



2011 Report on Sustainability

DELIVERING SUSTAINABLE GROWTH



TRANSALTA'S SUSTAINABLE GROWTH IS DELIVERING MORE ELECTRICITY WITH LESS IMPACT.



On the cover: Environmental Specialist Suzanne Adrain at the Keephills cooling pond.
This page: Cattails and native grasses on reclaimed land near the Keephills plant.

SUSTAINABLE GROWTH AT TRANSALTA

In 2011, TransAlta entered its second century. We are proud of our history and the electricity and energy products and services we provide. Over the past 100 years, they have made strong contributions to the quality of life and economic opportunities of both the people and communities we serve.

Today, we are Canada's largest publicly traded generator and marketer of electricity and renewable power. We have a growing and diverse portfolio of generating assets that integrate the benefits of coal, natural gas, hydro, wind and geothermal fuels.

We are recognized for our leadership and involvement in industry and public policy initiatives that are transitioning our company towards a lower carbon, sustainable energy future.

Table of Contents

2011 highlights	02	Drive the base	40
A conversation with Dawn Farrell	04	Accelerating value delivery	42
Our business	07	Technology development and innovation	44
Our strategy	08	Customer focus	47
Our governance	09	About this report	50
Awards and recognition	10	Independent limited assurance statement	52
Assurance learnings	11	Performance indicators	54
Map of operations	12	Corporate-wide statistics	54
Plant summary	13	Systemic indicators	57
Sustainable growth	14	Canada statistics	58
Growing sustainably	16	United States statistics	61
Biodiversity	18	Australia statistics	64
Reclamation and recycling	20	Discussion and notes on numbers	67
Transitioning Centralia	24		
Renewables growth	26		
Energizing our people	28		
Health and safety	30		
Human resources	33		
Communities of operation	35		
Our involvement	37		
Aboriginal relations	38		

Forward-Looking Statements

This document, documents incorporated herein by reference, and other reports and filings made with the securities regulatory authorities, include forward-looking statements. All forward-looking statements are based on our beliefs as well as assumptions based on information available at the time the assumption was made. In some cases, forward-looking statements can be identified by terms such as: "may," "will," "believe," "expect," "potential," "enable," "continue," or other comparable terminology. These statements are not guarantees of our future performance and are subject to risks, uncertainties and other important factors that could cause our actual performance to be materially different from those projected. Some of the risks, uncertainties, and factors include, but are not limited to: electricity demand and generation capacity; plant availability; cost and availability of fuel necessary for the production of electricity; legislative and regulatory developments; costs associated with environmental compliance; overall costs; competition; global capital markets activity; changes in prevailing interest rates; currency exchange rates; inflation levels and general economic conditions in geographic areas where we operate; results of financing efforts; changes in counterparty risk and the impact of accounting policies issued by Canadian and United States standard setters. Given these uncertainties, readers are cautioned not to place undue reliance on this forward-looking information, which is given as of the date hereof or otherwise, and we do not undertake to publicly update these forward-looking statements to reflect new information, future events or otherwise, except as required by applicable laws.

2011 highlights



24 per cent decrease
in GHG emissions in 2011

Emissions Our greenhouse gas (GHG) emissions decreased by 24 per cent in 2011 from 2010 levels. This sizable reduction reflects the closure of our Wabamun plant, the shutdown of Sundance Units 1 and 2, outages at Sundance 6 and Genesee 3, lower operating hours at our Centralia and Big Hanaford plants, and the sale of our Meridian Cogen and Grande Prairie biomass facilities.

Recognition We were recognized by several leading sustainability indexes for our efforts to meet global corporate responsibility standards. This includes the sixth consecutive year we have been recognized by the Dow Jones North American Sustainability Index; the sixth consecutive year we have been recognized by the FTSE4Good Index; and the third time we were named to the Jantzi-Sustanalytics list of Canada's Top 50 Socially Responsible Corporations.

Safety We delivered our best ever safety performance in 2011 by achieving an Injury Frequency Rate (IFR) of less than 1.0, placing our company firmly in world-class safety performance rankings for our industry.



Workers install safety netting to prevent falling objects and improve workplace safety.



\$350 million
to upgrade our hydro fleet

Renewables We added 19 megawatts (MW) of hydroelectric power to our renewables portfolio with the completion of the Bone Creek facility (newly named, Wecm̄l̄c̄et̄k̄we), located south of Valemount, British Columbia, on traditional Simpcw First Nation lands.

We broke ground on the New Richmond wind facility on the Gaspé Peninsula in Quebec, which will add 68 MW to our fleet when complete, which is anticipated in the fourth quarter of 2012.

We also announced a \$350 million Hydro Life Extension program to reinvest in our hydro fleet.

Technology We successfully commissioned the new Keephills 3 facility, located west of Edmonton, Alberta. This state-of-the-art plant features a highly efficient supercritical boiler capable of operating at a higher temperature and pressure than conventional coal facilities.

We recently announced that Project Pioneer, the partnership TransAlta led between industry and government to evaluate the feasibility of introducing carbon capture and storage (CCS) technology at Keephills 3 would not continue as the market for carbon sales and the price of emissions reductions were insufficient to allow the project to proceed.

Value Delivery We delivered total shareholder returns of 4.9 per cent, generated \$809 million of funds from our operations and increased our earnings before interest, taxes, depreciation and amortization (EBITDA) by 13 per cent over 2010 to more than \$1 billion.

Biodiversity We continued efforts to mitigate our operations' effects on wildlife and the natural environment by: addressing environmental impacts associated with activating the Spray River spillway, advancing bat studies at the Wolfe Island wind facility, continuing efforts to re-introduce Walleye fish at Wabamun Lake, and advancing reclamation activities at the Wabamun and Centralia facility and mine sites.

Challenges

TransAlta made significant strides forward in 2011, however there are always areas where we can improve. In some cases, we've already implemented plans to improve our performance. In others, we continue to seek solutions and consult in a transparent fashion with a wide variety of stakeholders ranging from community members to various levels of government, regulators, as well as through energy industry and public policy initiatives.

- The number of intersections between stakeholders and the electricity industry are growing and we need to do more to facilitate open dialogue with stakeholders and continue to enhance public understanding about the ways our industry contributes to long-term growth and economic stability. We also need to better inform stakeholders of the need for timely and sufficient infrastructure investment and how this impacts overall system efficiency and power pricing.
- Power generating facilities are long-life cycle assets that require major capital investments. In Canada, our industry has been actively working with provincial and federal governments seeking greater clarity about proposed greenhouse gas emission regulation frameworks, carbon pricing and the implementation of the 45-year rule governing the transitioning of coal-fired generating facilities.
- Through our experience with Project Pioneer, we've learned valuable lessons about the economic requirements necessary to sustain major CCS initiatives and will be sharing the findings from this six-year effort so that other CCS initiatives in the utility sector may benefit from our work.
- In 2011, TransAlta settled a matter with the Alberta Market Surveillance Administrator regarding a series of energy trades we conducted over eight days in 2010. In the absence of existing regulatory guidelines, we pursued a trading strategy that was subsequently determined to be out of alignment. Accordingly, we agreed to pay back all profits realized from the trades plus an administrative penalty. We engaged KPMG to audit our compliance programs and we recently hired a new vice-president of Trading and Optimization to strengthen this capacity throughout our organization.
- TransAlta made the strategic decision to move from a purely wholesale generation model to one where we develop stronger Commercial and Industrial (C&I) customer relationships. In 2011, we advanced this strategy by purchasing Nexen's customer book and we are working to cultivate other C&I clients.
- We recognize the need to upgrade and modernize our hydro fleet and in 2011, initial procurement work began on our \$350 million Hydro Life Extension program.



Parkeston gas-cogeneration plant in Western Australia.

a conversation with Dawn Farrell

Dawn Farrell became TransAlta's new president and chief executive officer on January 2, 2012. Prior to this appointment, she served as chief operating officer and has been with TransAlta for 23 of the 27 years she's been in the power business. Here, she answers questions about TransAlta's sustainability philosophy, current goals and challenges, and how our people and assets performed in 2011.

Q: How does TransAlta define sustainability?

Just a few decades ago, the concept of sustainability was considered novel. Today, successful companies make sustainability part of their value set, business practices and corporate culture. It has become "business as usual" and I'm proud that TransAlta is among this group of leaders.

Today, we don't think of sustainability as anything different or unusual from what we'd normally do in the course of running a fiscally-sound, responsible and responsive company. We've set a high standard for ourselves and we work hard to maintain it.

Q: What is the personal background you have in sustainable development?

My own sustainability journey began early in my career as an economist working with TransAlta's then President and CEO Ken McCready. He served as the first Chair of Alberta's Round Table on the Environment and the Economy. The Alberta Round Table has the mandate of building a vision and a set of principles for Alberta as it moves away from an "either/or" way of thinking about economics over environment, to a "both/and" framework.

Today, as CEO, when I look back at that initial period of thinking and framework development, much of what was determined then holds true today. There's no free lunch when it comes to energy. By that, I mean that every method of electricity generation offers both benefits and has environmental consequences. The question is how to arrive at the best balance, so a progressive standard of living and economic growth opportunities are available to the largest number of people. Of course, at the same time, you're working to minimize impacts of power generation through increased efficiencies, better technology, a diverse fuel base, thoughtful consultation, and thorough reclamation. It's a continually evolving process, and it takes long-term thinking and commitment to move it forward.

Q: TransAlta is working on "greening" its generating portfolio. What progress was made on this goal in 2011?

Growing the renewables part of our generating portfolio is a big part of our strategy – one that we are committed to expanding by 100 to 200 MW annually. In 2011, we broke ground on a new 68 MW wind facility in New Richmond, Quebec and when it begins commercial operation in 2012, we'll have over 1,100 MW of wind generation in our portfolio. This further reinforces our position as Canada's largest wind power generator.

Hydro is another important piece. We began commercial operation of the 19 MW Bone Creek hydro facility in British Columbia in 2011. We also announced our plans to invest \$350 million for upgrading of our hydro fleet over the next 10 years. Not only will this add value to our fleet, our hydro facilities provide important flexibility as they are the most responsive of power generating assets, and serve as cost-effective backup to allow us to better balance electricity availability.

Q: What else is TransAlta doing to diversify its generating portfolio?

The single largest addition to our generating portfolio in 2011 was Keephills 3 (K3), located in Alberta. We own this 450 MW facility 50/50 with Capital Power and we've been building it since 2007. Our employees made exceptional efforts to get it done right so it's very rewarding to see the facility operating. K3 is considered Canada's most advanced coal-fired generating facility and generates more electricity with less coal. It's also equipped with an advanced air quality control system that keeps sulphur dioxide, nitrogen oxides, mercury and particulates well within current air quality standards. It's the newest technology in power generation.

Natural gas-fired generation is another area we're developing and have made substantial progress on with Sundance 7 in central Alberta. This is a 800 MW combined gas-fired plant that will get the current low priced natural gas environment working harder for us. We're targeting completion of Sundance 7 in 2016/2017.

So, we're retiring older coal facilities, transitioning to new, cleaner coal technologies that reduce emissions, and concentrating on building more natural gas, wind and hydro capacity.



TransAlta employees survey reclaimed land near Wabamun, Alberta.

Q: How is TransAlta working to keep coal viable in an age of carbon constraint?

TransAlta has been involved in the conversation about the future of coal for a long time and we believe we've put a solid proposal forward to provincial and federal governments about the best way to approach the transition of these assets. One of the often-overlooked tenets of sustainability is to not waste money or resources. As stewards of our generating assets, we must earn an acceptable return on them. We are looking for certainty around the federal government's proposed coal regulations and hopefully we'll see clear rules published later this year. We are asking for flexibility in how we transition our coal assets, because each asset has different lifespan potential and we must deploy capital as efficiently as possible.

Q: Why did TransAlta make the decision to not proceed with Project Pioneer?

