compliance and the protection of assets (facilities and materials). Facilities protection is based on a tiered structure in which the level of security at a facility is matched with the level of risk associated with the facility.
2. PHI’s Corporate Security Manual appears to adequately cover the responsibilities of the Corporate Security department and the procedures necessary to maintain security. The manual provides detailed coverage of alert levels (levels of situational threat and appropriate response procedures), building access and parking, search procedures, emergency responsibilities and procedures (civil disturbances, sabotage and, bomb threats) and procedures for handling company property (removal, transfer, loans and scrap).

3. The Atlantic Region Electric System Operations procedure provides detailed instructions and restrictions for access to the system control room. The procedure includes secure, escorted and unescorted access requirements and guidelines for the use of ID cards.
4. ACE conducts security audits of “manned facilities” (Mays Landing, Carneys Point and smaller operations and “customer courtesy” facilities) on a four-year cycle.
5. Corporate Security conducts inspections of approximately 150 ACE substations on approximately a two-year cycle. The inspections are being conducted as planned; however, Corporate Security lacks a procedure to ensure follow-up on the deficiencies noted during the inspections to ensure they are corrected. Most deficiencies involve items requiring minor maintenance, such as washouts that may permit entry to the substation area from underneath fencing, torn fence fabric, broken locks or overgrown vegetation.
6. PHI’s Corporate Security Strategy policy document, dated November, 2007 contains a goal of conducting an annual review of corporate security policies and procedures. To date (April, 2009), no review has been conducted.
7. PHI’s IT organization has taken a series of steps since the beginning of the audit period to prevent and deter cyber attacks, including the installation of firewall, spyware, internet filtering and web security software, conducting network penetration testing and security assessments, installing intrusion detection sensors, and reviewing the security of third-party network connections.
8. Although, as indicated above, PHI has taken pro-active steps to enhance cybersecurity, the Company permits employees “limited” use of the internet for personal purposes (web browsing, personal emailing and similar activities). Most cyber attacks on corporate networks gain access through internet connections. The use of the internet for personal purposes on computers performing critical functions could increase the risk of intrusion into company systems, notwithstanding other steps PHI has taken to enhance security. This being stated, Overland recognizes that it may not be practical or necessary to ban the personal use of the internet on company computers across the board. However, it may be practical and advisable to consider doing so on computers that control or have sign-on capability to critical operating systems.

## **Legal**

1. The Legal organization is structured along practice areas which include a) employment, benefits, tax, environmental, and real estate; b) claims litigation, commercial law, bankruptcy, and intellectual property; c) federal and state regulation; d) NYSE and SEC compliance, securities law, and corporate secretary matters; and e) special projects, corporate policy, and SOX coordination. A full-time in-house attorney, Philip J.

Passanante, an employee of PHI Service Company, is assigned to matters concerning the New Jersey BPU.

2. PHI incurred between \$14 million and \$19 million in annual outside legal fees between 2005 and 2007. For the first nine months of 2008, the Company incurred approximately \$9.5 million in outside legal fees. If the trend in legal fees for the last quarter of 2008 is similar to that of the first three quarters, it would represent a vast improvement over prior years. PHI management has indicated that a concerted effort has been made to handle more matters in-house. Additionally, half of the weighting of Legal's balanced scorecard is tied to controlling outside legal expenditures.
3. Outside legal billings are managed by the Company through the use of a third-party software system called Serengeti Tracker. A decision to acquire a document management system was tabled when management suspended all discretionary spending in the fourth quarter of 2008 due to financial turmoil in the economy.

### **Insurance and Claims**

1. Insurance and claims are handled by two different organizations within PHI. Insurance is managed by Treasury, and Claims is managed by the Legal Services Department.
2. ACE is covered under blanket insurance programs maintained by PHI. Insurance limits and deductible amounts are benchmarked against other utilities to determine appropriateness and adequacy of coverage. Data indicates that PHI's insurance deductible levels are higher than the industry for excess general liability and lower than the industry for directors and officers liability.
3. All claims are investigated, and if need be, reserved if probable exposure is greater than \$5,000. The most significant claims-related contingencies disclosed by ACE at the end of 2008 include several environmental remediation sites in which ACE has been identified as a potentially responsible party, a contract dispute involving a previously sold generating facility, and income tax matters.

### **Summary of Recommendations**

#### **Facilities and Real Estate Management**

1. We recommend the Company implement a program of service level expectations similar to what is used in the Information Technology department to measure and assess Facilities, Security, and Real Estate Management performance.
2. We recommend the Company consider updating its benchmarking data on Facilities and Real Estate Management so that relative company performance can be assessed. Industry-specific or geographically relevant data would be preferred over data that has been obtained in the past.

## Supply Chain

1. We recommend the Company implement a program of service level expectations similar to what is used in the Information Technology department to measure and assess Supply Chain performance.

## Vehicle Resources Management

1. Given ACE's significantly higher-than-average cost per vehicle (compared with PHI and the Utilimarc benchmark study average), as heavier duty vehicles (large pickups and bucket trucks) are retired from service, we recommend ACE determine, on a case-by-case basis, whether they can be replaced with smaller, lighter versions of the same vehicle type. A list of retired heavy duty vehicles and their replacements should be maintained and, when it is determined that less costly replacements are not feasible, the reason should be documented. The list should be reviewed annually by the Vehicle Resources Group Manager in conjunction with annual transportation budget to provide a second level of review as to whether smaller, less costly vehicles can be acquired as heavy duty vehicles are retired.

## Records Management

1. We recommend ACE (and PHI) implement a policy addressing the retention of corporate email. There is currently no policy covering email and, based on potentially conflicting practices and requirements (as discussed below), it does not appear that the generic applicability of corporate records policy is sufficient to provide assurance that records maintained as emails and email attachments will be retained for required periods. The policy should address 1) the types of emails that constitute a corporate record, 2) retention of email correspondence and attachments by employees on their computers, and 3) retention of archived email correspondence and attachments by the IT organization. We do not recommend specific retention periods, or conditions under which emails should be or may be deleted by employees prior to archiving, but both of these should be considered and defined by PHI in developing an email retention policy.
2. We recommend ACE maintain records of the results of site visits to Nova Records Management. ACE indicated that "periodically, Company representatives will visit the Nova Records facility to ensure ACE documents are adequately stored."<sup>3</sup> ACE stated that it visits Nova "1-2 times per year" but does not maintain any documentation of the visits. Nova appears to be responsible for the care of most, if not all, of ACE's record archive. The findings from the site visits should be documented and maintained. PHI should consider having the findings sent to its internal audit department for their review and recommendations.

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<sup>3</sup> Response to Discovery, OC-705, response to question 4 (restricted)

## **Corporate Security**

1. Implement a program of service level expectations similar to what is used in the Information Technology department to measure and assess Corporate Security performance. Currently, PHI does not employ operational metrics to assess the performance of the security function. It is Overland's understanding that a system of service level expectations is being implemented beginning in 2010.
2. Standardize corporate security training across all PHI companies. Provide the corporate training given to Pepco uniformed security personnel to security personnel in ACE territory.
3. Perform and document the annual review of security policy and procedures as indicated in the Corporate Security Strategy document.
4. Implement a procedure to followup on and ensure correction of deficiencies found during substation inspections. Currently, Corporate Security performs substation inspections, documents noted deficiencies (most of which by themselves are minor), and sends inspection reports to the Substation Maintenance organization, where it is assumed corrections will be performed. We recommend a simple followup procedure be implemented to ensure corrections are made: 1) Corporate Security should hold the inspection report open until 2) Substation Maintenance reports back that it has addressed and corrected the noted deficiencies. This can be done by having someone in Substation Maintenance sign off on the deficiencies when corrected and sending a copy of the signed report back to Corporate Security.

## **Facilities and Real Estate Management**

The Facilities, Security, and Real Estate Management organization is part of the larger Safety and Strategic Services group which also includes Vehicle Resource Management and Supply Chain among others. The Facilities, Security, and Real Estate Management organization has primary responsibility for facilities operations and maintenance, real estate management (including rights of way), corporate security, and document services (e.g., mail, messenger, records retention, and reprographic services). We have discussed the Corporate Security and Records Retention functions separately in other areas of this chapter.

**Organization** - The head of the group is David Motil, Manager of the Facilities, Security and Real Estate Management Group. Mr. Motil reports to Hallie Reese, Vice President of Safety & Strategic Support Services. The Facilities, Security and Real Estate Management group consisted of approximately 130 employees as of September 2008.<sup>4</sup> The organization is about evenly divided between PHISCO employees who provide services to all of PHI and utility

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<sup>4</sup> Employee counts include open positions.

employees with responsibilities limited to a utility or a location. A good example of the latter is an employee working in building and grounds operations and maintenance.<sup>5</sup> Functionally, employees work in the following areas:<sup>6</sup>

- Facilities Operations and Maintenance (65 employees) - Responsible for the construction, reconfiguration, operation, and maintenance of new and existing facilities. Also ensures compliance with local, state, and federal laws (e.g., safety and health, environmental, etc.).
- Corporate Security (26 employees) - Responsible for the technical and physical security of the Company, its employees, and the general public. Also directs investigative support and surveillance activities.
- Real Estate & Right of Way:
  - Document Services (21 employees) - Responsible for the Company's mail, messenger, records retention, and reprographic services.
  - Real Estate (18 employees) - Responsible for the acquisition, leasing, sale, and management of land and transmission / distribution right-of-way.
- Administrative (3 employees)

**ACE Facilities** - In 2008 ACE owned six operations centers in the following locations:<sup>7</sup>

- Pleasantville
- Cape May Court House
- Bridgeton
- Glassboro
- Winslow
- West Creek
- 

In addition, ACE leases office space for the following purposes (term of lease included parenthetically):<sup>8</sup>

- Atlantic City - Customer Courtesy Center (January 2009 - December 2012)
- Turnersville - Customer Courtesy Center (April 2000 - March 2009<sup>9</sup>)
- Millville - Customer Courtesy Center (April 1990 - March 2012)

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<sup>5</sup> Response to Discovery, OC-1140.

