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May 15, 1979

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Mr. Chase R. Stephens  
Docketing and Service Section  
Office of the Secretary  
U.S. Nuclear Regulatory  
Commission  
Washington, D. C. 20555

In the Matter of  
The Cincinnati Gas & Electric Company, et al.  
(William H. Zimmer Nuclear Power Station)  
Docket No. 50-358

Dear Mr. Stephens:

Enclosed herewith are the originals of the affidavits of Paul R. Anderson, Allen M. Hill, W. Robert Kelley, William H. Zimmer, Jr. and Robert P. Wiwi. Copies of these affidavits had been included with our April 23, 1979 filing in the captioned proceeding, "Applicants' Supplemental Motion for Summary Disposition."

Please note that a typographical error has been corrected in Line 1, Paragraph 8 of Mr. Wiwi's affidavit, and a minor editorial change has been made on Line 3 of Subparagraph 1 of Paragraph 4 of Mr. Zimmer's affidavit. In addition, the first paragraph of the Qualifications of Mr. Paul R. Anderson has been corrected to include a line dropped by the typist.

If you have any questions, please let me know.

Sincerely,

Mark J. Wetterhahn  
Counsel for the Applicants

Enclosures

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Mr. Chase R. Stephens  
May 15, 1979  
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cc: Charles Eechhoefer, Esq.  
Dr. Frank F. Hooper  
Richard S. Salzman, Esq.  
Dr. Lawrence R. Quarles  
Mr. Glenn O. Bright  
Chairman, Atomic Safety and  
Licensing Appeal Board  
Chairman, Atomic Safety and  
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STATE OF OHIO )  
 ) SS.  
COUNTY OF MONTGOMERY )

AFFIDAVIT OF PAUL R. ANDERSON

PAUL R. ANDERSON, being first duly sworn according to law comes forward and states:

1. My name is Paul R. Anderson. I am employed by The Dayton Power and Light Company as Treasurer. In that position, I am responsible for the formulation of the Company's financing program (including the sale of securities), cash management and control and various financial studies. A statement of my professional qualifications is attached and incorporated by reference herein.

2. The Dayton Power and Light Company has estimated its construction expenditures to be \$1,016 million for 1979-1983. Included in this budget is \$29 million for the Company's share of the expenditures necessary to complete Zimmer Station, representing only 2.9% of the five-year construction budget.

3. The Company obtains the funds necessary to construct new facilities from internal sources and from external sources which includes the public sale of securities. Over the last five years, the Company obtained 20% of its requirements for its construction program from internal sources.

4. On March 9, 1979, the Company was granted a permanent rate increase of approximately \$10.5 million annually over the then existing emergency level of rates. The Company will seek additional rate increases as required and justifiable. Section 4909.15 of the Ohio Revised Code provides, in part, that The Public Utilities Commission, when fixing rates, shall determine:

(1) The valuation of property used and useful in rendering the public utility service, including an allowance for working capital and, at its discretion, an allowance for construction work in progress,

(2) a fair and reasonable rate of return to the utility,

(3) the dollar annual return to which the utility is entitled by applying the fair and reasonable rate of return determined in 2 above to the valuation determined in 1 above, and

(4) the cost to the utility of rendering the public utility service for the test period.

5. The Company's construction program cannot be totally financed with internally generated funds. The Company expects to obtain the remainder of its construction cash requirements from external sources, including the sale of securities when necessary to obtain the funds required.

6. It is my professional opinion, considering all the above factors, that the Company will be able to finance its portion of the construction costs for the Zimmer Station.

7. Extensive updated financial information related to operation and decommissioning was submitted to the SEC on January 9, 1979, with copies to the Licensing Board and parties. As that submittal applies to the Company, I incorporate it by reference herein.

8. I have reviewed the costs of operation of the Wm. H. Zimmer Nuclear Power Station Unit 1 over the first five years as presented in response to Question 1.a of the January 9, 1979 submission, and the costs of decommissioning discussed in response to Questions 2 and 3 in that submission. Based upon all the above factors and my knowledge of the capital structure and financial

condition of the Company and recent decisions of The Public Utilities Commission of Ohio, it is reasonable to assume that the Company will be able to pay its share of costs associated with operation of the unit and decommissioning costs.

*Robert Anderson*

SWORN to before me this 25<sup>th</sup> day of April, 1979.