Project Pioneer is a good example of how industry and government can collaborate effectively to test out and evaluate the potential of new technologies like carbon capture and storage (CCS). Over a several year process, TransAlta worked closely with Capital Power, Enbridge, and the Alberta and Canadian governments to prove the technical and economic feasibility of commercial-scale CCS, before making a major capital commitment. Unfortunately, the economics of the project did not

support further development. We came to the conclusion that we need to get two things right before CCS will work. The first is a framework where carbon emissions are valued at a level that incents major CCS investments. The second is there needs to be a stronger market for the carbon dioxide that is captured during the process.

While we are disappointed that Project Pioneer will not go ahead, we now know the technology works and we still believe there is a future for CCS.

Q: TransAlta achieved a record safety performance during 2011 – how did you do it and how will you continue to improve worker and contractor safety?

Like many companies, TransAlta has been working on safety for a long time. The bottom line is that safety has to matter to everyone, regardless of their role. It's not about making targets or incentives or reputation – it's about people. So, I'm extremely pleased when I see how we've improved our safety results in 2011. Most of these gains come from incenting people in a positive way. Encouraging people to report near misses is a truly effective way to uncover potential dangers in your operation and correct them before they cause any harm. TransAlta is also doing some really interesting work in the area of process safety to more clearly understand the human factors involved in operational errors. I feel this more holistic, human factor approach will help us continue to create a safer workplace across all of our operations going forward.

Q: How did TransAlta perform from an environmental perspective in 2011?

We improved our environmental performance in 2011 by lowering overall emissions, introducing cleaner coal technology and adding more renewable power. We also did well on the reclamation and restoration efforts made at two facilities that have closed: Wabamun, Alberta, and the Centralia Mine in Washington State. These are massive, multi-year projects which restore the land to the degree that one would never know power plants and coal mines used to operate there.

A big environmental challenge we faced in 2011 was the high water flows in the Spray River system and the activation of a spillway that hadn't been used in close to 40 years. What impressed me was the way our employees sprang into action to address the situation. They live our values and have the authority to act within those values at all times. We invested a considerable amount of money to restore and improve fish habitat, rebuild bridges, and to keep all stakeholders well informed throughout.

Q: How will TransAlta continue to deliver value in an environment of low power prices?

There are no silver bullets to fix the problem of low power prices. We have to adhere to our strategy, work hard and execute according to plan. Low natural gas prices are primarily an issue for us at our plant in Centralia, Washington, as they impact the Pacific Northwest more than they do Alberta. We are focused on re-contracting Centralia at prices that will be favourable for customers but that will also keep jobs, ensure payments into our community transition fund and provide returns to our shareholders. This is the essence of sustainability - returns to all.

We are aligning our cost structure to address the lower power prices. We are also investigating a number of potential growth opportunities in the Western U.S. and in Australia as lower prices often create great asset buying opportunities.

Additionally, ensuring our entire generating fleet operates safely, efficiently and delivers on availability is the foundation to sustainable success.

Q: How is growth part of the sustainability mix for TransAlta?

We have a set of well-defined growth targets based on our competitive strengths which are leading us to continually reduce our environmental impacts. They are ambitious but we believe we are well positioned to realize them.

We want to be the number one generator in Alberta and one of the top five generators in the Pacific Northwest. We're also determined to maintain our position as one of Canada's largest publicly traded companies in renewable power, and to be the supplier of choice in Western Australia. The technologies, fuel mixes and development strategies supporting these objectives are consistent with TransAlta's sustainable vision of power generation - one that is diverse, responsive and less carbon-intensive.



Dawn Farrell
President and Chief Executive Officer

May 30, 2012

our business

TransAlta owns, operates and manages a highly contracted and geographically diverse portfolio of power generating assets. We use a broad range of generation fuels including coal, natural gas, hydro, wind and geothermal.

We are a power generation and wholesale energy marketing company. Our 2,235 employees work across our three key markets – Canada, the Western United States and Western Australia – to deliver reliable, competitively-priced electricity. We had 8,257 MW of net generation capacity in operation at the end of 2011, excluding plants in development, and we produced 41,012 gigawatt hours (GWh) of electricity.

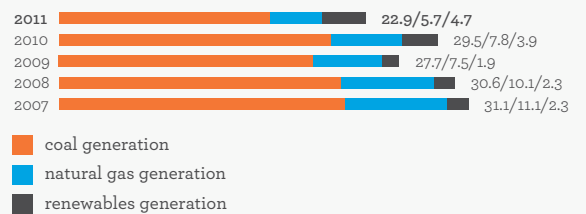
Annual electricity production* (GWh)



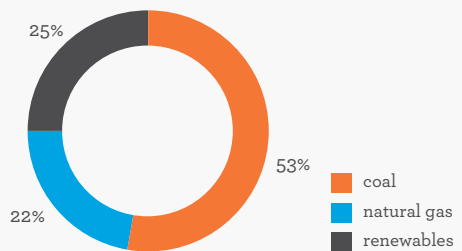
* The above chart reflects TransAlta's corporate-wide generation, including plants that we do not operate but in which we have financial ownership. The rest of this report provides data on only those facilities we operate. The 2011 generation associated with our operated facilities was 33,379 GWh. This number is the basis of emissions intensity calculations.

TransAlta achieved total gross production in 2011 of 41,012 GWh of electricity, a decrease from 2010, reflecting the shutdown of Sundance Units 1 and 2, outages at Sundance 6 and Genesee 3, lower operating hours at our Centralia and Big Hanford plants, and sales of the Meridian Cogen and Grande Prairie biomass facility.

Generation by type (million MWh)



Net ownership capacity (%)



Keephills 3 – Canada's most advanced coal-fired facility, located west of Edmonton, Alberta.

our strategy

TransAlta is a progressive power company producing more electricity with less environmental impact. Our three key strategies – deliver sustainable growth, energize our people, and drive improvement in our base operations – are how we are generating growth opportunities, powering more people, and creating long-term value.

Sustainable Growth

TransAlta intends to grow and diversify sustainably. We plan to maintain our leadership as Canada's largest producer of renewable energy by adding 100 to 200 MW of renewable growth across all markets, every year. We are working to become the number one generator in Alberta, Canada, our home base. We are enlarging our market presence in the Pacific Northwest in the United States and we are executing against our goal of doubling our market share in Western Australia in the next five years. In each of these key market areas, our goal is low-cost, lower-carbon leadership.

Energizing our People

TransAlta's people make a difference across every facet of our organization. We have the right people in the right roles with the capabilities and tools they need to succeed. In 2011, we appointed a new senior team

with more than 200 years of collective experience in our sector. All of our employees continue to work to improve the productivity and efficiency of our business, while building a greater understanding of the role they each play in realizing our strategic goals.

Drive the Base

Driving our business forward is about increasing productivity while maintaining a cost competitive structure and continually delivering superior plant performance. Availability is a key factor that determines the revenue we earn in many of our contracts. In 2011, we achieved fleet-wide availability of 88.2 per cent, however our goal is to continually achieve 89 to 90 per cent availability.



TransAlta Corporate Officers 2012 (left to right)

Hugo Shaw, Executive Vice-President, Operations; Brett Gellner, Chief Financial Officer; Dawn de Lima, Chief Human Resources Officer and Executive Vice-President, Communications; Robert Emmott, Chief Engineer; Rob Schaefer, Executive Vice-President, Corporate Development; Ken Stickland, Chief Legal and Business Development Officer; Dawn Farrell, President and Chief Executive Officer; Paul Taylor, President, U.S. Operations; Cynthia Johnston, Executive Vice-President, Corporate Services

our governance



TransAlta Board of Directors 2011 (left to right)

Gordon Lackenbauer, Martha Piper, Stephen Baum, Timothy Faithfull, Michael Kanovsky, Karen Maidment, Bill Anderson, Ambassador Gordon Giffin, Kent Jespersen, Yakout Mansour, Steve Snyder (Steve Snyder retired as president and CEO of TransAlta on January 1, 2012.)

Senior Leadership Changes

In 2011, the two most senior roles at TransAlta were successfully transitioned. Steve Snyder, TransAlta's former president and CEO, retired after leading our company for 16 years through a period of major regulatory change and building the business foundation that continues to deliver sustainable growth today. Dawn Farrell, who had served as our chief operating officer for the past two years, was appointed president and CEO on January 2, 2012.

At the Board level, after 22 years of overall service, Donna Soble Kaufman stepped down from her role as Board Chair after six years of significant contribution and Ambassador Gordon D. Giffin assumed the role of Board Chair.

TransAlta's 11-member Board of Directors is responsible for stewarding our company, establishing key policies and standards for risk assessment and management, and reviewing and approving our strategic plans. In addition, the Board plays a critical role in monitoring and assessing the progress we make in meeting both short and long-term goals.

TransAlta's corporate governance practices meet or exceed the standards set out in the Canadian Securities Administrators' policies and instruments. They also comply with applicable requirements of Sarbanes-Oxley, including any U.S. Securities and Exchange Commission rules under Sarbanes-Oxley, as well as foreign issuer standards of the New York Stock Exchange Corporate Governance Rules. The committees within the Board provide oversight regarding our sustainability progress and specific initiatives.

TransAlta's Committees of the Board include:

- Audit and Risk Committee;
- Human Resources Committee; and
- Governance and Environment Committee.

We are committed to operating in a safe and ethical manner and believe constructive engagement with employees, shareholders and other stakeholders is part of this commitment. We have a system in place where employees, shareholders and other stakeholders may report potential ethical concerns, on an anonymous basis, either directly to the Audit and Risk Committee or to the director, Internal Audit, who engages, as required, Corporate Security, Legal and Human Resources in determining an appropriate course of action. These concerns and any actions taken are discussed with the chair of the Audit and Risk Committee, providing a direct link between all stakeholders and the Board.

Our commitment to ethical conduct is demonstrated through our annual requirement for all employees and directors to sign TransAlta's Corporate Code of Conduct.

Our Board, through its Governance and Environment Committee, provides oversight to environmental, health and safety practices, procedures and policies as established by management in relation to legal/regulatory and industry standards or best practices. It reviews environment, health and safety performance, is briefed on environmental policy and regulatory developments, and discusses strategy questions related to TransAlta's sustainability goals on a quarterly basis.

awards and recognition

We strive for excellence in all that we do. External recognition from leading sustainability indexes and other organizations motivates us to continually do more.

The following is a sampling of the awards and recognition TransAlta received in 2011.

CEO of the Year	Steve Snyder, TransAlta's former president and chief executive officer, was named 2011 CEO of the Year by <i>Alberta Oil Magazine</i> . The magazine annually recognizes the excellence and innovation of senior executives in the energy industry through its C-Suite Awards.
Dow Jones North American Sustainability Index – 2011/2012	We were one of 24 Canadian companies named to the index in 2011, and the only Canadian company representing the utilities sector. This marked the company's sixth consecutive year on the index. The Dow Jones North American Sustainability Index selects the top 20 per cent of the 600 largest North American companies in each sector according to sustainability practices.
Evergreen Award	We were awarded the 2011 Evergreen Award by the Centralia-Chehalis Chamber of Commerce on January 14. The Chamber gives the award every other year to a business that supports community organizations, as well as the local business community. Criteria for selection include philanthropy, a positive attitude, community support, and generosity.
FTSE4Good Index – 2011	This year marks our sixth consecutive year on the FTSE4Good Index. This London-based sustainability index measures the performance of companies that meet globally-recognized corporate responsibility standards.
Hydro Hall of Fame	Our Horseshoe hydroelectric facility was awarded the 2011 Hydro Hall of Fame Award from Hydro Review. The Hydro Hall of Fame was established in 1995 and recognizes hydro achievement throughout North America, with a special emphasis on long-lasting hydro facilities. This recognition demonstrates the significant and enduring contributions of hydroelectric plants like our 100-year-old Horseshoe facility.
Jantzi Sustainalytics Index – 2011	We were placed on this index, which recognizes the Top 50 Socially Responsible Corporations in Canada, for the third consecutive year.
United Way	We continue to be an active supporter of the United Way in Canada, the United States, and Australia, with employee volunteer-driven campaigns at locations across our fleet. In 2011, we were again honoured with the Thanks a Million Award, for companies that contribute more than \$1 million in their annual campaigns. TransAlta has maintained the million dollar level since 2001.

assurance learnings

Last year TransAlta engaged Ernst and Young LLP to carry out limited assurance procedures on our 2010 Report on Sustainability.