<sup>6</sup> Responses to Discovery, OC-215 and OC-1140.

<sup>7</sup> Response to Discovery, OC-715 (as of November 30, 2008).

<sup>8</sup> Response to Discovery, OC-715.

<sup>9</sup> Response was provided January 21, 2009.



- Pleasantville - Customer Courtesy Center (September 1999 - August 2010)
- Trenton - Government Affairs Office (October 2004 - September 2011)
- Newark (September 2005 - August 2011)
- Mays Landing - Office / Warehouse / Exterior Storage (year-to-year)

The Company disclosed no vacant space in any of the owned or leased facilities listed above. However, ACE did acknowledge that during the period from January 2006 to November 2008, it either owned or leased a number of other facilities that were vacant. The most significant were the Administration Center in Egg Harbor Township with a net book value of \$16,650,248; the Brian Parent Center Holly Farm with a net book value of \$3,318,776; and the Atlantic City Operations Facility with a net book value of \$1,317,534. The first two were under contract for sale at the end of January 2009 while the latter was being sub-leased to mitigate costs.<sup>10</sup> In addition, ACE owned a number of land parcels that were vacant for some or all of the time between 2006 and 2008. This includes a 1,282-acre site in Cumberland County, New Jersey that is intended to be used for a generating station.<sup>11</sup>

During 2007 and 2008, ACE was a tenant of one facility leased from an affiliate, and a landlord of two pieces of property leased to affiliates. A summary of these properties is included in the following table:

Description	Mays Landing Complex	Combustion Turbine Site	Thermal Plant
Location	Hamilton Township	Millville City	Atlantic City
Type	Office / Warehouse / Exterior Storage	Ground Lease	Ground Lease
Lessor	Atlantic Southern Properties	ACE	ACE
Lessee	ACE	Conectiv Atlantic Generation	Thermal Energy Partnership I
Square Footage	58,983 finished / 109,875 unfinished	6098400	22132
2007 Cost	\$2,812,198	\$16,464	\$45,000
2008 Cost	\$2,331,506 *	\$16,464	\$45,000
Source: Response to Discovery, OC-717.			
* Described as "(as of 11/30/2008) Annual Cost to ACE".			

The Mays Landing complex lease is described in more detail in the chapter on Affiliate Relationships and Transactions.

**Business Planning and Performance Measurement** - As noted elsewhere, the Safety and Strategic Services organization historically did not prepare a consolidated organizational business plan. Instead, different disciplines within the organization had their own budget and balanced scorecard. A roll-up of the individual scorecards was performed at the Safety and Strategic Services level to ensure that objectives being pursued by individual disciplines were not in conflict. However, management adopted a more formalized, top-down approach to

<sup>10</sup> Response to Discovery, OC-716.

<sup>11</sup> Response to Discovery, OC-725.

business planning for the 2009 plan year. A new purpose statement and areas of focus were developed. Initiatives to drive improvements in the focus areas were identified, and the 2009 scorecard metrics were tied to these initiatives.<sup>12</sup> While other shared services (such as Information Technology) have developed service level expectations for their organizations, it is our understanding that such a system will not be implemented for the entire Safety and Strategic Services organization, specifically including the facilities management function, until 2010.<sup>13</sup>

The 2008 performance of the Facility and Real Estate Management group as measured by balanced scorecard metrics is summarized in the following table. These results are used in determining the level of Annual Incentive Plan pay-outs to employees:

**Table 25-2  
Facility and Real Estate Management  
Balanced Scorecard Results**

Description	Weighting	6/30 Target	6/30 Actual	AIP %
Employees - Fatalities	Trigger	0	0	
Employees - Recordables	5%	1	2	0%
Employees - Preventables	5%	1	2	0%
Employees - Complete all safety related work orders within 10 working days	15%	95%	95%	15%
Customers - Implement Green Initiatives	15%	39628	39628	15%
Customers - Develop and complete a Project Plan & estimated timeline and identified milestones to exit Edison Place	20%	39628	39628	20%
Customers - Provide a plan to meet all of the NERC requirements and targeted milestones	15%	39628	39628	15%
Financial Success - Facility, Security, & Real Estate "Total Spend" Relative to Budget	25%	\$59.8M	\$61.7M	0%
<b>TOTAL</b>	<b>100%</b>			<b>65%</b>

Source: Responses to Discovery, OC-1118 and OC-1151 (supplemented by July 2, 2009 e-mail clarification).

Although the organization did not make its safety or financial goals in 2008 (ignoring the triggering goal), it did achieve all customer-oriented goals. The resulting pay-out under the Annual Incentive Plan was approximately two-thirds of the target established by management.

**Internal Audits** - Because PHI's risk-based selection process for internal audits did not identify facilities management as a significant, high-risk operational area, no internal audits were conducted on ACE's or PHI's facilities management function, process, or procedures from the beginning of 2005 to the end of 2008.<sup>14</sup> However, both security audits and substation inspections were routinely performed in years past and are discussed more extensively in the Corporate Security section of this chapter.

<sup>12</sup> Response to Discovery, OC-1023.

<sup>13</sup> Responses to Discovery, OC-718.

<sup>14</sup> Response to Discovery, OC-719 (restricted).

**Benchmarking** - When asked about the existence of benchmarking studies, the only one identified for Facilities and Real Estate Management was a non-industry-specific study purchased from the International Facility Management Association (IFMA). Using 2005 data, PHI compared its results with those of the study. ACE's results are summarized in the following table:

Description (1)	ACE (2)	Study Mean (3)	Applicable Percentile Range (4)
Housekeeping Costs (\$ / RSF)	\$1.72	\$1.35	75 <sup>th</sup> - 90 <sup>th</sup>
Utility Costs (\$ / GSF) (A)	\$1.84	\$2.34	50 <sup>th</sup> - 75 <sup>th</sup>
Maintenance costs (\$ / RSF)	\$2.81	\$2.54	50 <sup>th</sup> - 75 <sup>th</sup>
Current Replacement Value Index (B)	3.5%	1.7%	90 <sup>th</sup> - 95 <sup>th</sup>
Cost of Operations (\$ / RSF)	\$6.35	\$6.39	50 <sup>th</sup> - 75 <sup>th</sup>
Cost of Providing the Fixed Asset (C)	\$3.99	\$6.19	25 <sup>th</sup> - 50 <sup>th</sup>
Occupancy Cost (\$ / RSF)	\$16.51	\$11.34	75 <sup>th</sup> - 90 <sup>th</sup>
Occupancy Cost per Occupant	\$9,698	\$4,706	90 <sup>th</sup> - 95 <sup>th</sup>

Source: Response to Discovery, OC-73.  
 Note: Percentiles are measured as follows: 1<sup>st</sup> percentile = best, 100<sup>th</sup> percentile = worst.  
 (A) ACE used the same figure for rentable square feet (RSF) and gross square feet in its calculations (GSF).  
 (B) Current replacement value index is the ratio of annual facility maintenance operating expenditures to the current replacement value.  
 © Cost of providing the fixed asset includes capital costs, capital leasehold improvements, taxes, insurance, and depreciation. It does not include lease costs, project, or support costs.

Although ACE's 2005 results fluctuated around the study's participating-company average (see Columns 2 and 3 above), they were noticeably substandard when percentiles were assigned by the Company to its results (see Column 4 above). However, conclusions cannot necessarily be drawn from this data because of the nature of the survey (multi-discipline, North American-wide) and differences in the timing of the data being compared (the survey was based on 2003 and 2004 data while ACE used 2005 data). We would expect that the higher cost of living in the northeastern U.S. would skew ACE's labor costs higher relative to a continent-wide survey of companies. In addition, general inflation in costs would drive ACE costs higher than those experienced in the earlier years reported in the survey. However, one would expect that these impacts would be offset to some degree by lower costs associated with the location of ACE facilities in smaller communities as opposed to the large metropolitan areas that were likely embedded in the IFMA survey. The effect that the nature of ACE's utility business would have on any comparisons to a non-industry-specific survey are unknown.

## **Supply Chain**

The Supply Chain organization is part of the larger Safety and Strategic Services group which also includes Vehicle Resource Management and Facilities Management, among others. The Supply Chain organization has primary responsibility for the sourcing of services and materials and the control of company inventory.

**Organization** - The Supply Chain organization is headed by Douglas Myers, Director of Supply Chain. Mr. Myers reports to the Vice President of Safety & Strategic Services, Hallie Reese.<sup>15</sup> As of September 2008, this organization has approximately 140 employees divided among the following groups:<sup>16</sup>

- Supply Chain and Sourcing (22 employees) - This group actually has 4 separate managers who report to Mr. Myers. It is tasked with the sourcing of services and materials (contract review, negotiation, etc.) and the investment recovery process (e.g., disposition of surplus assets). It also includes two employees who provide technology support to the rest of the organization. Employees are dispersed throughout the PHI service territories (Delaware, Maryland, Washington, DC), although none are physically located in New Jersey.
- Logistics (116 employees) - Reporting through one manager to Mr. Myers, this group is responsible for managing Power Delivery's inventory, which includes procurement, inventory control, warehousing, and physical distribution. A sub-set of this group also is responsible for managing Pepco's hazardous waste. While some employees provide shared services to all PHI utilities, the stores function is segregated between the legacy Conectiv utilities and Pepco. Unlike the Supply Chain and Sourcing group, Logistics has employees working from New Jersey locations such as Mays Landing.