*Thelma E. White*  
Notary Public

My Commission expires 3/2/81.  
THELMA E. WHITE, Notary Public  
in and for the State of Ohio  
My Commission Expires March 2, 1981



QUALIFICATIONS

PAUL R. ANDERSON

TREASURER

THE DAYTON POWER AND LIGHT COMPANY

My name is Paul R. Anderson. My business address is Courthouse Plaza S.W., P. O. Box 1247, Dayton, Ohio 45401. I am the Treasurer of The Dayton Power and Light Company. In that position I am responsible for the formulation of the Company's financing program (including the sale of securities), cash management and control and various financial studies.

I received a bachelor of Science degree in Accountancy and a Master of Accounting Science degree in 1963 and 1964, respectively, from the University of Illinois. From 1964 until 1978, except for two years of military service, I was employed by Arthur Andersen & Co., an international public accounting firm, in the public utility audit division, working in the areas of financial audits, rate proceedings, financings, and special matters. I joined The Dayton Power and Light Company as Treasurer in June 1978.

I am a certified public accountant and a member of the American Institute of Certified Public Accountants, the Ohio Society of Certified Public Accountants and the Financial Executives Institute.

STATE OF OHIO                    )  
                                  )    SS.  
COUNTY OF FRANKLIN            )

AFFIDAVIT OF W. ROBERT KELLEY

W. ROBERT KELLEY, being first duly sworn according to law comes forward and states:

1. My name is W. Robert Kelley. I am employed by Columbus and Southern Ohio Electric Company as Vice President - Electric Operations. In that position, I am responsible for the generation design, operation, and maintenance; system operations; and substation operation and maintenance. A statement of my professional qualifications is attached and incorporated by reference herein.

2. ZPS-1 will supply C&SOE with its lowest incremental cost energy. Fuel cost for energy from ZPS-1 for the year 1980 is expected to be about 4.40 mills/kwh. The next least expensive energy will be from base-load, coal-fired units at a fuel cost of about 11.50 mills/kwh. With ZPS-1 in service in 1980, total C&SOE fuel costs are expected to be 145.1 million dollars. Without ZPS-1, these total fuel costs would be expected to rise to 155.3 million dollars. ZPS-1 is therefore expected to reduce fuel costs for C&SOE by 10.2 million dollars in 1980.

3. Without ZPS-1 in service, fuel oil usage by C&SOE would probably increase by about 94,000 barrels in 1980 over usage which would be expected with ZPS-1 in service.

4. Installed reserve requirements for C&SOE are approximately 5% higher than the other two companies. The generation reserve

criterion for C&SOE is based on the Daily Capacity Margins technique recommended by the ECAR Generation Reserve Panel of which C&SOE is a member. In this procedure, a yearly level of reliability is determined by analyzing daily reserve margins which take into account daily peak loads and related available generating capabilities. The reliability level used by C&SOE in forecasting reserve requirements is based on the most recent seven year system performance which portrayed a system acceptable reliability level. For this report, required installed reserve levels are expressed as a percent of peak load demand.

5. Without ZPS-1 for years 1980 and 1981, C&SOE's projected installed reserve would deteriorate from a level of 34.6% in 1979 to 28.8% in 1980 and to 18.8% in 1981. No new units are planned by C&SOE during this time frame.

6. The above projected reserve levels are based upon the most recent C&SOE load forecast, which indicates anticipated summer and winter peaks for 1980 and 1981 as listed below:

	Summer Peak Demand (MW)	Winter Peak Demand (MW)
1980	2121	2026
1981	2219	2068

The above forecast includes the assumption that the City of Columbus would have their proposed generating station in operation for the winter season of 1981. If this project would not meet this schedule, then the forecasted C&SOE winter peak demand in 1981 would increase to 2126 MW.



7. The basic methodology used for the C&SOE load forecast is econometric modeling. Economic and demographic data was utilized in multiple regression equations to forecast energy consumption for the three major customer sectors and to forecast summer and winter peak demands. An analysis of load factor is also incorporated into the projection of peak demands.

WR Kelly

SWORN to before me this 23rd day of April, 1979

Sandra L. Witte  
Notary Public

My Commission expires Feb. 22, 1984.

SANDRA L. WITTE  
NOTARY PUBLIC - STATE OF OHIO  
MY COMMISSION EXPIRES FEB. 22, 1984

## QUALIFICATIONS

W. ROBERT KELLEY  
VICE PRESIDENT - ELECTRIC OPERATIONS  
COLUMBUS AND SOUTHERN OHIO ELECTRIC COMPANY

My name is W. Robert Kelley. My business address is 215 North Front Street, Columbus, Ohio 43215. I am Vice President - Electric Operations for the Columbus and Southern Ohio Electric Company. In that position, I am responsible for generation design, operation, and maintenance; system operations; and substation operation and maintenance.