During the evaluation of reporting processes against requirements for disclosure adopted for the report, Ernst and Young identified scope to build on the significant progress already made by TransAlta (and covered in this report) on the management of sustainability matters.

As a result of the review, Ernst and Young identified the following positive aspects:

- TransAlta conducted a review of data which led to minimal findings related to data accuracy and completeness, of which none were material.
- TransAlta’s project lead was responsive to all queries in an effective and efficient manner which led to no time delays during the engagement.

Ernst and Young also identified recommendations related to internal business continuity planning and corporate governance with respect to sustainability reporting and data management:

- TransAlta’s data collection, analysis and reporting relies on one individual. There are potential risks to the business without the segregation of duties. To minimize the risk of data loss or corruption in the event of a disruption within the business, TransAlta should consider adopting a business continuity process for data management (policies, standards, and procedures). The purpose of a business continuity process is to minimize the operational, financial, legal, reputational and other material consequences arising from a disruption.
- While reporting guidelines are followed, there are no corporate guidance or procedure documents for the reporting of data. Providing this type of guidance information could reduce the risk of an inconsistent approach and variations in the scope of data being collected.

TransAlta intends to continue comparing the annual Report on Sustainability assurance findings with our progress against the identified recommendations in future reports.

Areas for Improvement Identified During 2010 Assurance Review

TransAlta’s Progress in 2010/2011

Business Continuity	
TransAlta should explore a business intelligence system that will automatically collect and summarize data.	≈ TransAlta has purchased an air emissions software program, in which collected data is calculated and summarized based on business unit and regulatory requirements.
Policy and Guidance	
TransAlta should develop a Corporate Governance structure for sustainability with involvement of Internal Audit and Risk Management business units to help mitigate the risk of potential penalties associated with GHG legislation.	≈ While Internal Audit and Risk Management business units are not involved specifically with the Report on Sustainability, they are involved with aspects included in the Report on Sustainability. For example, the Risk Management business unit is involved in the annual Dow Jones Sustainability Index submission.
TransAlta should consider a team-based approach to the sustainability reporting process, in order to manage the data, processes and assurance.	✓ TransAlta has developed a team within the Corporate Environmental Services business unit to manage all corporate compliance and sustainability reporting aspects, including quality control and data management.
TransAlta should develop guidelines for data gathering and reporting of sustainability data (by indicator and location) including full scope, definitions of key terms and assumptions, responsible party identification, effective sign-off processes, query log documentation processes, and year-over-year materiality determination.	≈ TransAlta agrees that the lack of processes and guidelines related to data collection and reporting is significant. Documentation development, including policy and procedures, of the reporting process is ongoing. Certain information included in this report undergoes rigorous third party verification, and materiality assessments, prior to regulatory submission.

✓ **Signifies Completed** – We worked on this target in 2010 and 2011 and have completed all the associated tasks.

≈ **Signifies Ongoing** – We made some progress on this target but we have not yet completed all the associated tasks.

map of operations



generation facilities and offices

- coal-fired plants
- hydro plants
- gas-fired plants
- wind-powered plants
- geothermal plants
- corporate offices (3)
- energy marketing offices (2)

68 MW Capacity *(in development)*
New Richmond, Quebec, Canada



450 MW Capacity
Keephills 3, Alberta, Canada

As of December 31, 2011	Facility	Capacity (MW) ¹	Ownership (%)	Net capacity ownership interest (MW) ¹	Fuel	Revenue source	Contract expiry date
Western Canada 39 Facilities	Sundance, AB ²	1,581	100%	1,581	Coal	Alberta PPA/Merchant ³	2020
	Keephills, AB ⁴	812	100%	812	Coal	Alberta PPA/Merchant ⁴	2020
	Keephills 3, AB	450	50%	225	Coal	Merchant	—
	Genesee 3, AB	466	50%	233	Coal	Merchant	—
	Sheerness, AB	780	25%	195	Coal	Alberta PPA	2020
	Poplar Creek, AB	356	100%	356	Gas	LTC/Merchant	2024
	Fort Saskatchewan, AB	118	30%	35	Gas	LTC	2019
	Brazeau, AB	355	100%	355	Hydro	Alberta PPA	2020
	Big Horn, AB	120	100%	120	Hydro	Alberta PPA	2020
	Spray, AB	103	100%	103	Hydro	Alberta PPA	2020
	Ghost, AB	51	100%	51	Hydro	Alberta PPA	2020
	Rundle, AB	50	100%	50	Hydro	Alberta PPA	2020
	Cascade, AB	36	100%	36	Hydro	Alberta PPA	2020
	Kananaskis, AB	19	100%	19	Hydro	Alberta PPA	2020
	Bearspaw, AB	17	100%	17	Hydro	Alberta PPA	2020
	Pocaterra, AB	15	100%	15	Hydro	Alberta PPA	2013
	Horseshoe, AB	14	100%	14	Hydro	Alberta PPA	2020
	Barrier, AB	13	100%	13	Hydro	Alberta PPA	2020
	Taylor Hydro, AB	13	100%	13	Hydro	Merchant	—
	Interlakes, AB	5	100%	5	Hydro	Alberta PPA	2020
	Belly River, AB	3	100%	3	Hydro	Merchant	—
	Three Sisters, AB	3	100%	3	Hydro	Alberta PPA	2020
	Waterton, AB	3	100%	3	Hydro	Merchant	—
	St. Mary, AB	2	100%	2	Hydro	Merchant	—
	Upper Mamquam, BC	25	100%	25	Hydro	LTC	2025
	Pingston, BC	45	50%	23	Hydro	LTC	2023
	Bone Creek, BC	19	100%	19	Hydro	LTC	2031
	Akolkolex, BC	10	100%	10	Hydro	LTC	2015
	Summerview 1, AB	70	100%	70	Wind	Merchant	—
	Summerview 2, AB	66	100%	66	Wind	Merchant	—
	Ardenville, AB	69	100%	69	Wind	Merchant	—
	Blue Trail, AB	66	100%	66	Wind	Merchant	—
	Castle River, AB ⁵	44	100%	44	Wind	Merchant	—
	McBride Lake, AB	75	50%	38	Wind	LTC	2023
	Soderghen, AB	71	50%	35	Wind	Merchant	—
	Cowley Ridge, AB	21	100%	21	Wind	Merchant	—
	Cowley North, AB	20	100%	20	Wind	Merchant	—
	Sinnott, AB	7	100%	7	Wind	Merchant	—
	Macleod Flats, AB	3	100%	3	Wind	Merchant	—
Total Western Canada	5,996		4,775				
Eastern Canada 14 Facilities	Sarnia, ON	506	100%	506	Gas	LTC	2022-2025
	Mississauga, ON	108	50%	54	Gas	LTC	2017
	Ottawa, ON	68	50%	34	Gas	LTC	2012
	Windsor, ON	68	50%	34	Gas	LTC/Merchant	2016
	Ragged Chute, ON	7	100%	7	Hydro	Merchant	—
	Misema, ON	3	100%	3	Hydro	LTC	2027
	Galetta, ON	2	100%	2	Hydro	LTC	2031
	Appleton, ON	1	100%	1	Hydro	LTC	2031
	Moose Rapids, ON	1	100%	1	Hydro	LTC	2031
	Wolfe Island, ON	198	100%	198	Wind	LTC	2029
	Melancthon, ON	200	100%	200	Wind	LTC	2026-2028
	Le Nordais, QC	99	100%	99	Wind	LTC	2033
	Kent Hills, NB	150	83%	125	Wind	LTC	2033-2035
	New Richmond, QC ⁶	68	100%	68	Wind	Quebec PPA	2032
Total Eastern Canada	1,479		1,332				
United States 17 Facilities	Centralia, WA	1,340	100%	1,340	Coal	Merchant	—
	Centralia Gas, WA	248	100%	248	Gas	Merchant	—
	Power Resources, TX	212	50%	106	Gas	Merchant	—
	Saranac, NY	240	37.5%	90	Gas	Merchant	—
	Yuma, AZ	50	50%	25	Gas	LTC	2024
	Imperial Valley, CA ⁷	327	50%	164	Geothermal	LTC	2016-2029
	Skookumchuck, WA	1	100%	1	Hydro	LTC	2020
	Wailuku, HI	10	50%	5	Hydro	LTC	2023
Total U.S.	2,428		1,979				
Australia 5 Facilities	Parkeston, WA	110	50%	55	Gas	LTC	2016
	Southern Cross, WA ⁸	245	100%	245	Gas/Diesel	LTC	2013
	Total Australia	355		300			
TOTAL	10,258		8,386				

1 Megawatts are rounded to the nearest whole number.
2 Includes a 15 MW uprate on Sundance Unit 3 expected to be commercial in 2012; excludes Sundance Units 1 and 2.
3 Merchant capacity refers to uprates on Unit 4 (53 MW), Unit 5 (53 MW), and Unit 6 (44 MW).
4 Includes two 23 MW uprates on Keephills Units 1 and 2 expected to be commercial in 2012 as merchant capacity.
5 Includes seven individual turbines at other locations.
6 Facilities currently under development.
7 Comprised of 10 facilities.
8 Comprised of four facilities.



TransAlta

Aleta Corbett, environmental specialist, (left) and Glenn Isaac, manager of environmental services, Hydro, (right) using electrofishing to safely capture and relocate fish.

SUSTAINABLE GROWTH

To meet the growing demand for reliable, affordable electricity, TransAlta is introducing new technologies, building diversity in our fuel mix and working to minimize environmental impacts.



growing sustainably

At TransAlta, sustainability lives within our mandate and is firmly embedded in our business culture. It's a large part of who we are and how we work. We recognize the diverse value that is created from looking at power generation through a sustainable lens.

Our Growth Objectives

TransAlta has clearly defined growth objectives that reinforce our commitment to being a responsible power generator.

In 2011, TransAlta made meaningful and measurable progress towards realizing each of these growth objectives, while at the same time demonstrating that we are continuing to improve our sustainability performance.

Don Wharton, vice-president of Sustainability and Policy, says, "Our sustainability leadership is tangible and delivering clear results. Our greenhouse gas and other emissions are lower, we've made strong gains in renewables and we're developing more natural gas-fired generation, bringing more balance and diversity to our generating portfolio."

One of the most important ways we balance sustainability and our growth objectives is through the diversity we achieve by using a variety of fuel sources to generate electricity.

Sustainability through Diversity

A mix of coal, natural gas, hydro, wind and geothermal energy make up TransAlta's power generating assets. Coal has historically been the predominant fuel in our generating portfolio and has long been the basis for the secure, reliable, and low-cost power that has built Alberta's economy.

As the world moves toward a lower carbon future, TransAlta has been transitioning its portfolio to reduce greenhouse gas emissions and boost its renewable power content. Today, coal is the fuel source for about 68 per cent of the electricity we generate; a decade ago it was 75 per cent. During that time we've concentrated on developing our wind power portfolio and are now Canada's largest wind power operator. We have also been steadily adding new hydro development and, beginning in 2012, plan to invest in a major Hydro Life Extension program. We've shifted from conventional coal-fired generation towards cleaner coal technologies, like the highly efficient supercritical technology we've introduced at Keephills 3. TransAlta officially opened



Don Wharton, Vice-President, Sustainability and Policy

this new facility in 2011 with joint venture partner Capital Power, after a staged retirement of four older coal units at Wabamun, Alberta ending in 2010.