This organization is not responsible for power supply. Power supply management is discussed in Chapter 14.

Business Planning and Performance Measurement - In 2008, the Supply Chain organization was measured for purposes of determining incentive payments under the Annual Incentive Plan. This was a departure from 2006 and 2007 when Logistics and Strategic Sourcing were measured separately.<sup>17</sup> Given the relatively few employees assigned to Strategic Sourcing, this is understandable.<sup>18</sup>

The 2008 actual results and associated targets under this plan are summarized in the following table:

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<sup>15</sup> Response to Discovery, OC-215.

<sup>16</sup> Responses to Discovery, OC-215, OC-1142, and OC-1143.

<sup>17</sup> Response to Discovery, OC-1024.

<sup>18</sup> Included in the Supply Chain and Sourcing group previously identified is a sub-set of employees assigned to Strategic Sourcing. In September 2008, this group totaled 9 employees (see response to Discovery, OC-215).

Description	Weighting	Target	Actual	AIP %
Employees - Fatalities	Trigger	0	0	
Employees - Recordables	5%	2	1	7.5%
Employees - Preventables	5%	1	1	5.0%
Customers - Implement SAP Barcoding System in X PHI storerooms	15%	3	4	22.5%
Customers - Contribute to the PHI Corporate supplier diversity goals *	15%	28%	36%	22.5%
Customers - Improve overall PHI inventory accuracy to 96% *	10%	96%	97%	12.5%
Customers - Emergency Preparedness - Conduct refresher training and Table Top Exercise for all Logistics Staging Area personnel (A)	10%	85%	100%	15.0%
Customers - Number of documented green / environmentally friendly initiatives negotiated with suppliers and / or internal process improvements	5%	10	11	5.5%
Financial Success - Total Supply Chain spend relative to budget	25%	\$21.3M	\$18.9M	37.5%
Financial Success - PHI Cash Flow Requirement Impact (cost reductions & cost avoidance) *	10%	\$12M	\$23M	15.0%
<b>TOTAL</b>	<b>100%</b>			<b>143.0%</b>
Source: Responses to Discovery, OC-1118 and OC-1151. * Designated as a "key metric" in the monthly management report submitted to the President/COO and Senior Vice President of Operations (see response to Discovery, OC-1208). (A) Percentage of employees who have been assigned a role within the Logistics Incident Management Team and have received training by a specified date.				

As can be seen in the previous table, the Supply Chain organization met or exceeded every Annual Incentive Plan performance measure in 2008.

Until 2009, different disciplines within the larger Safety and Strategic Services organization (such as Supply Chain) were monitored through individual cost center budgets and balanced scorecards absent the structure of a consolidated organizational business plan. However, beginning in the last quarter of 2008, management adopted a more formalized top-down approach to business planning for Safety and Strategic Services for the 2009 plan year. A new purpose statement and areas of focus were developed. Initiatives to drive improvements in these areas of focus were identified, and the 2009 Business Scorecard metrics were then tied to these initiatives.<sup>19</sup> While other shared services (such as Information Technology) have developed service level expectations for their organizations, it is our understanding that such a system will not be implemented for the entire Safety and Strategic Services organization, presumably including Supply Chain, until 2010.<sup>20</sup>

Benchmarking and Key Performance Indicators - The Supply Chain organization has two benchmarking studies at its disposal from the past three years. The first was performed by Analytic Results in 2006 and compared PHI's inventory management and sourcing activities to

<sup>19</sup> Response to Discovery, OC-1023.

<sup>20</sup> Responses to Discovery, OC-718 and follow-up to OC-1002.

those of a multi-industry peer group and a utility peer group. Initiatives identified by Analytic Results for PHI consideration included:<sup>21</sup>

- Inventory and Treasury need to partner on impact of inventory on working capital management at PHI.
- Continue downward pressure on inventory and utilize all resources for inventory rationalization.
- Strategic Sourcing and Treasury need to lead the discounting validation and the payment terms effect analysis.
- Evaluate purchasing-card (P-Card) utilization.

ACE's inventory balance has decreased from 2008 to 2007, which conforms to the consultant's recommendation. However, it should be pointed out that stores inventory purchases make up a small percentage of total spend at ACE. In 2007, stores transaction throughput was \$17 million.<sup>22</sup> To put this amount in proper perspective, capital expenditures in 2007 were \$149 million and accrual-based fuel and purchased energy costs were \$1.051 billion.<sup>23</sup>

P-Card usage was reviewed in two internal audits conducted in 2008 that covered the period from May 1, 2005 through June 30, 2008. The primary concern raised concerning P-Card usage was the possibility that employees could be directly reimbursed for expenses that had already been paid by the Company to the P-Card issuing bank (Scotiabank). The Company addressed this problem when it decided to pay all charges on P-Cards of PHI employees and no longer reimburse them for their usage beginning on December 26, 2007. In the latter audit, Internal Audit observed that ". . . changes regarding the use of P-card charges and expense have been effective . . ."<sup>24</sup> P-Card spend increased from \$16 million to \$18 million between 2006 and 2007.<sup>25</sup>

In 2007, PHI purchased the results of a benchmarking study completed by CAPS Research. This work was co-sponsored by the Institute for Supply Management and Arizona State University. The study was not utility-industry-specific but rather based on a cross section of 200 to 300 companies. Using data from the time period from 2004-2006, PHI identified several benchmarks summarized by CAPS Research as key performance indicators. Those are summarized in the following table:

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<sup>21</sup> Response to Discovery, OC-73 (Analytic Results Working Capital Management Project).

<sup>22</sup> Response to OC466 (December 2007 Safety and Strategic Services Monthly Report).

<sup>23</sup> PHI 2008 Form 10-K, pp. 324 and 327).

<sup>24</sup> Responses to Discovery, OC-724 (Expense Reports & P-Card Audit Review dated June 9, 2008 and Expense Reports Audit dated December 9, 2008) (restricted) and OC-952.

<sup>25</sup> Response to Discovery, OC-73 (PHI's results for Key Performance Indicators).

Description	CAPS Industry Benchmarks		PHI	
	2005	2006	2005	2006
SS Operating Expense as a % of Purchased Spend	1.01%	0.84%	0.7%	0.5%
SS Employees as a % of Total Employees	1.45%	2.72%	0.47%	0.53%
Purchase Spend (in million \$'s) per SS FTE	\$21.08	\$24.22	\$27	\$35
Cost Reduction & Cost Avoidance as a % of Total Leverageable Spend	N.A.	N.A.	4%	2%
% of Purchases Made with Diversity Suppliers (A)	9.4%	7.6%	23%	22%
% of Leverageable Spend via P-Card	1.69%	1.86%	2.63%	1.83%
Source: Response to Discovery, OC-73 (CAPS Research Survey and Strategic Sourcing KPI's). (A) Data in PHI column for this specific row is ACE/DPL only. FTE = full-time equivalent				

In all cases but one, PHI compared favorably to the diverse peer group included in CAPS Research's survey. The one exception, percent of leverageable spend via P-Cards in 2006, indicated that PHI was generally consistent with the peer group included in the survey.

Physical Counts and Internal Audits - According to ACE's financial statement filings, the Company had \$14 million and \$15 million of inventory as of December 31, 2007 and 2008, respectively. This is comprised of generation, transmission, and distribution materials and supplies and is less than 0.6% of ACE's total assets for these two years.<sup>26</sup>

In compliance with FERC regulations, ACE is required to complete physical inventory counts of all stock every two years. To monitor on-going accuracy, random counts of 200 inventory items per region are conducted quarterly by storeroom supervisors for inventory not under their control.<sup>27</sup> Based on performance measures reported to management, PHI achieved inventory accuracy of 91% and 97% in 2007 and 2008, respectively. The 1997 results were skewed downwards because of Pepco's 89% accuracy.<sup>28</sup>

Internal Audit also conducts physical inventory counts. The results of these counts are documented in short reports. From the time period from the beginning of 2005 to the end of 2008, Internal Audit reported results for Bridgeton (November 15, 2005), West Creek (September 8, 2006), and Glassboro (July 29, 2008). Using Audit Command Language software to provide a statistical sample of inventory items to count, Internal Audit concluded that all of these locations' inventories were within acceptable error limits, and as a result, the inventory was fairly valued.<sup>29</sup>

<sup>26</sup> PHI 2008 Form 10-K, pp. 325 and 334.

<sup>27</sup> Response to Discovery, OC-720 (Inventory - Stock Material (Delmarva/ACE) Work Practice 742A).

<sup>28</sup> Response to Discovery, OC-466 (December 2007 Safety and Strategic Services Monthly Report) and OC-1208. ACE's inventory accuracy was 98% in 2007. ACE's 2008 results were not disclosed in the 2008 report.

<sup>29</sup> Response to Discovery, OC-720(B). If the calculated "upper error limit" is within 10% of the total value, the site is considered to have passed the test.