I attended the College of Engineering at Ohio State University in Columbus, Ohio, and received a B.S.E.E. Degree in 1962. In addition, I attended the Public Utilities Executive Training Course at the University of Michigan Graduate Business School in 1978.

In 1962, I was hired as a Substation Engineer by Columbus and Southern Ohio Electric Company. I was promoted to Assistant Supervisor of Test Procedures in 1966; and in 1968, became Supervisor of Test Procedures. I was promoted to Director of System Operations Analytical Area in 1973; and in 1974 was promoted to Manager of System Operations. I was elected Vice President of Electric Operations in 1976.

I am a member of the Institute of Electrical and Electronic Engineers; the East Coast Area Reliability, Coordination and Review Committee; the Ohio Valley Electric Corporation, Operating Committee; The Ohio State University, Mechanical Engineering Advisory Committee; the Electric Power Research Institute, Advisory Committee of Fossil Fuel and Advanced Systems Division; and the Edison Electric Institute, Nuclear Power Subcommittee.

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STATE OF OHIO            )  
                              )  SS.  
COUNTY OF HAMILTON    )

AFFIDAVIT OF ROBERT P. WIWI

Robert P. Wiwi, being first duly sworn according to law comes forward and states:

1. My name is Robert P. Wiwi. I am employed by The Cincinnati Gas & Electric Company as Vice President of Electric Operations. In that position, I am responsible for among other duties the formulation of CG&E's long term energy and demand forecast and determination of additional generation capability so as to maintain adequate generating reserve margins. A statement of my professional qualifications is attached and incorporated by reference herein.

2. In determining the need for power or additional generating capacity several major factors are involved. The first is the forecast of future customers energy requirements and peak demands throughout the year with major emphasis being placed on forecasting the peak demands in the season likely to produce the greatest annual peak demand. For CG&E the peak season is the summer season because of the large amount of electric air conditioning installed by our customers.

3. The Cincinnati Gas & Electric Company (CG&E) updates its electric sales and load forecasts annually in the spring. Electric sales are forecast for each class of service fifteen

years into the future, the first three years of which are split up monthly by company for shorter term planning and revenue budgeting purposes. The methodology employed at CG&E involves a mix of forecasting techniques. The overall approach, however, is econometric in nature and results in a forecast of annual energy consumption by class of service which in turn derives a forecast of summer and winter peak demands.

4. Summer and winter peak loads are derived by applying load research based peak contribution factors to the disaggregated kWh forecast and summing the coincident peak contributions.

5. The forecasted peak loads in the following table reflect an anticipated annual compound growth rate of 4.6% over the projected peak that could have occurred in 1978 if we had experienced a typical Cincinnati "hot spell." This growth rate is consistent with projections being made by others not directly involved in the electric utility industry but who are interested in the electric utility sector of our economy and its future peak demands.

6. Another major factor in CG&E Co. generation expansion plans is the maintaining of a reserve margin of generation in the range of 18-25% at the time of the system peak. This reserve margin is necessary to provide a reliable source of power at peak times even in the event of forced outages of equipment or unanticipated electric demands in excess of the forecast. This reserve margin is also required throughout the year to permit

the removal of generating units from service for purposes of maintenance and inspection.

The following table of data for The Cincinnati Gas & Electric Company and Subsidiary Companies shows the effect of the Zimmer Nuclear Unit on the generation reserve margins for the next two years.

<u>Year</u>	<u>Summer Peak Forecast</u>	<u>Total CG&amp;E *Generation</u>	<u>Reserve Margin</u>	<u>*Generation less Zimmer</u>	<u>Reserve less Zimmer</u>
1980	3218	3912	21.6	3595	11.7
1981	3352	4218	25.8	3901	16.4

\* Generation based on net summer capability.

Without Zimmer Unit #1 being placed in service in early 1980, the reserve margins are not adequate for reliable service to our customers.

7. Prudent generation planning dictates that even with the desired reserve margins, some probability remains that a series of coincident forced outages of equipment will necessitate the purchase of emergency power from neighboring systems. If the reserve margin falls below the design range the probability of the need for emergency purchases of power greatly increase both as to frequency and magnitude and conceivably could exceed the amount available. If sufficient power could not be imported into the system the consequences could range from

(i) our customers being subjected to planned disconnection of service for several hours to

(ii) a total collapse of the system or blackout of southwestern Ohio. These consequences cannot be permitted to occur.

The social economic cost and potential costs of damage to the electric supply facilities of the company could approach 100's of millions of dollars. Therefore Zimmer Unit #1 must be placed in service in accord with its present in service date.