Supercritical technology enables coal-fired plants to operate at significantly higher temperatures and pressures. This results in an overall net cycle efficiency increase, and lowers fuel-related stack emissions by about seven per cent.

When compared to the four Wabamun units TransAlta retired, Keephills 3 will emit approximately 60 to 80 per cent less sulphur dioxide (SO₂), nitrogen oxides (NOx), mercury (Hg), and 24 per cent less carbon dioxide (CO₂), while producing about the same amount of power.

Project Pioneer

More efficient plants are one approach, but securing long-term viability for coal requires new technologies that will significantly lower or even potentially eliminate greenhouse gas emissions. This is why TransAlta took the lead on Project Pioneer, the world's first large-scale carbon capture and storage (CCS) project in the utility sector, proposed to be built adjacent to the Keephills 3 plant.

Project Pioneer had the potential to make coal carbon-neutral and was being designed to remove one million tonnes of carbon dioxide (CO₂) annually from Keephills 3, storing it deep underground in geological formations, and directing captured CO₂ to enhanced oil recovery efforts in Alberta's maturing oilfields.

After close to five years of research, including: front-end engineering, economic and technology evaluation, and attracting \$784 million in funding commitments from The Government of Alberta, The Government of Canada and the Global CCS Institute, Project Pioneer partners announced in April 2012 that the project would not proceed.

The project partners determined that, although the technology works and capital costs were in-line with expectations, the market for carbon sales and the price of emissions reductions were insufficient to allow the project to proceed.

"While we're disappointed that Project Pioneer will not go ahead, we now know the technology works and we still believe there is a future for CCS," says Dawn Farrell, TransAlta's president and chief executive officer.

Don Wharton, vice-president of Sustainability and Policy, explains, "TransAlta remains committed to greening our generating portfolio and to being a leader when it comes to advancing technologies that will enable coal-fired generation to be less carbon-intensive. We've learned many valuable lessons from Project Pioneer and believe this effort has laid relevant groundwork for CCS implementation in the future."



Employee Environmentalism in Action

Whether it's packing waste-free lunches, commuting in a more eco-friendly way, printing double-sided, or turning computers and monitors off when not in use, the combined actions of our employees have the potential to make a great impact on the environment. That's why the Eco-Action Team was formed in the spring of 2009.

"The Eco-Action Team is about living our sustainability values and empowering our employees to create positive change for the environment both at work and at home," says Jessi-Ann Riddell, senior communications advisor, and chair of the team. "It's entirely volunteer-driven and has been gaining momentum and support at TransAlta."

In 2011, organizers saw growing participation levels, not just at head office, but at a number of our other sites in Alberta, the U.S. and Australia as individuals and groups led environmentally-focused initiatives of their own.

The team hosts an annual Eco-Challenge which engages employees in a friendly competition to see which team can achieve the greatest environmental impact. Through the experience, employees learn simple, practical ways they can decrease their environmental footprint, while keeping the environment top-of-mind at work. The Eco-Challenge, along with team-led initiatives rolled out throughout the year, has been instrumental in increasing employees' environmental engagement, leadership and awareness.

biodiversity

TransAlta strives to be proactive, collaborative and responsive when it comes to minimizing the impact of our operations, protecting wildlife, and reclaiming land and waterways.

Spray River Spillway Activation

TransAlta operates 21 hydroelectric facilities across Canada. One of these, the Spray River hydroelectric facility, is located on the Alberta boundary of Banff National Park.

On May 23, 2011, Spray Unit 2 was undergoing scheduled major maintenance when Spray Unit 1 experienced an unplanned outage. This halted the usual flow downstream from the generating facility and necessitated a controlled spill into Goat Creek to manage the rising water levels in the Spray Lakes Reservoir upstream. Even with this preventive measure, peak springtime inflows brought the Spray Lakes Reservoir to capacity by mid-July, which activated the spillway next to Canyon Dam and resulted in elevated flows in the Spray River downstream.

Glenn Isaac, manager, environmental services, Hydro, explains, "This was the first time in over 38 years the Spray River spillway had been activated as a result of the unusual situation of higher-than-normal water volumes together with an unplanned facility outage. We worked closely with Parks Canada, Alberta Parks, Alberta Sustainable Resource Development (ASRD), the Department of Fisheries and Oceans, and Trout Unlimited to address the situation and keep the residents of Banff, Canmore and Cochrane safe and well informed."



Trees were air lifted by helicopter to successfully form 30 large woody debris piles in specially selected locations of the Spray River. The scour from the then high water levels helped create pool habitats around tree piles and provide overhead cover for fish.

In addition, TransAlta funded and actively participated in a program to support restoration efforts, which included fish rescue from side channels and remnant pools. More than 2,400 fish were gathered and returned safely to the Spray River system. Bundles of trees were placed by helicopter to create new fish habitat on the affected areas of the Spray River, providing overhead cover where fish congregate. Independent water quality monitoring was also established to assess the impacts of the increased sediment in the water.

Waters in the Spray system gradually receded, returning to normal levels in September. Spray Unit 1 resumed operations on September 10, 2011 and Unit 2 was back on-line in November 2011. TransAlta also replaced the Spray River Bridge with a new, longer span structure to accommodate any future instances of high water flow. The Spray River Bridge connects the popular Goat Creek and Spray River cross-country ski trails.

Bird and Bat Monitoring at Wolfe Island Wind Facility

TransAlta's efforts to minimize environmental impacts are carefully researched and tailored to each of the unique ecosystems in which our operations are situated.

Located at the entrance to the St. Lawrence River, and accessible only by ferry, Wolfe Island, Ontario is recognized as an Important Bird Area due to the large number of waterfowl that gather offshore during the spring and fall migratory periods.

TransAlta successfully commissioned the 86-turbine wind facility on Wolfe Island in 2009 and shortly thereafter began implementing the Post-Construction Follow-up Plan for Bird and Bat Resources. The follow-up plan is considered to be the most comprehensive bird and bat monitoring program in place at any Canadian wind facility and was designed to assess both direct and indirect effects on birds and bats from operating wind turbines.

Since 2009, TransAlta has conducted year-round surveys at our Wolfe Island wind facility in cooperation with Environment Canada/Canadian Wildlife Service, the Ontario Ministry of Natural Resources, Natural Resources Canada, and Ducks Unlimited Canada. To maintain objectivity, TransAlta contracts third parties to independently collect and analyze all bird and bat data related to our wind facility operations.

In 2011, TransAlta proactively initiated an additional research study that was carried out during the fall bat migration from July 15 through September 30.

Operational controls on selected wind turbines are used to prevent the turbine blades from spinning during higher risk periods, which occur from dusk to dawn during low wind conditions when bats are most active. The research compared different wind cut-in speeds – the wind speed at which turbine blades begin to rotate.

Based on the findings from this initial 10-week study, TransAlta determined that bat mortality is lower at curtailed turbines compared to those that are not operationally controlled. The bat mortality rates, however, still remain below the adaptive management threshold identified in the site's post-construction monitoring plan.

Garry Perfect, environmental specialist, explains, "This proactive research has built on previous studies we've initiated at the Summerview wind facility in Alberta. We plan to continue the study during the 2012 fall bat migration period, to obtain a larger dataset."

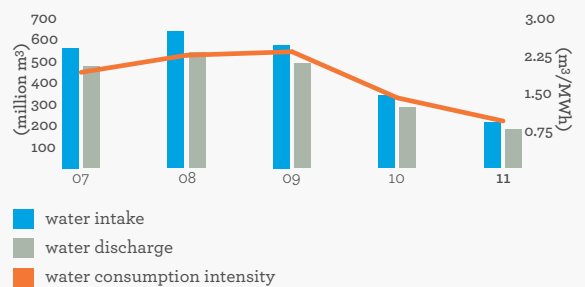
Findings will be used to determine optimal operating parameters during the sensitive bat migratory periods and to contribute to a better understanding of bat and wind facility interaction.

Re-introducing Walleye at Wabamun Lake

TransAlta participates in programs designed to mitigate a long-term impact of operations on nearby ecosystems.

For example, new schools of Walleye fish were swimming in Alberta's Wabamun Lake in the summer of 2011, thanks to assistance TransAlta is providing to Alberta Sustainable Resource Development (ASRD) in a unique effort to re-establish this important species. Walleye are valuable predators in lake ecosystems as they moderate smaller fish populations, however, they disappeared from Lake Wabamun more than a century ago due to overfishing.

Water management



This is the second year of a multi-year program in which TransAlta is providing in-kind support to ASRD as part of Federal Fisheries Act requirements associated with the decommissioning of the Wabamun power plant.

In May 2011, aquatic biologists used nets to trap adult Walleye in Lac Ste. Ann and harvest eggs and milt from the Walleye, with subsequent fertilization of the eggs. Approximately two million eggs were then transported to the ASRD Cold Lake fish hatchery to be incubated and raised under controlled conditions. The hatchlings were later released into Lake Wabamun after reaching an appropriate life stage.

The second phase of the program used angling to capture adult Walleye from Lac Ste. Anne. A total of 531 adult Walleye were caught and released into Lake Wabamun in June 2011. Since the program began, a total of 1,369 Walleye have been successfully introduced.



TransAlta uses industry best practices to mitigate the impacts to fish and fish habitat resulting from our operations.

reclamation and recycling

A power facility's life span can stretch for decades with proper maintenance and upgrading, however, it eventually comes to an end. This is when TransAlta applies thorough reclamation and recycling strategies to get the most value from the asset, while returning the environment as closely as possible to pre-development conditions.

Wabamun Area Reclamation Reaches Milestone

TransAlta is currently reclaiming the Wabamun power plant site through an intensive, multi-year process, which began in 2002. Located near the Village of Wabamun approximately 67 kilometres west of Edmonton, Alberta, the facility was built in the late 1950s and, at its peak, generated about 3.7 million megawatt hours of energy annually. It is the first integrated Canadian generating facility and coal mine to undergo a reclamation process of this magnitude.

The plant was officially decommissioned in March 2010 and for the balance of the year and all of 2011, an active reclamation and recycling effort has been underway. Thousands of kilograms of salvageable metals, motors and transformers, as well as hazardous materials like asbestos and PCBs were recovered prior to major demolition activity. On March 18, 2011, the plant's three concrete chimney stacks were dropped through an engineered demolition and on August 11, 2011, the plant building itself was demolished.

Clark Williams, Wabamun decommissioning project manager, says, "With careful planning and coordination, the Wabamun stacks and power house came down safely and throughout the year we recycled over 20,000,000 kilograms of metal and 20,800 litres of liquids."

In addition, the decommissioning team has excavated about 750,000 tonnes of coal ash, which has been stockpiled on site, and will be sold to a local cement manufacturer.

Clark adds, "In 2012, we will continue with the excavation work, which involves setting drainage and contouring and reseeding the newly replaced top soil with natural grasses. We plan to apply for a reclamation certificate from Alberta Environment in 2014."

In addition to the environmental care that is being applied to the Wabamun reclamation process, TransAlta's efforts are helping to support the future social and economic aspirations of the community. This includes both a bequest of land to the Village of Wabamun, which is opening up commercial development opportunities, and the donation of 50 acres of land along with a monetary grant, which the Village is directing to recreational and residential development, including the area's popular Waterfront Park. In addition, TransAlta contributed 10 acres of land to the Alberta Fish and Game Association Wildlife Trust Fund. The land is next to a protected area, which is home to a colony of Western Grebe shore birds.



The Wabamun coal-fired power plant was safely imploded on August 11, 2011.



Reclaimed land in Kopiah near Centralia. The next phase of reclamation in Kopiah is to plant Douglas Fir trees for upland forest land use.