In addition, Internal Audit incorporated a review of inventory in its audit of the Pleasantville District Operations in 2007. Overall, the office was found to be “operating effectively and efficiently and [had] adequate controls to ensure compliance with established company policies and procedures.” However, Internal Audit did make the following recommendation concerning meter inventory: “Meter Department should develop district operations meter inventory and tracking policies and procedures” when it noted that there was a lack of tracking information on meter movement between the New Castle Regional Office and district stores.<sup>30</sup> According to the Company, when the matter was last communicated to management, it was still in process as it was expected that the Energy Vision - Automated Meter System application, which is scheduled to be completed in the third quarter of 2009, would inventory and track meters.<sup>31</sup>

**Recent Initiatives** - Beginning in 2008, Supply Chain management and internal stakeholders formed a cross-functional working group to automate certain aspects of the PHI sourcing process, which encompasses qualifying, bidding, evaluation, and purchasing processes. One example of this is the use of a Lotus Notes workflow tool for the Construction Management team’s Service Request Form. This form is used by Construction Management to manage projects from the bidding phase through completion in the field.<sup>32</sup>

**Vehicle Resources Management**

The Vehicle Resources Management (VRM) organization oversees PHI’s utility transportation function and fleet. As of October, 2008, the organization was headed by Frank Cottone, Group Manager, Vehicle Resources. Two managers reporting to Mr. Cottone are responsible for ACE, DPL and Pepco fleet operations and administration.

**ACE’s Transportation Fleet**

ACE currently operates a fleet consisting of approximately 530 transportation units. This includes vehicles (cars, SUVs, and light to heavy duty pickup, bucket and digger trucks), trailers and power operated equipment (forklifts, backhoes and trenchers).

<b>Type of Unit</b>	<b>2005</b>	<b>2006</b>	<b>2007</b>	<b>March, 2009</b>
Vehicles	382	385	349	389
Power Operated Equip.	39	37	36	39
Trailers	89	87	88	77
Other	19	22	22	27
<b>Total</b>	<b>529</b>	<b>531</b>	<b>495</b>	<b>532</b>
Fleet Benchmark Studies, Responses to Discovery, OC-73 (2005) & OC-1057 (2006 & 7); OC-706 (2009)				

<sup>30</sup> Response to Discovery, OC-724 (Pleasantville District Operations Audit Report dated October 23, 2007) (restricted).

<sup>31</sup> Response to Discovery, OC-859 (restricted).

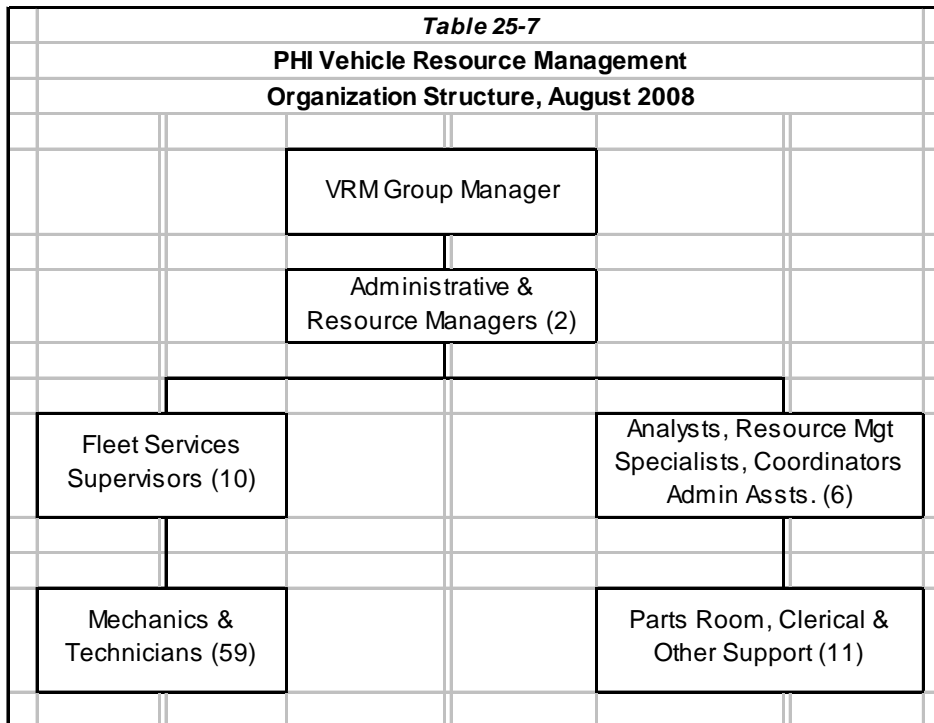
<sup>32</sup> Response to Discovery, OC-1146.



“Other” units account for about 1 percent of fleet cost and consist primarily of tow-behind equipment such as cable tensioners and arrow boards (used to direct traffic). Much of ACE’s transportation equipment, and most vehicles, are leased. Owned units consist primarily of trailers and power operated equipment. A few dozen vehicles assigned to and operating in ACE’s territory are owned or leased by affiliates. Most of these are DPL vehicles (DPL leased the vehicle), but the vehicle is stationed and used in ACE’s territory.

**Transportation Organization and Operations**

**Organization** - PHI’s Vehicle Resource Management (VRM) group resides within the Safety and Strategic Services organization (a unit of Utility Operations - Revenue Process). In 2008 VRM consisted of approximately 90 employees. VRM is headed by a group manager who is responsible for directing fleet operations (acquisition, maintenance, repair, fuel, licensing and disposal) as well as planning, budgeting and performance objectives. Two administrative managers, responsible for operations and maintenance centers in various PHI regions, report to the group manager. Fleet services supervisors, who oversee day-to-day operations and maintenance activities, report to the administrative managers. The general layout of PHI’s VRM organization is summarized in the table below:



ACE’s component of VRM consists of two fleet services supervisors, 15 mechanics and a parts clerk (storekeeper). ACE is also allocated VRM management and support cost performed on its behalf by PHI Service Company.

**Transportation Budget** - During the audit period, ACE was responsible for approximately \$9 million from a \$37 million annual operations and maintenance budget for PHI VRM as a whole. The table below summarizes ACE's VRM O&M expenses for 2006 and 2007.

Category	2006	2007
Lease	\$ 3,217	\$ 3,157
Depreciation	112	79
Interest	0	0
Licensing	139	150
<b>Ownership Cost</b>	<b>\$ 3,468</b>	<b>\$ 3,386</b>
Mechanic	1,614	1,783
Contract	207	157
Parts	635	661
Fuel	1,439	1,439
<b>Operating Cost</b>	<b>\$ 3,895</b>	<b>\$ 4,040</b>
Support Labor	1,498	1,377
Other Support Cost	429	482
<b>Support Cost</b>	<b>\$ 1,927</b>	<b>\$ 1,859</b>
<b>Total VRM Cost</b>	<b>\$ 9,290</b>	<b>\$ 9,285</b>
Source: Utilimarc Benchmark Study, Response to Discovery, OC-1057		

**Vehicle Assignment** - During the audit period most of ACE's transportation units were assigned to various operations areas (electric distribution, maintenance, meters, etc.). In some cases vehicles were assigned to specific employees. Operations managers determine how the vehicles and other units are assigned and used on a day-to-day basis. ACE maintains a small motor pool of four passenger cars for assigned short term use as needed.<sup>33</sup>

**Repairs and Maintenance** - ACE maintains facilities for maintenance and repair at the following seven locations.<sup>34</sup>

- Winslow
- Glassboro
- Bridgeton
- West Creek
- Pleasantville
- Cape May
- Mays Landing

As noted above, as of August, 2008, ACE employed 15 mechanics and one storekeeper. These employees report to two fleet supervisors. (See DR 1044). ACE performs repairs and

<sup>33</sup> Response to Discovery, OC-706-3

<sup>34</sup> Response to Discovery, OC-707-2

maintenance both internally and externally depending on the nature of the work, the internal availability of someone with the required skill, cost and timeframe.<sup>35</sup>

**Vehicle Procurement and Administration** - VRM is responsible for procurement as well as for administration of vehicles and other rolling stock. When acquiring vehicles, ACE indicated that VRM follows the Strategic Sourcing department's Guiding Principles for Sourcing. VRM's administrative functions include, in addition to procurement, specification (determination of what is needed and what to acquire), registration, fueling and disposal. Replacement decisions are based on age, mileage and maintenance records. ACE's Regional Resource Manager (not part of VRM) reviews the potential transportation unit replacement list and makes changes based on ACE's business needs. The Resource Manager approves the list and forwards it to VRM, which performs the disposal and procurement activities to complete the replacement.

**Utilimarc Benchmark Study** - Utilimarc, a consultant that specializes in utility industry fleet operations, performed benchmarking of PHI's VRM organization in 2005, 2006 and 2007. The table below summarizes key statistics for ACE and PHI as a whole for 2007, compared with the averages for all of the utilities in a group of 46 utility holding company study participants.

**Table 25-9**  
**Atlantic City Electric and PHI**  
**Key Fleet Benchmarks - 2007**

Benchmarks	ACE	PHI (Pepco, DPL & ACE)	Participant Average
<u>Cost Drivers</u>			
Average Age Vehicles	6.4	6.8	5.9
Average Age Trailers	14.9	17.6	14.3
Average Age Power Op Units	11.9	10.9	10.7
Maint / Repair Hrs per Mechanic	1,917	1,951	1,945
Maint / Repair Hrs per Support Employee	3,768	3,768	6,050
Units per Mechanic	33	41	43
Units per Support Employee	87	80	134
Customers per Unit	1,091	824	768
Total Annual Cost per Vehicle	\$ 24,510	\$ 16,984	\$ 17,438
Total Annual Cost per Trailer	2,414	2,313	2,809
Total Annual Cost per Power Operated Unit	11,361	10,852	9,251
Cost per Retail Customer (1)	\$ 17.13	\$ 17.43	\$ 19.88
Source: Utilimarc 2007 Fleet Benchmark, Response to Discovery, OC-1057			
1. Cost per customer calculated using an average of year-end 2006 & 2007 customers reported in PHI's Forms 10K. The calculation reported in the benchmark document, \$34.39 per customer, was approximately double the correct amount and was in error.			