8. Notwithstanding the foregoing potential consequences of the delay in Zimmer station, the customers of the company would experience substantial increases in cost of energy because the energy that would have been produced by Zimmer would need to be produced by older less efficient coal and oil fired steam equipment and gas turbines as well as through the purchase of energy from others if available, such purchased energy being produced by similar less efficient and expensive generation equipment. An estimate of the fuel and purchase power penalty costs incurred by our customers in 1980 should the in service date of Zimmer Unit #1 be delayed from January 1, 1980 to January 1, 1981 is \$21,535,570 and using an additional 1,133,896 barrels of oil.

*R. M. ...*

SWORN to before me this 30<sup>th</sup> day of April, 1979.

*Mary B. Pfennig*  
Notary Public

My Commission expires \_\_\_\_\_.

QUALIFICATIONS  
ROBERT P. WIWI  
VICE PRESIDENT - ELECTRIC OPERATIONS  
THE CINCINNATI GAS & ELECTRIC COMPANY

My name is Robert P. Wiwi. My place of business is Fourth and Main Streets, Cincinnati, Ohio. I am Vice President of Electric Operations of The Cincinnati Gas & Electric Company.

I received a Bachelor of Science Degree in Electrical Engineering from the University of Cincinnati in 1964. I received a Master of Business Administration Degree from Xavier University in 1969. I also attended an Electric Utility Management Program at the University of Michigan in 1972. I have been employed by The Cincinnati Gas & Electric Company and its Subsidiaries since 1964. I have held various positions in the Electric Department in both the operating and planning divisions. I was Manager of the Electric Operations Department from May, 1972 until May, 1976 when I became Vice President of Electric Operations.

I am a member of the Institute of Electrical and Electronic Engineers, the Association of Edison Illuminating Companies and the Coordination Review Committee of East Central Area Reliability (ECAR).

STATE OF OHIO            )  
                              ) ss  
COUNTY OF MONTGOMERY)

AFFIDAVIT OF ALLEN M. HILL

1. Allen M. Hill, being duly cautioned and sworn, deposes and says that he is Manager of Planning for The Dayton Power and Light Company and, as such, is responsible for the planning of future generation facilities, as well as the forecast of future peak demand and energy requirements. A statement of my professional qualifications is attached and incorporated by reference herein. The forecast of the demands is based upon econometric modeling techniques which were developed and tested for sales by customer class as well as for both summer and winter peak demand. The forecast, prepared in late 1978 was made based upon long run economic expectations.

2. The following are the projected demands through 1985:

<u>SUMMER</u>		<u>WINTER</u>	
	MW		MW
1980	2192	1980-81	2438
1981	2268	1981-82	2553
1982	2349	1982-83	2669
1983	2422	1983-84	2783
1984	2494	1984-85	2895
1985	2566	1985-86	3006

3. Based on these projections, if the Zimmer Station is not available for service in the summer of 1980, The Dayton Power and Light Company would have 16% reserve margin. Without the Zimmer Station in service by the following winter (1980-1981), an 18% reserve margin would result. These reserve margins do not provide acceptable levels of reliability.

4. It should be noted that these margins assume that East Bend Unit No. 2 will be on line as scheduled in January of 1981. With any slippage of this unit the reserve margins will be further reduced.



5. If the Zimmer Station were delayed one year, additional fuel costs of \$30 million would be incurred.

6. Therefore, the timely completion of Zimmer Station is in the best interest of The Dayton Power and Light Company and its customers.

Allen M. Hill

SWORN to before me this 24 day of April, 1979.

Beulah J. Routzohn  
Notary Public



My Commission expires \_\_\_\_\_.

BEULAH J. ROUTZOHN, Notary Public  
In and for the State of Ohio  
My Commission Expires Sept. 25, 1983

QUALIFICATIONS

ALLEN M. HILL

MANAGER - PLANNING

THE DAYTON POWER AND LIGHT COMPANY

My name is Allen M. Hill. My business address is Courthouse Plaza S.W., P. O. Box 1247, Dayton, Ohio 45401. I am the Manager of Planning and, as such, am responsible for the planning of future generation, transmission, and distribution facilities, as well as the forecasts of future peak demand and energy requirements.

I received a Bachelor of Science Degree in Electrical Engineering and a Master of Business Administration in 1967 and 1972 respectively, from the University of Dayton. Since that time I have been continuously employed by The Dayton Power and Light Company in various positions including: Electrical Engineer, System Planning Engineer, Valuation Engineer, Coordinator of Rate Design, Supervisor of Gas Services, and most recently, Manager of Planning.