Centralia Restoration Progress

More than 1.5 million Douglas Fir trees have taken root on TransAlta's former Centralia mine and power plant site in Washington State, U.S. The area is being transformed into a forested landscape dotted with lakes, creeks and wetland areas, where elk, deer and bear populations are now flourishing. About 90 per cent of the area will be returned to forest and the remaining 10 per cent will take shape as a transitional ecosystem between forest and wetlands.

TransAlta purchased the sub-bituminous surface coal mine and nearby coal plant in 2000 and operated the coal mine until its closure in late 2006. During its productive life, which began in 1971, 8,500 acres were disturbed for mining activities and 160 million tonnes of coal was extracted, along with 1.5 billion yards of material.

We live here, and we have pride in the project. We're committed to protecting the environment and restoring the land to the equivalent or better than when we purchased it.

Roger Fish

Director, Centralia Commercial Operations
and former mine manager

In May 2012, Centralia's reclamation marked a milestone as the final reclamation plan was submitted to the state's Office of Surface Mining, Reclamation and Enforcement (OSM). To date, more than 2,500 acres of land have been restored, in a multi-year effort that is expected to be complete by 2025. Final approval of the reclamation efforts through government certification are expected to take another five years beyond the completion date.

Whitewood Mine Reclamation Targeting Completion in 2013

The Whitewood Mine was the source of coal for TransAlta's Wabamun power facility since 1962 and was officially retired from service March 31, 2010, the same date the power plant was retired. During the course of its nearly half a century of service, Whitewood Mine operations disturbed 1,900 hectares of land. Reclamation work has been ongoing and at the March 2010 closure, 72 per cent, or 1,372 hectares, had been reclaimed. To date, an additional 452 hectares have been levelled and efforts to re-vegetate them with grasses and upland tree species are underway.

Dan Kuchmak, reclamation planning specialist, Alberta Mining, explains, "Reclamation work is important not only because it fulfills our land use commitments to the government and hence the people of Alberta, but because it is the responsible thing to do."

Work is underway on reclamation activities required to return the final 76 hectares of disturbed land back into a natural state, with a targeted completion date of the end of 2013. The restored land will be suitable for a variety of uses, including agriculture, reforested and wetland areas. As well, two end-pit lakes, Whitewood Lake and West Pit Lake, have been constructed.



Whitewood reclaimed land looking southwest over Finger Lake.

Waste by-product utilization

	2007	2008	2009	2010	2011
Tonnes sold					
Dry fly ash	660,820	675,880	576,650	699,410	525,830
Bottom ash	219,970	255,530	81,040	120,680	0
Gypsum	106,146	79,170	102,365	82,211	55,892
Gravel	85,000	0	4,183	14,579	0
Cenospheres	3,325	1,669	1,569	2,096	2,097

Ash and gypsum are high demand commodities in the cement and wallboard businesses. Cenospheres are a by-product of the coal-fired generation process, and are used to manufacture cement-based paint and plastic products.

By-product management

	2007	2008	2009	2010	2011
Percentage of sales					
Ash	82%	92%	86%	89%	90%
Gypsum	10%	8%	13%	9%	10%
Gravel	8%	0%	1%	2%	0%
Cenospheres	0.31%	0.16%	0.20%	0.23%	0.36%

In 2011, we continued to demonstrate our commitment to reclamation throughout our operations and significantly advanced decommissioning activities at the Wabamun plant. Our intent is to leave the land in a condition suitable for industrial, residential and wildlife use. In 2011, our Wabamun reclamation efforts resulted in 91 per cent of solid materials and 97.5 per cent of liquids recovered being recycled, rather than returned to landfill.

Taylor Wind Facility Reclamation

TransAlta's Taylor wind facility located near Magrath, Alberta, is one of the first in North America to undergo a comprehensive decommissioning process, which was initiated in 2011. The turbines in this 3 MW wind facility originally began generating electricity in 2004, and were among the earliest vintage in TransAlta's fleet, with lattice-style turbine support structures.

Terry Kwas, manager of environmental services, Wind Energy, explains, "We are decommissioning the Taylor wind facility slightly ahead of its expected end-of-life, recognizing that this decommissioning represents the end of an early technology era. As wind power pioneers, we are now pioneering the process of decommissioning wind facilities. Throughout this process, we are committed to working closely with regulators and landowners to ensure our efforts bring the land back to equivalent or better capability using sound decommissioning and reclamation practices."

The decommissioning process started with the development of a decommissioning plan, consultation process with the local municipality, and Alberta Utility Commission notification. Decommissioning included dismantling of the turbine structures, salvaging useable parts and recycling metals, and then removing site infrastructure like underground cables, concrete foundations and transformers.

During decommissioning planning, consideration was given to the potential for soil contamination from hydrocarbon-based lubricants used in the turbines. Christine Nicholls, environmental specialist, explains, "Environmental consultants conducted a standard environmental site assessment program, beginning with identification of any potential or actual onsite contamination. The consultants then collected soil

samples from the site; TransAlta personnel used this information to inform their site excavation work. The consultants returned to site following the excavation to collect confirmatory soil samples, which documented that soil levels met regulatory criteria. TransAlta then backfilled the excavation with subsoil and top soils and reseeded the area with a grass mix developed in conjunction with the landowner."

As Canada's largest wind power operator, with a fleet capacity of more than 1,000 MW, this initial decommissioning experience will be leveraged when other facilities reach end-of-life.

Ask Us

Q: How is the reclamation process proceeding at the Taylor wind facility?

— David and Derral Taylor, Landowners

A: TransAlta is a leader in wind power generation and is one of the first companies in Canada to be involved in decommissioning a wind facility site.

In 2011, TransAlta advanced the decommissioning process by removing turbines and ancillary structures; completing Phase I, II and III Environmental Site Assessments, as well as removing concrete foundations. Most of the concrete foundations removed will be re-used at a nearby hydro facility as erosion control material for the spillway. This resulted in avoiding putting approximately 60 tonnes of concrete in a landfill facility.



Derral Taylor and his father David Taylor on their land near the reclaimed site where the Taylor wind facility turbines stood.

transitioning Centralia

TransAlta has been an active power generator in the U.S. Pacific Northwest since our purchase of the Centralia coal-fired facility in Southwest Washington in 1999.

Coal and Washington State

The Centralia plant has the capacity to generate 1,340 MW of electricity annually and helps keep the lights on from Portland to Seattle. The plant is one of the cleanest coal-fired facilities operating in North America due to the \$300 million TransAlta has invested to date in emissions control technology designed to lower mercury and particulate emissions.

Washington State Gov. Chris Gregoire signed an Executive Order in May 2009 calling for the state Department of Ecology to work with TransAlta to reduce emissions from the coal-fired power plant by more than half. Those negotiations led to an agreement in 2011 between TransAlta, state officials, local environmental groups, area labour and business interests, and community leaders to phase out the use of coal in Washington State. This progressive transition plan minimizes the impact to local employees and communities, while giving TransAlta the opportunity to recover an acceptable rate of return from our investments in this facility.

Specifically, the Washington State Legislature voted in April 2011 to approve Senate Bill 5769, which will shut down one of Centralia's two coal-fired boilers by 2020 and phase out coal combustion entirely by 2025. Gov. Gregoire signed the bill into law on April 29, 2011. The bill also requires TransAlta to provide \$30 million for economic development and community transition efforts and an additional \$25 million of financial assistance that will be used for the development of energy technologies to reduce air quality impacts.

We committed to working collaboratively to achieve a realistic timeline for ending the use of coal in Washington State.

Our goal is to ensure access to cleaner, affordable and reliable electricity while minimizing any undue economic impact to our employees, local communities and company.

Paul Taylor

President, U.S. Operations



Centralia employees and supporters rallied on the Washington State legislature steps in Olympia on February 15, 2011 as a debate over the fate of the Centralia coal plant took centre stage. The rally was the culmination of several weeks of activity by TransAlta, its employees and the Lewis County community to raise awareness of the importance of the plant.



An aerial view of TransAlta's Centralia plant and the surrounding area.

Additionally, Bill 5769 allows TransAlta to enter into long-term contracts with Washington utilities. It also helps protect the Centralia facility from any other operating or financial requirements or limitations relating to greenhouse gas emissions.

In an effort to provide replacement generation following the transition, TransAlta is developing plans to construct a large-scale natural gas plant at the existing site. According to the terms of the new law, TransAlta will receive expedited permitting for this less emissions-intensive method of generation.

Dawn Farrell, president and CEO says, "What made the difference in our Centralia negotiations was our willingness to sit down, open our books, discuss the scenarios regarding plant closure in a very transparent and constructive way and ensure everyone clearly understood our record as a responsible power producer. The result is we have an agreement that provides balance, protects the local economy and will improve the environment."

Ask Us

Q: What advantages are there to TransAlta to transition its coal-fired plant to a cleaner form of energy? - Washington State Gov. Chris Gregoire

A: When TransAlta agreed to the TransAlta Energy Transition Bill in early 2011, it was a significant collaboration among policymakers, environmentalists, labour leaders and TransAlta around the common goal of reducing emissions from energy production without unduly disrupting the local economy. The agreement works for all parties and allows TransAlta to plan long-term growth across the Pacific Northwest.

The agreement provides for the orderly transition of the Centralia plant from coal in 2020 and 2025, and allows TransAlta to grow and maintain our presence in the power market while protecting jobs and the community. Along with allowing TransAlta to enter into long-term Power Purchase Agreement contracts, the bill includes a provision for expedited permitting to construct a new large-scale natural gas-fired generation plant at the existing Centralia site.

renewables growth

In 2011, TransAlta continued its push to add incremental growth to its renewables portfolio. Our stated goal is to enlarge this generation segment, which includes wind, hydro and geothermal, by 100 to 200 MW every year.

Hydro Power Progress

TransAlta began as a hydro facility operator in 1911, when our first megawatt was generated by our Horseshoe hydro facility in Alberta. In 2011, we announced a \$350 million Hydro Life Extension program and began work on the initial vendor contracts and key agreements. Phase one of the multi-phase project involves investments in new turbines, generators, control panels and other facility upgrades at our Spray, Bighorn, and Brazeau hydro plants in Alberta.

In British Columbia, the Bone Creek hydro facility TransAlta built in cooperation with the Simpcw First Nation achieved commercial operation on May 21, 2011. This 19 MW hydro facility is located on traditional Simpcw lands approximately 90 kilometres south of Valemount, B.C. TransAlta worked closely with the Simpcw First Nation on this initiative, which provided construction-related contracts and employment for their local members and businesses.

These significant investments will rejuvenate our hydro fleet with more modern equipment that strengthens reliability. The upgrades also support the vital roles these facilities play in providing valuable backup and load following capability, keeping our system more responsive and resilient.

Lora Brennan
Director, Hydro Operations



Bone Creek, a 19 MW run-of-river hydro facility, located near Blue River, British Columbia.

New Richmond Wind Facility

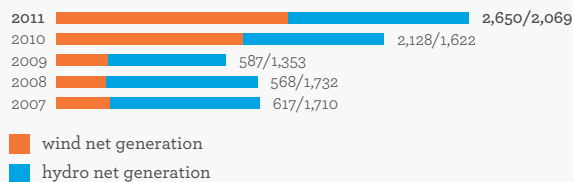
We reached a major milestone in wind power in 2011, completing our first full year of 1,000 MW of capacity. We are now Canada’s largest generator of wind power with nearly one third of the country’s capacity.

On March 18, 2011 TransAlta received approval from the Government of Quebec to build New Richmond, our newest wind facility, located in the province’s Gaspé Peninsula. At an estimated cost of \$205 million, New Richmond will add another 68 MW of capacity to our fleet with 33 Enercon E82 wind turbines. These advanced, direct drive turbines have no gearboxes and fewer moving parts, resulting in quieter operation and superior reliability.