The study shows that ACE's 2007 cost per vehicle was considerably higher than PHI as a whole and the benchmark study participant average. It also indicates a relatively high level of support overhead for both ACE and PHI, evidenced by a significantly lower number of units and repair

<sup>35</sup> Response to Discovery, OC-706-3

hours per support employee than the participant average. ACE's higher cost per vehicle in 2007 was due to primarily its fleet mix, which had more heavy-duty (and more costly) vehicles than the average utility in the study.<sup>36</sup> Although ACE's vehicles were larger and more costly than average, ACE had over 40% more customers per vehicle than the average utility in the study. Thus, although ACE's cost per *vehicle* was relatively high, its cost per *customer* (which translates more directly to a cost-based customer rate) was relatively low. ACE's vehicles were about 6 months older than the study average. A review of the data provided in response to Discovery, OC-706 shows that ACE added a number of new vehicles in 2008, bringing down the average age of the fleet.

## **Records Management**

The Records Management function has primary responsibility for records retention policy and for record storage, retrieval and destruction.<sup>37</sup> In addition, employees are responsible for managing and retaining records within their own control.<sup>38</sup>

## **Records Storage**

PHI Document Services is responsible for the storage of physical corporate records. The Information Technology organization is responsible for the storage of electronic records (data). Document storage, retrieval, pickup and delivery for ACE is outsourced to Nova Records Management.<sup>39</sup> Nova also "offers destruction services . . . but they do not make the determination on what ACE records to destroy."<sup>40</sup> ACE stated that "periodically, company representatives will visit the Nova Records facility to ensure ACE documents are adequately stored."<sup>41</sup> We requested the findings from these visits, but ACE indicated that the are not logged or documented.

## **Corporate Records Policy**

PHI's corporate records policy broadly defines corporate records to include virtually any work or company-related information created in the course of business.<sup>42</sup> It notes that records can be stored on a variety of devices, including home computers. It states that employees and others working with company information are expected to comply with the policy. It contains the following key provisions:

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<sup>36</sup> In an email to Overland provided in response to a question about the benchmark study, VRM Group Manager Frank Cottone provided statistics that showed that ACE's vehicles were driven almost 25 percent more miles than the PHI average. Therefore, in addition to vehicle size, the costs of fuel and maintenance associated with the additional miles also contributed to ACE's higher cost per vehicle.

<sup>37</sup> Response to Discovery, OC-705 (restricted)

<sup>38</sup> Response to Discovery, OC-705, Attachment 2 (restricted)

<sup>39</sup> Response to Discovery, OC-705, response to question 1(d) (restricted).

<sup>40</sup> Response to Discovery, OC-1059, response to question 2

<sup>41</sup> Response to Discovery, OC-1059, response to question 3

<sup>42</sup> Id.

- Retention - The policy notes that records have defined minimum retention periods to meet legal and regulatory requirements. There are controls (procedures) to ensure retention for required periods.
- Disposal - The policy provides that records should be kept only while being actively used, unless a longer retention is required by law, rule, regulation, or for a business purpose (such as historical reference).

Reports are provided to department heads listing records scheduled for destruction. Department heads have the opportunity to approve records due for destruction or extend retention periods.<sup>43</sup>

**Corporate Records Retention** - ACE has a detailed retention schedule for various types of corporate records.<sup>44</sup> Examples of retention periods include:

- General accounting records - 6 years.
- Journals and ledgers - 50 years.
- Plant accounting records - 25 years.
- Securities (stocks, bonds, other financial instruments) - 25 years
- Audits and related workpapers - 6 years.
- General Administration - 5 years.
- Security records (building, facility, material security, access authorization, visitor logs - 5 years.
- Shareholder communications and shareholder lists - 3 years
- General contracts and performance documentation - 6 years.
- General employment - 3 years.
- Environmental plans and policies - 3 years
- General legal matters - 10 years
- Liability claims - 2 years
- Hazardous contamination - retain indefinitely
- Business licenses and permits - retain indefinitely

In general, the procedure calls for records destruction at the end of the retention period. The retention period is defined in general as beginning when the records become inactive (for example, when a claim is closed). ACE indicated that the retention schedules are consistent with federal, state and IRS regulations applicable to ACE and its affiliates.

**Data Retention** - PHI Information Technology, acting on behalf of the Chief Information Officer, is responsible for the development and implementation of electronic data retention policy. ACE provided Overland with a copy of PHI's Data Retention Standard (DRS), which became effective

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<sup>43</sup> Response to Discovery, OC-705, response to question 1, item e (restricted).

<sup>44</sup> Response to Discovery, OC-705, attachment 1 (restricted).

after the audit period (October 1, 2008). The DRS applies to information stored electronically “on disk, tape, or other media, or virtual and electronic reports.”<sup>45</sup> The DRS:

- Specifies that the retention period for data is applicable to all data which falls under the categories of corporate records found in the Record Retention Table (retention schedule).
- Distinguishes between offline data (tape and other media not directly accessible from the corporate network) and online data (accessible through the corporate network through an application system or database). Online data, generally, is “retained during the entire life cycle of the system or application which uses the data.” Offline data is generally retained until “its scheduled retention time [as defined in corporate records retention policy] expires.
- Distinguishes “backup retention” from “data retention”, with backup defined as data “currently in production”, retained to “allow critical functions to resume in case of an interruption in computer processing.”

The DRS suggests that the Corporate Records Retention Policy, and the specific instructions set forth in the Record Retention Table, is the overriding policy governing the retention of information held in the form of electronic data. In other words, while the DRS defines and distinguishes between various types of electronic information, electronic information consisting of corporate records must be retained in accordance with the Corporate Records Retention Policy.

**Corporate Email Retention** - The IT Infrastructure Group is responsible for email storage, retention and destruction.<sup>46</sup> With regard to retention, ACE indicated that corporate email “falls under the same policies and standards applicable to all information assets.”<sup>47</sup> This might be interpreted to mean, for example, that if an email contains a discussion of a liability claim, it should be retained for two years, but if it discusses a general legal matter, it should be retained for 10 years. ACE indicated that “[e]mail archives are retained for 7 years unless special requirements are identified in accordance [with] policies and standards referenced in response number 1.”<sup>48</sup> This further supports the interpretation that if an email fall under one of the specific record types for which retention periods are listed above, it should be retained for that period; otherwise, it is archived and retained for 7 years. As a practical matter, it seems highly unlikely that employees would maintain a copy of the Records Retention Table at their desk to parse their emails into retention groups. It also seems impractical to expect the IT organization to sift through emails at the end of the archive period to salvage emails for which a longer retention is applicable under the corporate records policy.

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<sup>45</sup> Response to Discovery, OC-1058, response to question 1, attachment

<sup>46</sup> Response to Discovery, OC-1058, response to question 2

<sup>47</sup> Response to Discovery, OC-1058, response to question 1

<sup>48</sup> Response to Discovery, OC-1058, response to question 3

ACE indicated that the following retention language “was reviewed and approved by the IT Steering Committee and recommended as a modification to the Records Retention Table (the table containing specific retention requirements, including the examples, listed above)”:

A retention period of 7 years is specified for “any other corporate records (electronic or document) including but not limited to *customer records, outage reports and work requests* (emphasis added).”

It is not clear whether ACE is stating that this language actually applies to corporate email because email is not among the types of records cited. In addition, we could not find the cited language in the Records Retention Table. Overland therefore interprets the data response to mean that the policy modification *could* be interpreted to apply to email, but at this stage it has been *recommended*, not implemented. Further clouding retention policy, the Records Retention Table contains the following requirement which can be interpreted to include most routine corporate email:<sup>49</sup>

General Administration - General administrative records, *including routine correspondence* . . . Disposal: Keep for 5 years after becoming inactive. Disposal triggers: Destroy 5 years after becoming inactive (emphasis added).

**Records Disposal - Physical (Paper) Records** - Destruction of records is outsourced to Nova Records Management, but is controlled by PHI Document Services. ACE stated that reports of documents scheduled for destruction are provided to department heads, who may approve the scheduled destruction or extend the retention period.<sup>50</sup> Document Services can proceed automatically with destruction after providing reasonable notice to department heads. However, Document Services follows up with department heads before proceeding and usually obtains a written response regarding the disposition of records listed on the destruction report.<sup>51</sup>

**Records Disposal - Electronic Records (Data)** - Disposal of PHI data is governed by the DRS. It provides that “[r]etention of data beyond its established retention period is permitted, but the data should not be retained beyond the Company’s requirements if:

- The data exist is in another system or format and need to be available only in one form (either paper or electronic); both are not required.
- The system which created the data or allows access to it no longer exists.”

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<sup>49</sup> Response to Discovery, OC-705, Attachment 1, PHI Retention Schedules (restricted).

<sup>50</sup> Response to Discovery, OC-705, response to question 1, item e (restricted).

<sup>51</sup> Response to Discovery, OC-1059, Response to question 4, item a.

## **Corporate Security**

Corporate security can be divided into two broad categories:

- Revenue, people (employees, contractors, visitors), facilities and other physical asset security (including the electric distribution system).
- Electronic systems and data (cybersecurity).

PHI's Security organization is primarily responsible for revenue, people and physical asset security. The IT organization is primarily responsible for cybersecurity.

### **Corporate Security Organization**

PHI's Corporate Security organization is part of the Safety and Strategic Services organization, which is part of Utility Operations - Revenue Process. Corporate Security is responsible for the security of revenues, people and physical assets. As of September, 2008 it consisted of 18 employees (26 authorized positions) and 72 contract security officers.<sup>52</sup> The department is headed by a Manager, Corporate Security Group, who reports to the Manager, Facilities Services (Security and Real Estate Management). Below the Group Manager, the 18 employees consist of a Security Services Manager (who is responsible for ACE's and DPL's security), a Security Liaisons and Investigations Manager, a Manager of Security Systems and Compliance, Security Supervisors, Specialists, Special Officers and Investigators.

During the audit period ACE's Corporate Security, a subgroup of the PHI organization, consisted of the following:<sup>53</sup>

- Manager, Corporate Security (Ron Dollin)
- Senior Security Investigator
- Security Investigator (retired since the end of the audit period, position currently open)
- Two theft of service investigators (contractors)
- 10 uniformed guards (contractors)
- Two open Security Investigator positions

Except for the uniformed guards stationed at Mays Landing, ACE security personnel are shared with DPL. Ron Dollin, the Senior Security Investigator has responsibility for the Atlantic (ACE), Bay (DPL) and New Castle (DPL) regions. The two theft of service investigators work exclusively in ACE's territory. Some of the uniformed guards work at the Carneys Point call center, which provides customer services to ACE and DPL.

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<sup>52</sup> Response to Discovery, OC-215 and OC-702.

<sup>53</sup> Response to Discovery, OC-377 (employee organization charts), OC-702, OC-998 and Interview with Ron Dollin, April 20, 2009.



## Security Policies and Procedures

We requested ACE's procedures for securing assets, for maintaining the security of office, operations, maintenance and warehouse facilities, and for maintaining the security of the electric grid. ACE responded by providing the following two documents:

1. **PHI Corporate Security Strategy (November, 2007)** - This policy document lists corporate security goals, which are divided into categories relating to "people," "process" and "protection." People goals concern hiring, training and retaining Corporate Security employees. Process goals relate to the ongoing responsibilities of the security organization. They include audits of manned facilities and annual reviews of department policies and procedures. Protection goals are aimed at ensuring that assets and employees are adequately protected. The document lists specific requirements for facility protection, including things such as electronic access control, perimeter protection (fences, etc.), security officers, closed circuit television, alarms, audits and inspections. Assets and facilities are ranked according to risk level, with things such as servers, control centers and call centers ranked in the highest category.
2. **PHI Corporate Security Manual (April, 2008)** - This document describes the responsibilities of the Corporate Security department:
  - Establishing security policy
  - Setting security standards
  - Promoting security education and awareness
  - Providing special advice and notification
  - Monitoring compliance with federal, state, local and company standards
  - Investigating security incidents
  - Liaising with law enforcement and security agencies.

The security manual indicates that the group manager is responsible for formulating and implementing corporate security policy as established by the executive security council. The group manager is also responsible for providing security at all facilities. The security manual contains an alert system based on a ranking of threats from low (minimum threat, low likelihood, routine security measures are responsive) to high (credible terrorist or criminal threats, actual events in the PJM system or credible threats to other infrastructure, such as computer system). The manual includes recommended general and security responses for each alert level. Also covered in the security manual:

- Facilities access procedures for employees, contractors and other visitors.
- Automated access procedures (card readers)
- Vehicle access
- Search procedures
- Responses to emergency situations, including bomb threats.

## Revenue Protection

One of the key responsibilities of the corporate security function is revenue protection. Revenue protection is geared primarily toward the prevention and detection of service theft. ACE has two contract investigators who focus primarily on detecting theft of service in larger (commercial and industrial) accounts.

## Cybersecurity

PHI's IT organization has the primary responsibility for cybersecurity. We asked PHI to list and describe initiatives taken in the past four years to maintain and improve the safety of information systems from cyber attacks. We also reviewed, from a security perspective, company policy governing the security of information assets and system user activities through which unauthorized access to company systems is most often acquired: web surfing, file transfers from home and other unsecured computers, attachment of devices and media to company computers (flash drives and CDs or DVDs) and the use of personal email on company computers.

## Initiatives to Improve Cyber Security

We asked ACE to provide a list of the steps it has taken in the past four years to improve the safety of its network and information systems from cyber attacks. Assessing the effectiveness of these steps in creating and maintaining an adequate level of security is beyond the scope of this audit. However, we noted PHI has taken an extensive set of measures to improve cyber security, including the following:<sup>54</sup>

1. Adding firewall protection, spyware protection and disk encryption to all laptop computers,
2. Installing software to report and alert on Active Directory changes (Among other things, the active directory determines who has access to what systems and databases and who is authorized to make changes to the directory structure, systems and databases),
3. Conducting network penetration testing and security assessments,
4. Installing software to monitor and manage external threats,
5. Documenting and reviewing the security of third-party network connections,
6. Installing intrusion detection sensors,
7. Installing internet filtering and web security software,
8. Establishing site-specific firewalls at generating plants,
9. Installing a system to analyze network traffic and behavior and provide perimeter security to detect and mitigate denial-of-service (DoS) attacks.

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<sup>54</sup> Response to Discovery, OC-1050, question 1.

## Policies to Protect Information Assets

In accordance with its Information Security Program Charter, PHI has a series of information security policies and procedures. Below is a summary of significant policies:

- Acceptable Use - This policy applies to “corporate production systems, together with their associated data, interfacing processes and supporting infrastructure, owned by or under the custodial care of the PHI Information Technology organization.” Acceptable Use approval authority is vested in the Chief Information Officer and all employees, contractors and other users of PHI’s information assets are responsible for it. It is a blanket policy for the following specific standards:
  - Internet Acceptable Use - Limits the use of the internet for personal purposes and prohibits the use of the internet to access “objectionable” sites and materials, requires the use of company-approved browser software and reserves the Company’s right to monitor users’ internet activity.
  - Electronic Mail Acceptable Use - Covers areas similar to the Internet Acceptable Use policy, applies to the corporate email system.
  - Software Acceptable Use - Covers requirements for the appropriate business use of company software.
  
- Asset Identification and Classification - This policy defines information assets. Like the Acceptable Use policy, it is a blanket policy for a series of standards.
  - Information Classification Standard - Requirements for classifying information assets with respect to security level.
  - Information Handling Standard - Instructions and requirements for handling “high-security” information assets.
  - Records retention policy - Instructions for retaining records to meet company needs and external legal or regulatory requirements (discussed elsewhere in this chapter).
  - Data Retention - Specific instructions for the retention of data.
  
- Asset Protection - This policy defines the Company objectives for standards to protect the confidentiality, integrity and availability of information assets. It covers the following standards:
  - Access Control Standard - Requires proper identification and authentication for access to company information assets.
  - Remote Access Control Standard - Requires an approved business need to authorize remote access to information assets and provides specific instructions for remote access.
  - Internet Firewall Standard - contains instructions and requirements for system firewalls.

- Integrity Protection Standard - Contains instructions and requirements to ensure that information is “correct, auditable and reproducible.”
- Encryption Standard - Contains instructions and requirements for encryption to protect “high security” information assets.
- Anti-virus Standard - Contains requirements for protecting information assets from viruses and malicious code.
- Auditing Standard - Requires auditing to record relevant security events and maintenance of audit logs.

### **System Vulnerabilities Created by Employee Use of Company Systems**

PHI’s information systems are connected to the internet. A recent article in Electric Light and Power magazine noted that “at the end of the day, every system is connected to the Internet [and] every company should have a very strict security policy in place.”<sup>55</sup> It further noted that SecureWorks, a security services provider to more than 100 utilities, blocked an average of 49 cyber attacks *per utility per day* in the first four months of 2007. During the next five months, the number of attempted intrusions increased to 93 per utility-day. To limit the ability of cyber attackers to penetrate company systems, one expert on network intrusion prevention was quoted in the article recommending the following restrictions on employee activities:

- Do not web surf
- Do not bring files from home
- Do not plug in thumb drives or CDs into work computers
- No personal e-mail at work.

We asked PHI to provide its policies with respect to each of the above-listed activities.

- Web surfing - The Internet Acceptable Use Standard governs the use of the internet by company employees and contractors. It limits, but does not prohibit, the use of the internet for personal purposes. Specifically, it states that “Company Internet Resources are provided primarily for official and authorized Company business use and purposes.” But it also states that “[l]imited personal use of Company Internet Resources is acceptable as long as it does not conflict with Company business and interests . . .” The Acceptable Use Standard also prohibits the use of the internet to access “objectionable” material. PHI also noted in its data response that it uses a web filtering technology to block access to business-inappropriate sites.
- File transfers to and from company computers and use of thumb drives and CDs - We were unable to find any standards regulating the transfer of files between company-owned (and system-connected) computers and external computers.

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<sup>55</sup> Nancy Spring, *Cyber Security: Are We Doing Enough?*, Electric Light and Power, May, 2008.