Darren McCrank, director, Wind Operations, says, “Canada’s wind power sector offers very attractive, high margin growth opportunities. Wind is one of the fastest growing renewables segments and TransAlta is well-positioned to leverage our experience in new markets.”

New Richmond is expected to achieve commercial operation in the fourth quarter of 2012 and is contracted under a 20-year Electricity Supply Agreement with Hydro-Quebec Distribution.

Renewables generation (GWh)



At the time of this report’s production, 23 of the 33 cement turbine foundations had been poured for the New Richmond wind facility.



>1,000 MW
wind power capacity in 2011

Ask Us

Q: TransAlta provided educational awareness sessions at Moncton’s local middle and senior high schools during the early stages of development of New Brunswick’s first wind farm. Does TransAlta plan to continue this educational program? – Heather Fraser, Natural Resource Program Coordinator, City of Moncton, New Brunswick

A: TransAlta believes raising awareness about sustainable energy is an important obligation to the communities where we operate. Our personnel are amongst the most experienced and knowledgeable professionals in the wind industry. As time and resources allow, we continue to respond to requests to speak to groups, provide educational materials, offer current information for student use, or direct inquiries to appropriate resources. This is all in an effort to continue to provide good information about these technologies to stakeholders and the public.



ransAlta's Am

TransAlta's
Amazing Race

Valerie Brown, manager of Health and Wellness, readies for TransAlta-wide health and wellness challenge called "TransAlta's Amazing Race".

ENERGIZING OUR PEOPLE

Our employees, customers and communities are the reasons behind TransAlta's continued success. We are working hard to create a workplace where teamwork, collaboration and innovation flourish.



health and safety

TransAlta significantly lowered our annual Injury Frequency Rate in 2011, which has enabled our company to enter a new level of world-class safety performance.

Setting a New Standard for Safety

Our vision is to be internationally recognized as the Environment, Health and Safety (EH&S) leader in power generation by our employees, unions, customers, shareholders, regulators, suppliers, and our communities of operation.

In 2011, we made major strides towards this vision, by recording one of the best safety performances in our history, an annual Injury Frequency Rate (IFR) of 0.89, against a target of less than 1.0. TransAlta assesses our safety performance against peer utility companies that are members of the Canadian Electricity Association. We are a top quartile performer in this group. And, by recording an IFR of less than 1.0, we are delivering what is considered to be world-class safety performance, a standard we intend to maintain, even as we work to reach our ultimate goal of achieving zero injury incidents.

Proactivity and continually reinforcing awareness are fundamental to effective health and safety performance. Rod Kause, director of Corporate EH&S, attributes the exceptional safety performance TransAlta employees and contractors delivered this past year to a variety of safety initiatives that have been introduced and recently taken root.

Introducing new safety programs is a constantly evolving process. We've gained a lot of traction and buy-in from initiatives like our Best Fit Eyewear program and Stop the Drop, which focused on reducing falling objects. But our emphasis on Significant Near Miss reporting is the key reason why we've lowered the frequency of safety incidents throughout our fleet.

Rod Kause
Director, Corporate EH&S



Wind technicians Carson Romeril and Mark Van Driesten conduct a Field Level Hazard Assessment before commencing maintenance at the Summerview 2 wind facility.

Near Miss Reporting functions like an early warning system, where employees alert their peers and managers to incidents that have occurred but did not result in an injury. Recognizing and reporting near miss incidents dramatically improves worker safety and offers tremendous learning opportunities for the rest of the company. In fact, since Near Miss Reporting has been introduced, TransAlta employees have demonstrated they are eager to make improvements that result in greater safety for all.

Rod says, "In previous years, we averaged about 20 significant near miss reports annually. In 2011, employees reported 52. The program is resonating very well on the floor; our people are taking these safety alerts, sharing them at their tailboard sessions and with our contractors. It's about getting the most out of the lesson learned and sharing them as widely as possible."

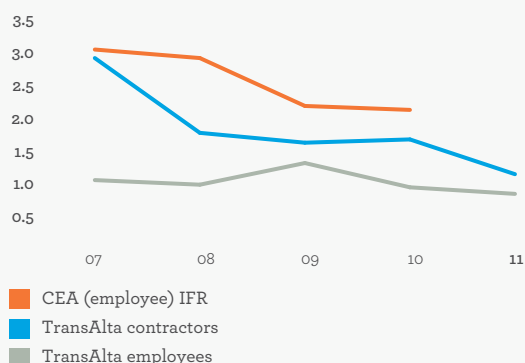
All around TransAlta, employees made a concerted effort to work more safely in 2011. Mark Thomson, an operations technician at TransAlta's Sarnia regional cogeneration facility, explains, "Staff at all levels of work execution are committed to sending everyone home safely at the end of the day. The management team rolled out the rules and expectations but the people in the field took ownership by driving safety one step further. We are proud to say that no one on this site required even medical treatment despite the increased number of hours worked in 2011."



A caution tag and yellow caution tape are used to safely cordon off an area where maintenance is being performed.

TransAlta uses two key metrics to monitor and evaluate our employee and contractor safety performance. Total Recordable Injury Frequency provides a broad assessment of all the health and safety incidents recorded during a year, including those related to restricted duty and occupational health issues like repetitive strain injuries. Incident Frequency Rates reflect injuries from safety incidents requiring medical aid or resulting in lost time.

Recordable injury frequency rate
(injuries/200,000 hours worked)



TransAlta achieved a combined annual injury frequency rate (IFR) of 0.89 in 2011, compared to 1.19 in 2010. IFR is the number of lost-time and medical aid injuries per 200,000 hours worked. We benchmark our IFR against the Canadian Electricity Association (CEA). The CEA's employee IFR for 2011 was not available at the time of this report's production.

Ask Us

Q: How does TransAlta maintain a high level of safety awareness and motivation across your workforce to sustain strong safety results?
- Henry Geertz, Regional Service Director,
Alstom Thermal Services

A: Safety is a core value at TransAlta. A continuous focus from the front line supervisor to the CEO is critical in our ability to maintain our safety awareness. Having a well balanced, solid safety scorecard, effective communication, and clear accountabilities and expectations are key with all staff and contractors driving our strong safety results.

Our emphasis on encouraging near miss reporting is another integral part of maintaining motivation and creating an environment where people are continually looking out for each other.

Comprehensive Health and Wellness

At TransAlta, we believe the health of our employees is our most valuable asset. Our health and wellness program supports this by viewing each employee and their family as a whole, offering a contemporary array of options that promote healthy lifestyles, both inside and outside of work.

For example, a brand new employee fitness centre opened its doors at TransAlta’s Calgary head office in 2011, a tangible demonstration of this philosophy in action.

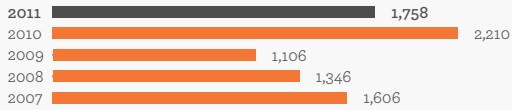
Valerie Brown, manager, Health and Wellness, says, “We want our employees to be happy and productive in the workforce. We’ve seen a strong response to this pilot program, which provides free passes to a well-equipped, on-site gym. Structured fitness programs are offered there, including spin, yoga and boot

camp classes, as well as one-on-one instruction and comprehensive fitness assessments. We’ve had higher than anticipated usage rates and are extending this, where viable, to other operating locations.”

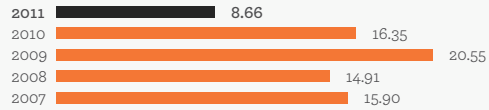
TransAlta promotes a proactive approach to employee health through other initiatives, like the annual health fair we hold across our North American operations. The fairs provide an extensive array of health and lifestyle information, and the opportunity for employees to have blood pressure, glucose testing and other screening tests completed.

TransAlta’s Greatest Transformation is another example of how our company is actively engaging employees in organized wellness programs. Three teams of 20 employees embarked on a 12-week challenge in 2011, competing to win a top prize of \$500 towards a wellness purchase.

Short term disability rate
(days/1000 employees)



Long term disability rate
(cases/1000 employees)



Wellness Coordinator Kim Berenbaum, in the ‘Power House’, the new employee-named fitness centre at TransAlta’s head office.

human resources

TransAlta values a fully engaged workforce and is finding new ways to enhance how our people interact, learn, innovate and advance.

TransAlta's talented employees are the reason our company celebrated 100 years in business in 2011. Their passion and commitment have taken us from our beginnings as the operator of a single hydro plant, to Canada's largest publicly traded generator and marketer of electricity.

Today, having the right people in the right roles with the right tools is more important than ever as our company meets 21st century sustainability challenges. One of the biggest challenges is the increasingly competitive employment marketplace.

Re-inventing our Workplace

The celebration of our Centennial in 2011 provoked questions about what work will look like at TransAlta during the next 100 years and, importantly, what systems, practices and approaches will foster a workplace culture where we can attract and keep top performers.

We used the occasion to explore these possibilities. As part of our Centennial Project, we conducted focus groups involving more than 500 employees held across our Canadian and U.S. operations early in 2011. The focus groups were a valuable opportunity to verify, at the front line, what our people value and where opportunities exist for becoming better at what we do. Although this initiative was not directly focused on human resources issues, the input influenced new directions in our human resource services and programming development.

We identified several other opportunities to improve the way we recruit, train, develop and retain our people in 2011. Work progressed throughout the year on studying each of these areas, developing programming and gathering the necessary resources to support delivery in 2012.

Key initiatives we built in 2011 and will deliver in 2012 include:

- introducing personal development plans for all operating employees across our fleet, to better assess the skills and abilities they need for optimal performance and provide recommended training and/or mentoring;
- redesigning our employee orientation and onboarding practices to improve the ability of new hires to be successful in their roles sooner, through more intensive training and mentoring, as well as expanding onboarding for existing employees who are taking on a new role at TransAlta;

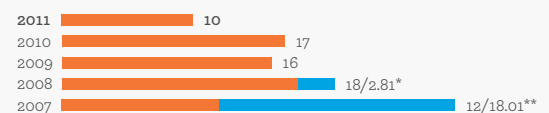
We really reinvented our talent management function in 2011, which includes recruitment, onboarding of employees, learning and development, performance management and total rewards. All are vital to creating a high level of employee engagement, which is a top priority for TransAlta.

Greg Reinhart

Vice-President, Human Resources, Centres of Excellence

- creating more assignment diversity and experience for new graduates through role rotation, so they can get to know the many facets of our company earlier in their careers;
- launching our first employee survey on total rewards, which includes both compensation and recognition, in advance of a project to update this area;
- addressing the industry-wide challenge of employee retention by linking a portion of managerial bonuses to retention performance; and
- outsourcing the exit interview process, to promote more candid feedback from employees who are moving on, so that it can be used to improve awareness and our practices.

Employee turnover rate (%)



* Employees "released" as a result of the mine closure.

** Employees "released" as a result of the Mexico sale.

Learning Every Day

About 70 per cent of the new skills and information employees develop and retain are gained in an on-the-job setting, rather than a classroom. That's why in 2011 TransAlta's Human Resources Learning and Development team laid the groundwork for the launch of a new learning portal that will deliver comprehensive self-directed, web-based learning in 2012.

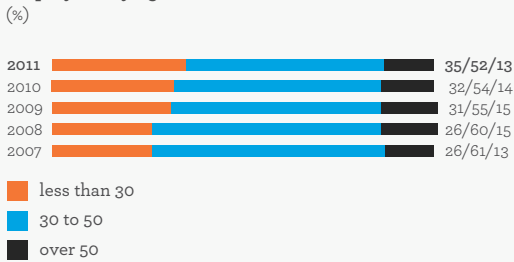
Susanne Beaton, director of HR Programs explains, "Our new learning portal will feature a soft skills library with extensive resources, including e-learning, e-books, articles, research and a series of courses that lead to a leadership certificate. This online tool is flexible and accessible, and will provide our employees with more choices about how, when and where they pursue their learning objectives."