- Personal email - The Internet Acceptable Use standard implicitly allows the use of personal email accounts. The Email Acceptable Use standard explicitly permits the “limited” use of the Company email system for personal purposes.

**Training** - Pepco’s employee and contracted uniformed security officers receive training several times per year “to reinforce PHI expectations regarding security practices and procedures.” The training is provided by Corporate Security managers and supervisors. The procedure that discusses this training requirement, dated November, 2007, indicates that it “is not currently available for the Atlantic, Bay and New Castle regions.”

### **Security Audits and Inspections**

The primary responsibility for security audits is not vested in Internal Auditing, but in the Corporate Security organization itself.<sup>56</sup> Corporate policy requires security audits of “manned facilities” at least once every four years.<sup>57</sup> The policy requires the audits to be conducted by teams of at least two security personnel. It requires the audits to cover all security practices and equipment currently in place, including facility access control, alarms, perimeter protection, lighting, CCTV, guard performance, security records, adherence to procedures, security of materials and coordination with public safety officials to assess external impacts on facility security.

We requested copies of security audit reports conducted in ACE’s territory during the years 2005-2008.<sup>58</sup> As part of a larger audit that included safety, health and environmental areas, a comprehensive audit of security was performed at Mays Landing in 2007. In 2008 ACE conducted less comprehensive physical security audits of the West Creek Operations Center, the Tilton Road Customer Courtesy Center and the Millville Customer Courtesy Center. It does not appear any security audits of manned ACE facilities were conducted in 2005 or 2006.

### **Substation Inspection**

ACE provided reports covering substation inspections between September, 2007 and October, 2008. ACE attempts to inspect about 5 substations per month. Certain critical substations (defined as such in conjunction with the NJBPU) are inspected every year. We noted that most of the deficiencies indicated on substation inspection reports were minor, involving things such as torn fencing, washouts and overgrown vegetation. For example, an inspection of one substation conducted in February, 2008, yielded the following of deficiencies:<sup>59</sup>

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<sup>56</sup> We requested internal audit reports addressing ACE’s security infrastructure. The only thing we received was a copy of the report for a 2007 audit of Pleasantville district operations Audit that included a finding about card access to facilities. The audit found that employees and contractors were sometimes given access in “access groups” (groups of facilities and doors) and noted in some cases the number of buildings and doors was beyond what was needed.

<sup>57</sup> Response to Discovery, OC-702, PHI Corporate Security Strategy, pp. 2-3.

<sup>58</sup> Response to Discovery, OC-999

<sup>59</sup> Response to Discovery, OC-997. It should be noted that this inspection produced a higher-than-average number of deficiencies, but the deficiencies noted are typical.

- Broken top-guard
- Inadequate signage
- Numerous washouts
- Wire and material stored along fence line.

Ron Dollin, who is in charge of security for ACE, indicated that substation inspection reports are sent to the substation maintenance organization. A copy is also sent to the Corporate Security office in Washington, D.C. However, there is no formal process to followup on whether deficiencies noted on the inspection reports have been corrected.

### **Security Performance Measurement and Assessment**

We asked ACE to describe how PHI assessed and measured its security infrastructure and operations. The Company responded with the following:

- Participating in industry security meetings, including the Edison Electric Institute Security Committee, NJ Electric and Gas Working Group / NJBPU, FBI Infraguard, and Middle States Metal Theft Task Force.
- Performing periodic inspections of substations and facilities.
- Adherence to security industry best practices.
- Employing a formally trained contract guard force to protect infrastructure.
- Providing security awareness programs to employees.
- Periodic liaison with law enforcement.<sup>60</sup>

These are primarily operational and management activities, rather than measurement or assessment. We also asked if Corporate Security used a service level expectations methodology similar to what is used in the Information Technology function. ACE initially indicated that the Security function did not use service level expectations for self-assessment.<sup>61</sup> ACE revised the response to the following:

Currently, ACE or PHI has not used an assessment methodology equivalent or a process similar to what is reflected in the Service Level Expectations goals and review maintained by the Information Technology function to assess the performance of its security function. However, the 2009 Safety and Strategic Services Business Plan addresses steps necessary to develop meaningful SLEs for 2010. Specifically, the following steps will be conducted in 2009: a) identify critical S&SS maintained equipment and ensure availability (Initiative KL2) and b) identify critical S&SS services and ensure delivery (Initiative KL3) The sub

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<sup>60</sup> Response to Discovery, OC-703, item 1

<sup>61</sup> Response to Discovery, OC-703 item 2

initiatives that support these main initiatives will address the dialogue with key business leaders to determine those items that are of a critical nature, to gather data in 2009 to support the development of an SLE for 2010.<sup>62</sup>

### Atlantic Region Security Incidents

The table below summarizes reported incidents in the Atlantic Region for the years 2005 through 2008.

<b>Incident Category</b>	<b>2005</b>	<b>2006</b>	<b>2007</b>	<b>2008</b>
Assault	1	1	1	
Break and Enter			1	
Dumping	2			
Financial offenses	1		1	2
Fraud			2	
General Complaints		1		
Policy Violation	1		2	2
Suspicious Activity	2	2		1
Theft	13	4	4	9
Threats / Difficult Customers	7	1	4	8
Trespass	7	1	2	1
Vandalism			4	1
Wire Theft	7	6	16	39
<b>Total</b>	<b>41</b>	<b>16</b>	<b>37</b>	<b>63</b>
Source: Response to Discovery, OC-703				

The only thing that stands out in the table is the dramatic increase in wire theft incidents, which is almost certainly the result of rising copper prices during the past several years. ACE's Manager of Security confirmed that copper theft, which can include theft of *installed* copper, picked up in recent years as a consequence of the increase in copper prices. He stated that ACE and other utilities have begun a regional program to address copper and similar thefts that may be perpetrated by individuals who target more than one utility.

### Legal

#### Organization

As of late 2008, the Legal organization was headed by William Torgerson, Vice Chairman and Chief Legal Officer who reported directly to the CEO of PHI.<sup>63</sup> Mr. Torgerson was responsible for the Legal organization and for Ethics Compliance and Government Affairs & Public Policy. Reporting to Mr. Torgerson was Kirk Emge, Senior Vice President and General Counsel, a

<sup>62</sup> Response to Discovery, OC-703 item 2, revised

<sup>63</sup> Response to Discovery, OC-18. Mr. Torgerson was planning to retire in June 2009 when we interviewed him in December 2008.

position Mr. Emge had assumed earlier in 2008 as part of a long-range management transition. Mr. Torgerson had previously been General Counsel.<sup>64</sup>

After Mr. Torgerson's retirement, Mr. Emge began reporting directly to the CEO of PHI. In addition to the Legal organization, Mr. Emge continued to head External Affairs Administration, but unlike Mr. Torgerson, he was not responsible for Government Affairs and Public Policy. After Mr. Torgerson's retirement, the head of this group also began reporting directly to the CEO.<sup>65</sup>

The Legal organization is comprised of approximately 30 attorneys, including "dotted-line" reports from the unregulated businesses, and support staff. An Associate General Counsel is generally the highest level assigned to an employee without supervisory responsibilities, while the title of Deputy General Counsel is assigned to those with the most significant supervisory responsibilities. In late 2008, there were five employees holding the title of Deputy General Counsel with the following assigned practice areas:<sup>66</sup>

- Employment, benefits, tax, environmental, and real estate;
- Claims litigation, commercial law, bankruptcy, and intellectual property;
- Federal and state regulation;
- NYSE and SEC compliance, securities law, and corporate secretary matters; and
- Special projects, corporate policy, and Sarbanes Oxley coordination.

A full-time in-house attorney, Philip J. Passanante, an employee of PHI Service Company, is assigned to matters concerning the New Jersey BPU.

### **Management of Outside Counsel**

Since the merger of Pepco and Conectiv, a concerted effort has been made to perform more of the legal work in-house, consistent with a recommendation made by a consultant in the 2002-2003 timeframe. To the extent that outside counsel is retained, the primary attorneys (as identified by management) and related assignments are:<sup>67</sup>

- Covington & Burling - corporate matters and financing
- Orrick, Herrington & Sutcliffe - contract matters, Mirant bankruptcy, Bluewater Wind
- Hunton & Williams - environmental issues

The following table summarizes the amounts spent by PHI on outside legal counsel over the past 3+ years:

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<sup>64</sup> Interview with William Torgerson, Vice Chairman and Chief Legal Officer, and Kirk Emge, Senior Vice President and General Counsel (December 9, 2009).

<sup>65</sup> Response to Discovery, OC-1120.

<sup>66</sup> Interview with Kirk Emge, Senior Vice President and General Counsel (December 10, 2009).

<sup>67</sup> Interview with Kirk Emge, Senior Vice President and General Counsel (December 10, 2009).



<b>Table 25-11 PHI Outside Legal Counsel</b>					
<b>Firm</b>	<b>Expertise</b>	<b>2005</b>	<b>2006</b>	<b>2007</b>	<b>2008-1st 3 Qtrs</b>
Swidler Berlin	Mirant Bankruptcy	\$2,973,971	\$208,958	(A)	(A)
Bruder Gentile	Corporate, FERC	2,059,204	1,213,753	809,071	412,410
Dickstein Shapiro	Litigation - Spent Nuclear Fuel	973,972	1,003,197	1,914,653	726,275
Covington & Burling	Corporate, Financing	756,447	1,195,203	2,194,350	1,258,613
Hogan & Hartson	Corporate, HR	657,516	1,043,431	644,317	497,257
Hunton & Williams	Corporate, Environmental	511,552	947,879	889,948	495,106
Day Pitney	Regulatory (DPL & Pepco)	(A)	(A)	1,639,957	(A)
Orrick Herrington	Delaware IRP/RFP, Mirant	(A)	746,125	1,295,938	802,086
Schiff Hardin	Regulatory	(A)	176,551	473,264	1,027,206
Venable	Trademarks, SunGuard	269,877	455,354	(A)	761,457
Other		7,242,937	7,584,773	8,854,913	3,539,861
<b>TOTAL</b>		<b>\$15,445,476</b>	<b>\$14,575,224</b>	<b>\$18,716,411</b>	<b>\$9,520,271</b>
Source: Response to Discovery, OC-693 (A) Amount below \$100,000 and not disclosed.					

Within the Legal organization, any matter expected to incur legal fees of \$100,000 or more must be budgeted.<sup>68</sup> Legal matters are monitored by PHI through Serengeti Tracker (Serengeti); a third-party, web-based software system. Serengeti has the following functionality:<sup>69</sup>

- Electronic Billing (invoice auditing, approval routing, and spending alerts)
- Matter Management (case development and deadline alerts, requirement enforcement, results analysis, evaluation, collaboration management)
- Budgeting and Accruals (actual vs. budget comparisons, roll-up of project budgets to department, accruals for unbilled time)
- Reporting and Trending (filtering, customizable reporting and graphing)

PHI requires that all outside counsel upload their bills to Serengeti for payment. Bills must be detailed and have itemized fees and expenses so that PHI management can perform a thorough review before payment is made. When all necessary approvals have been obtained, Serengeti data is uploaded to SAP for payment.

<sup>68</sup> Interview with Kirk Emge, Senior Vice President and General Counsel (December 10, 2009).

<sup>69</sup> Response to Discovery, OC-694.

In the second half of 2008, Legal was considering the acquisition of a new document management system. However, due to the financial turmoil in the fourth quarter of the year, management suspended all discretionary spending and tabled plans to pursue a new software package.<sup>70</sup>

### Performance Measurement

As with other organizations, Legal is measured against a balanced scorecard. In 2008, the metrics tracked for Legal and their associated weights were as follows:

Description	Weighting	Target
Employees - Fatalities	Trigger	0
Employees - Recordables / Preventables	5%	0
Employees - Conduct one new safety awareness activity per quarter	10%	4
Employees - % of exempt employees conducting or participating in diversity discussions	10%	95% in 5
Customers - Client survey distributed and returned by year-end to measure Legal's responsiveness to it's customers (A)	15%	85%
Financial - Achieve the O&M budget	10%	35,929,000
Financial - Reduce adjusted outside counsel expenditures below benchmark	50%	18,650,000
<b>TOTAL</b>	<b>100%</b>	
Source: Response to Discovery, OC-70.		
(A) Satisfaction must be 3 or above on a 5-point scale.		

Performance against these metrics was not made available.<sup>71</sup> However, as noted in Table 25-11 above, expenditures on outside counsel through the first three quarters were tracking at approximately 51 percent of the adjusted annual expenditures targeted.

### Insurance and Claims

Insurance and claims are handled by two different groups within PHI. Insurance matters are the responsibility of the Manager of Corporate Insurance, who resides within the Treasury Department of PHI Service Company.<sup>72</sup> On the other hand, issues surrounding claims are assigned to a sub-group of the Legal Services Department. ACE has an on-site claims supervisor and adjuster at Mays Landing and another adjuster at the Carney's Point facility in southern New Jersey.<sup>73</sup>

<sup>70</sup> Response to Discovery, OC-694.

<sup>71</sup> Response to Discovery, OC-1118.

<sup>72</sup> Response to Discovery, OC-709.

<sup>73</sup> Response to Discovery, OC-713.

## Insurance

Program limits and deductible amounts are benchmarked against other utilities to determine the appropriateness and adequacy of coverage. Benchmarking data is obtained both internally through a periodic, small industry survey and by the insurance broker.<sup>74</sup> ACE does not carry its own insurance policies, but rather is covered under several blanket insurance programs with other regulated and unregulated subsidiaries of PHI. The primary blanket insurance policies include:

Type	Term	Deductible	Cost
Property	March 1 - March 1	\$100,000 - \$2,500,000	\$2,988,000
Excess General Liability	October 31 - October 31	\$2,000,000	6,545,000
Directors & Officers Liability	August 1 - August 1	\$1,500,000	2,709,000

Source: Response to Discovery, OC-710.  
 Note 1: There are multiple insurers for each policy listed above.  
 Note 2: Deductibles, coverages, and insurers have remained the same between 2007 and 2008.  
 Note 3: The cost of these policies is allocated to ACE according to criteria on file with the SEC.

The benchmarking data provided by the Company indicates that its deductible for excess general liability is higher than the industry median and mean while the deductible for directors & officers liability is lower than the industry median and mean. No benchmarking data was provided for property insurance.<sup>75</sup>

According to the Company, the performance of the Insurance sub-function of Treasury is not assessed using formal service level expectations, a tool employed elsewhere (e.g., Information Technology).<sup>76</sup> In addition, most likely due to its classification as a part of Treasury, we found no evidence that Insurance had its own balanced scorecard.<sup>77</sup>

No internal audits of the Insurance function were conducted between January 2005 and January 2009.<sup>78</sup>

## Claims

As previously mentioned, PHI has staffed the Claims function for ACE on-site for quick response and investigation of matters that arise in the eastern and southern portions of New Jersey.

Claims come to the attention of the Claims department through a number of different sources. Tariff-related claims are generally submitted by e-mail by the Customer Service Department. Claims can also emanate from the Operations Department or direct contact with the claimant. All claims are investigated, and after review, a decision is made to either deny the claim, adjust

<sup>74</sup> Response to Discovery, OC-709.

<sup>75</sup> Response to Discovery, OC-711.

<sup>76</sup> Response to Discovery, OC-711.

<sup>77</sup> Response to Discovery, OC-70.

<sup>78</sup> Response to Discovery, OC-712 (restricted).

it, settle it, or prepare for litigation. Any claim having a probable exposure of greater than \$5,000 is reserved within the Claims system. Loss reserves are established on an individual basis, and litigation cases are evaluated by inside/outside counsel.<sup>79</sup>

As of the filing date of its 2008 Form 10-K, ACE disclosed the following significant claims-related contingencies in the footnotes to its financial statements:<sup>80</sup>

- A \$25 million claim for indemnification by the purchaser of the B.L. England generating facility contending that if a contract for terminal services with a third party (which was sold as part of the purchase) is not found to be enforceable by an arbitrator, ACE should make payment.<sup>81</sup>
- As one of three potentially responsible parties (PRPs) at the Delilah Road Landfill site in Egg Harbor Township, New Jersey, ACE has been actively participating in the remediation of the site for a number of years. ACE has estimated its share of additional costs associated with post-remedy operation and maintenance of the site to be \$555,000 to \$600,000. In late 2008, one of the other PRPs filed for bankruptcy. ACE does not believe that its liability for this site will have a material adverse effect on it regardless of the impact of this bankruptcy.
- In 2007, ACE was informed by the New York Department of Environmental Conservation that it was identified as a PRP at the Frontier Chemical Waste Processing Company site located in Niagara Falls, New York based on manifests indicating that ACE had sent hazardous waste to this site. ACE is participating in a group of other PRPs to establish its responsibility at the site. ACE does not believe that its liability for this site will have a material adverse effect.
- In late 2008, the Environmental Protection Agency (EPA) informed ACE that it was a PRP at the Franklin Slag Pile Superfund Site in Philadelphia, Pennsylvania. ACE had previously sold boiler slag from the B.L. England generating facility to the former operator of the site. In its assertion, the EPA contends that if found liable, ACE would be responsible for historical and future clean-up costs and EPA-mandated remedies. The EPA has spent \$6 million to date at the site and expects to spend another \$6 million. However, other parties have been sent similar letters by the EPA. Although it does not believe it is liable based on the facts of the case, ACE is unable to predict what costs it will ultimately bear at this site.

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<sup>79</sup> Response to Discovery, OC-713.

<sup>80</sup> 2008 PHI Form 10-K, pp. 354-357.

<sup>81</sup> Subsequently, the arbitrator issued an interim award, ruling that the contract is enforceable. ACE believes this relieves it of responsibility, but it cannot predict the purchaser's future actions (June 30, 2009 PHI Form 10-Q, pp. 40-41).

- PHI and the IRS are still in settlement negotiations with respect to prior year income tax returns. In dispute is the treatment of certain construction expenditures and related depreciation. In 2006, PHI deposited the amount of additional taxes and interest that it believed was owed. A recent IRS offer of settlement pertaining to ACE has led management to believe that it would owe less than the previously-deposited \$121 million.

As with Insurance, Claims does not employ formal service level expectations. However, it does have the following goals and each individual is evaluated based on the accomplishment of the following objectives:<sup>82</sup>

- Contact 95 percent of claimants within 72 business hours to acknowledge receipt of their claims;
- Thoroughly investigate claims, ensuring all facts and evidence are gathered and secured; and
- Aggressively negotiate and obtain favorable settlements in property damage and bodily injury claims by fairly and accurately assessing company liability.

No internal audits of PHI's Claims function have been completed since January 2005. However, an audit of the claims process was begun in December 2008.<sup>83</sup>

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<sup>82</sup> Response to Discovery, OC-714.

<sup>83</sup> Response to Discovery, OC-712 (restricted).

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