Ask Us

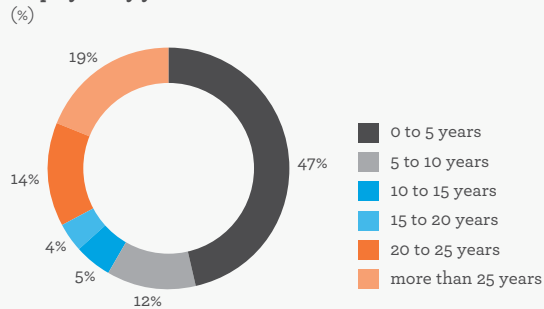
Q: What is TransAlta doing to attract the right employees in today's highly competitive job market? – Shaun Andrews, Manager, Site Development

A: TransAlta is using a variety of strategies to ensure we are attracting and retaining the right people. We have strengthened our on-campus recruitment activities and we are also using more social media tools (Facebook, Twitter, LinkedIn). As well, we are optimizing TransAlta's visibility on multiple search engines and job boards to enable us to reach candidates best suited to our company. We are also developing learning solutions that help make TransAlta a great place to grow your career.

Employees by age



Employees by years of service



Sarah Basha, advisor, Onboarding, guides new grad Paramdeep Grewal through the office.

communities of operation

TransAlta is committed to the sustainability of the communities in which we operate. We're a responsible electricity producer, environmental steward and an important contributor and community participant.

Our company works to create solid, long-lasting community relationships that are built on trust and maintained with a spirit of transparency and mutual respect. We demonstrate this by actively communicating with stakeholders about our operations, keeping them well informed about new projects and welcoming their participation in our open houses, stakeholder committees and local initiatives.

Wabamun Demolition Consultation

In 2011, TransAlta conducted major demolition work at the site of our former Wabamun power plant, which we decommissioned in 2010. Three large chimney stacks and the former power house were felled through engineered and controlled blasts, on March 28 and August 11, respectively. Both operations involved extensive planning and consultation. TransAlta's community relations team met with local municipalities, fire and emergency services, utilities, AltaLink and regulators, including Alberta Environment, Alberta Sustainable Resource Development and the RCMP, to ensure everyone was informed and up-to-date about our plans.

"Although the actual blasting event takes only 18 seconds, it's the culmination of years of planning and preparation to ensure the structure is ready and nearby infrastructure is safe," says Larry Christiansen, project control specialist for the Wabamun Decommissioning Project. "The company and other stakeholders were informed in advance and we worked closely with them to ensure their concerns were addressed."

Both demolitions were safely conducted according to plan and TransAlta recorded both demolitions and posted the videos on YouTube. In addition to being a

major milestone for local residents, TransAlta used the occasion of the chimney stack demolition to organize a silent auction where employees could bid for the right to push the plunger and start the blast. TransAlta and the demolition contractor hired for the project together matched all donated funds, resulting in a \$6,000 contribution to the United Way.

Enhancing Community Capacity

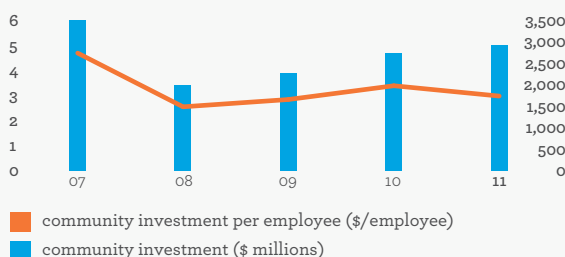
At TransAlta, we view community investment as a way to help improve the quality of life in the communities where we operate. The four key pillars of our community investment program are arts and culture, education, environment, and health and human services. In each of these funding categories, we partner with not-for-profit organizations that are working to make a positive and lasting difference. In 2011, we contributed \$5.0 million to over 125 organizations.

TransAlta looks for opportunities to contribute more than money to the organizations we work with. Our employees are active volunteers and we encourage their involvement and contributions of expertise to the organizations we partner with.

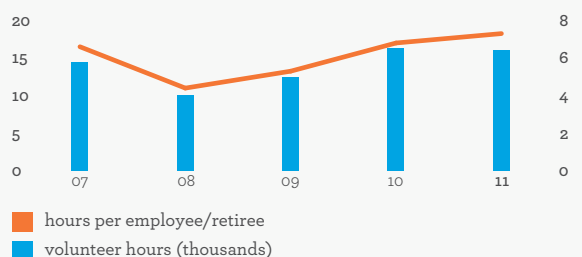
Colleen Carter

Senior Advisor, Corporate Communications

Community investment
(\$ millions)



Volunteer hours *



* Volunteer hours do not include the many hours that TransAlta employees contribute privately.

The 2012 Alberta Winter Games

TransAlta's support for the 2012 Alberta Winter Games is a prime example of our community commitment. Successfully staged in early February 2012 in Spruce Grove, Stony Plain and Parkland County, the Alberta Winter Games brought together 2,800 athletes from around the province who competed in 22 different winter sports. In addition to promoting healthy, active pursuits and motivating young people to realize their potential, a community event of this magnitude fuels volunteerism and community spirit.

TransAlta provided diamond level sponsorship for the games, which was allocated to clothing for the 3,000 volunteers required to run the event. Cheryl McNeil, senior community relations advisor, says, "Volunteerism is really at the heart of staging a successful Alberta Winter Games and TransAlta's employees were delighted to play a significant role in this effort. Many have noted how this event has created a legacy of goodwill and passion for community participation."



TransAlta employee volunteers (Alberta Winter Games) (left to right) Dan Overwater, Rob Ogurian, Kent Brandt, Mark Kondruk, Colleen Leonard, Cheryl McNeil, Dave Wood, Darlene Cardinal, Dave White and Mark Shoup.

Flagship Community Programs

The Calgary Exhibition & Stampede is known around the world for its unique western hospitality and world-class entertainment. TransAlta is a presenting sponsor of the Calgary Stampede's nightly grandstand show and, through our support of the Calgary Stampede Foundation, we are a major benefactor of The Young Canadian School of Performing Arts. More than 6,500 talented youth have trained at the school, which offers performers tuition-free professional instruction opportunities in voice, musical theatre, gymnastics and dance.

TransAlta provides significant funding for other major arts initiatives including the Honen's International Piano Competition and Edmonton's Fringe Theatre Adventures Society.

Hull Child & Family Services is a Calgary-based non-profit organization focused on helping children and their families achieve success in their lives. TransAlta has partnered with Hull and its early intervention program that works closely with schools to support vulnerable youth.

The United Way is another well-known social services organization dedicated to changing social conditions and improving the lives of people and communities. TransAlta employees and retirees rally around a series of United Way fundraising initiatives each year and our company matches employee and retiree donations dollar for dollar. In 2011, TransAlta contributed a total of \$1.36 million to United Way.

Ask Us

Q: What value does TransAlta place on health and wellness for employees and the broader community? - Deborah Larsen, General Manager, TransAlta Tri Leisure Centre

A: TransAlta believes our success is closely linked to healthy, fully engaged employees. Likewise, we recognize that our license to operate is a privilege we earn through a record of positive community involvement. That's why we actively promote wellness, invest in fitness facilities and subsidize programming for employees, as well as contribute to community initiatives that promote healthy lifestyles.

Most recently, we opened a new fitness facility at our Calgary head office to provide more opportunity and access for employees to pursue fitness as part of their workday. The TransAlta Tri Leisure Centre is an example of how we extend this philosophy beyond our company. Since 2002, the leisure centre has served the communities of Parkland County, Spruce Grove and Stony Plain. TransAlta also provides a fitness subsidy to employees from our nearby Alberta Coal operations to encourage them to enjoy this multi-purpose facility.

our involvement

TransAlta's strength comes from the knowledge and commitment of our employees. It is also a result of the many industry and community initiatives in which our employees make the time to participate.

Our employees are actively engaged in numerous research initiatives, industry associations, educational institutes and community advisory groups, including:

- Alberta Carbon Capture and Storage Development Council
- Alberta Chamber of Resources
- Alberta Fish and Game Association
- Alberta Water Council
- American Coal Ash Association (ACAA)
- Association of Power Producers of Ontario (APPrO)
- Association of Washington Business
- Banff Aquatic Ecosystem Advisory Group
- Bat Wind Energy Cooperative
- Bluewater Community Awareness Panel – Ontario
- Bluewater Sustainability Initiative – Ontario
- Bow River Basin Council – Alberta
- Canadian Chamber of Commerce (Environment Committee)
- Canadian Clean Power Coalition (CCPC)
- Canadian Electric Utilities Project Management Network
- Canadian Electricity Association
- Canadian Embassy in Australia
- Canadian Industry Recycling Coal Ash (CIRCA)
- Canadian Wind Energy Association (CANWEA)
- Centralia College
- Chambers of Commerce in all jurisdictions
- Clean Energy British Columbia
- Committee on Keephills Environment – Alberta
- Construction Owners' Association of Alberta
- Edison Electric Institute
- Energy Environment Research Centre of North Dakota
- Foothills Restoration Forum and Native Prairie Working Group
- Gifford Pinchot National Forest Resource Advisory Committee – Washington
- Independent Power Producers Association of British Columbia (IPPBC)
- Innovations Alberta
- Institute for Sustainable Energy, Environment and Economy (ISEEE)
- Integrated CO₂ Network consortium (ICO2N)
- International Emissions Trading Association
- Keephills Power Project Steering Committee
- Lewis County Economic Development Council – Washington
- Lower Kananaskis River Users Association (LKUA) – Alberta
- National Wind Coordinating Collaborative
- Northern Alberta Institute of Technology
- North Saskatchewan Watershed Alliance – Alberta
- Ontario Waterpower Association
- Pew Center on Global Climate Change
- Sarnia Lambton Environmental Association (SLEA)
- Southern Alberta Institute of Technology
- Southern Alberta Sustainable Communities Initiative
- University of Alberta
- University of Calgary
- University of Lethbridge
- University of Regina
- University of Saskatchewan
- WindTRM (Wind Technology Roadmap)

aboriginal relations

TransAlta regularly interacts with First Nations communities across Canada, developing long-term, mutually-beneficial relationships grounded in trust and respect.

Many of TransAlta's power producing facilities and infrastructure are located in areas close to or on First Nations lands. Our recent growth, particularly in British Columbia, Quebec and Ontario, has expanded our Aboriginal engagement opportunities. In 2009, TransAlta worked with 13 First Nations; today, this has grown to almost 50. Acknowledging its growing role, in 2011 TransAlta formalized a directorship position for Aboriginal Relations within the company and is adding more Aboriginal Relations staff, to enhance our capacity to liaise with and maintain the relationships we've established with Aboriginal groups.

Cultural Sensitivity and Awareness

TransAlta's Aboriginal Relations team fosters our First Nations relationships and helps our employees learn more about their unique rights and cultural traditions. One way we accomplish this is through Aboriginal awareness training. About 40 TransAlta leaders and employees participated in the full-day training sessions in 2011, which cover both historical and contemporary Aboriginal issues and enhance cross-cultural communication.

Respectful Development

One of the most recent Aboriginal relationships TransAlta has cultivated is with the Simpcw First Nation in British Columbia, following our acquisition of Canadian Hydro Developers (CHD) in 2009. CHD had previously initiated development of a 19 MW hydroelectric project at Bone Creek, approximately 90 kilometres south of Valemout, B.C., located on traditional Simpcw lands.

In March 2011, Dawn Farrell, then TransAlta's chief operating officer (and now president and chief executive officer) met with Simpcw Council and band representatives and confirmed TransAlta's intent to honour the previously developed Impact Benefit Agreement.

Janet Janvier, Aboriginal relations advisor, says, "We value the opportunity to work constructively with the Simpcw First Nation on the Wecm̓l̓cetkwe hydro facility. The progress we've made together has resulted in an excellent project and a working relationship grounded in trust and mutual respect."



The bustle on a dancer's regalia at a powwow in Enoch, Alberta.

The Simpcw First Nation was invited to submit a new name for the Bone Creek site, in their language. "Wecm̓l̓cetkwe" means "water comes to life" – an apt name for the new facility which achieved commercial operations on May 21, 2011. TransAlta made efforts to hire local Simpcw First Nation workers during construction and Simpcw businesses earned about \$2.4 million in construction contracts for the project.

Ask Us

Q: What does TransAlta do to encourage contracting and employment with Aboriginal companies and workers?

– Percy Rain, Paul First Nation

A: TransAlta's procurement group includes in every Request for Proposal a section on Aboriginal Content, which asks the potential supplier to demonstrate their commitment to our Aboriginal Relations policy by estimating the value of services that will be procured through local Aboriginal businesses and estimating the number of local Aboriginal persons that will be employed.

Inclusive and Involved

TransAlta hosts and participates in a variety of events and gatherings celebrating Aboriginal culture. In 2010, we established the tradition of formally recognizing National Aboriginal Day as a company and during the 2011 event, First Nations representatives and TransAlta employees shared the experience of forming a large friendship circle at our corporate head office.

We also were part of the 2011 Banff Indian Days event hosted by the Stoney Nation, where we hosted a breakfast and were able to connect with many members of the community.

All of TransAlta's original hydro facilities are located in Stoney Nakoda territory. We recognize their interests and have initiated regular quarterly meetings to keep them informed about our activities and to work cooperatively towards mutual goals.

Jason Edworthy

Director, Aboriginal Relations

Promoting Educational Opportunities

Every year, TransAlta awards up to ten scholarships to Aboriginal students across Canada who are interested in pursuing post-secondary studies. We also support an annual scholarship at Mount Allison University in New Brunswick.

Here's what recent TransAlta Aboriginal scholarship and bursary students told us:

"With this award, I can now afford to register for a driving course – something that I felt only the privileged could attend. You do not know how thankful I am as I will not only gain a great skill, but a strong level of confidence."

"I don't think 'thank you' is said enough – so Kiisitsinatsin – thank you so much for supporting my educational endeavours."

"It is very difficult to manage a family and continue with my education on a fixed income. You have helped me tremendously and your effort will not go unnoticed."



At the Bone Creek blessing ceremony Hugo Shaw, EVP, Operations, holds a gifted drum and a commemorative bronze plaque with then Simpew Chief Nathan Matthew.



Hugo Shaw, executive vice-president, Operations, in the Operations Diagnostic Centre.

DRIVE THE BASE

Five fuels – one vision: be the low-cost, high-reliability power producer with assets that consistently deliver. Excellence in availability, productivity and safety performance are the drivers.



accelerating value delivery

TransAlta’s competitive strength comes from our ability to produce power from a diverse, well-maintained and reliable operating fleet. Driving the base is about sustaining strong plant performance while improving productivity and driving down costs.

TransAlta operates a total of 75 power generating facilities that use five different fuels to create electricity: coal, natural gas, wind, hydro and geothermal and we do so in three distinct geographies - Canada, the Western U.S. and Western Australia. Operating a diversified fleet requires a consistent, relentless focus on safety, efficiency and cost-effectiveness.

Delivering Long-term Value

The contributions of TransAlta employees at every facility we operate are what translate into value for our shareholders. Our goal is to achieve an average Total Shareholder Return (TSR) of eight to 10 per cent per year over the long-term, which is consistent with Standard and Poor’s and the Toronto Stock Exchange (TSX) indexes.

In 2011, TransAlta produced a TSR of 4.9 per cent; while this was below our target, it was significantly higher than the TSX and we continue to focus on delivering strong shareholder returns. In addition, we generated \$809 million of funds from our operations, and our earnings before interest, taxes, depreciation and amortization (EBITDA) increased 13 per cent over 2010, to more than \$1 billion, while our earnings per share increased seven per cent over 2010.

TransAlta has a clear focus on being a low-cost operator and is disciplined when it comes to allocating capital. Diversity is also key driver of results. We have achieved diversity in our fuel mix, across our operating geographies, through the technologies we use, and in our mix of uncontracted and contracted power marketing arrangements. It reduces risk and generates stable cash flow so we can pursue the best opportunities.

Will Bridge

Executive Vice-President, Business Development



Will Bridge, Executive Vice-President, Business Development

EBITDA, Earnings and Cash Flow

	2011	2010
Comparable EBITDA (\$ millions)	1,077	955
Comparable Earnings Per Share (\$)	1.04	0.97
Funds From Operations (\$ millions)	809	805
Funds From Operations Per Share (\$ millions)	3.64	3.68

Targeting Strong Availability

One of the key metrics the utility industry uses to measure fleet performance is availability, which is the percentage of time a generating unit is capable of running, regardless of whether or not it is generating electricity. In 2011, TransAlta set a target of 89 to 90 per cent availability for our fleet and we delivered results that came close, at 88.2 per cent, reflecting the unplanned outage at our Genesee 3 Unit and the shutdown of Sundance Units 1 and 2.

Plant availability (%)

2011	88.2
2010	88.9
2009	85.1
2008	85.8
2007	87.2

Capital investments are required on an ongoing basis to ensure that our facilities run at optimal levels for extended periods of time. Over the past several years, TransAlta has made substantial investments into our coal fleet to ensure these facilities run as efficiently as possible to the end of their Power Purchase Agreements (PPAs) and beyond. In 2012, we will perform extended outages at Keephills 1 and 2 to set those plants up for their end of lives in 2028 and 2029.

A Plant-Centric Operating Model

Another important way TransAlta is working to deliver superior operating performance is through efforts to create a more “plant-centric” operating model for our organization. This means each of our coal, gas, hydro and wind operating teams are invested with full ownership and accountability for the safe operation, performance and business results of our generating fleet.

Hugo Shaw, executive vice-president, Operations, explains, “Moving to this operating model will result in more innovation, more clearly defined accountabilities and priorities, faster decision-making and a stronger competitive advantage.”

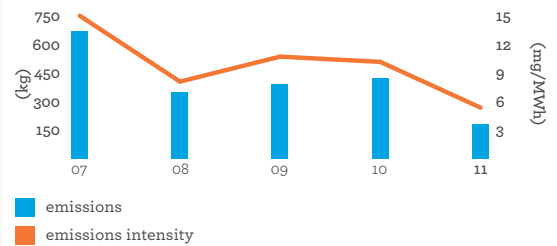
Other ongoing initiatives that TransAlta advanced in 2011 to improve operating performance include a concentrated effort on Management of Change (MOC) processes across the company. The MOC initiative is a shared effort between our engineering, project team and operational groups and is a process designed to help prevent personal, environmental and business losses and improve planning efficiency.

The Conference Board of Canada recently estimated that \$200 billion will be invested in electricity generating infrastructure in Canada over the next 20 years, with more than half of that coming in the two provinces where TransAlta is strongest: Alberta and Ontario. We’re well positioned to pursue growth opportunities in Canada, in the Western U.S. and Western Australia, where we are experiencing strong demand from our industrial customer base in Australia’s principal mining region.

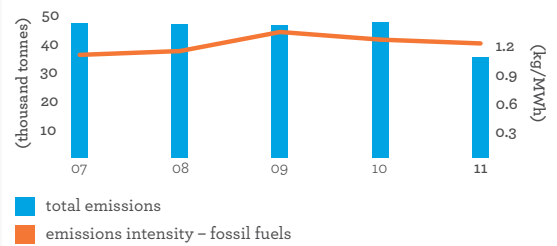
Our Emissions

We continue to reduce our emissions of air pollutants as shown below.

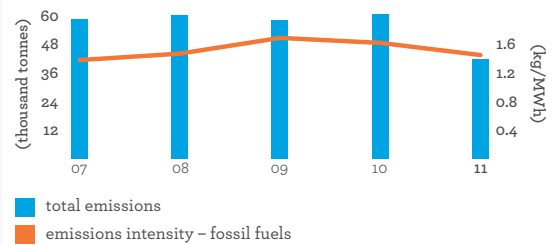
Mercury emissions



SO₂ emissions



NO_x emissions



technology development and innovation

From supercritical boilers to the wireless telecommunications our employees use to stay connected, TransAlta is a leader when it comes to innovating and implementing new technologies and supporting research for greener power generation.

Keephills 3 – Canada’s Most Advanced Coal Plant

After almost five years of construction and a \$1.98 billion investment, the long-anticipated Keephills 3 facility began generating commercial electricity on September 1, 2011, demonstrating the best available technology currently economically achievable for use with sub-bituminous coal. The 450 MW facility is located 70 kilometres west of Edmonton, Alberta and features an immense, supercritical boiler capable of operating at higher temperatures and pressures than conventional coal-fired facilities. These increased operating parameters, combined with advanced design turbines, deliver impressive efficiency gains, enabling the generation of more electricity with less coal.

Another major advancement that sets Keephills 3 apart is its advanced air quality control system. Keephills 3 produces significantly less CO₂ than the four Wabamun units TransAlta retired in 2010. Keephills 3 also reduces emissions of sulphur dioxide (SO₂), nitrogen oxides (NO_x), mercury and particulates with a state-of-the-art flue-gas desulphurization unit, low NO_x burners, a particulate collection system that makes use of fabric filters and an advanced mercury emission control system. The high efficiency boiler and turbine design are also responsible for fewer CO₂ emissions than conventional coal-fired facilities.

TransAlta and Capital Power are 50/50 joint-venture partners in the facility and both companies are independently dispatching and marketing their share of the unit’s electrical output to the Alberta power grid. Capital Power led the plant construction effort, which began in 2007 and at its peak involved 1,900 workers. In addition to the generating facility, a new dragline was built to supply coal to the plant and is currently the largest of its kind in the world.

TransAlta is now operating Canada’s most advanced coal-fired plant. We helped build it while maintaining one of the best safety records in the industry and it will efficiently supply electricity to Albertans for generations to come.

Craig Beattie
Plant Manager, Keephills 3



The gleaming coal pulverizers or coal mills (six in total) at Keephills 3 which pulverize the coal to a fine powder before it is blown into the boiler.

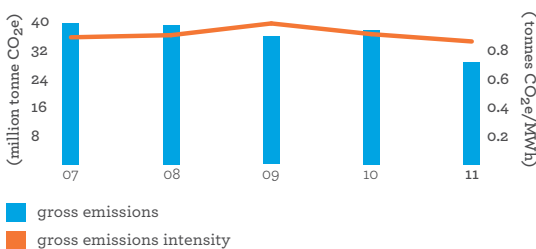
Managing Greenhouse Gas (GHG) Emissions

Reducing our carbon footprint has been a longstanding objective for TransAlta. We recognize the need to lower GHG emissions for both environmental and business risk reasons. Our approach has been, and continues to be, steady reduction through capital stock turnover consistent with the realities of the power sector. Our strategic approach has several elements including:

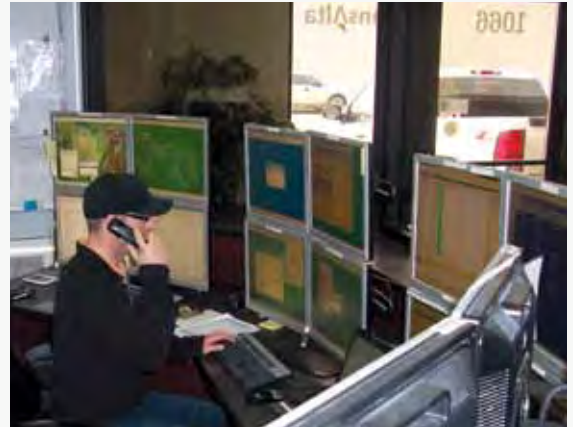
- Phasing out older coal units, for example the fourth and final unit (Unit 4) of our Wabamun plant that was closed in 2010;
- A focus on renewables and natural gas replacement generation, and for growth, as demonstrated by the continued growth of our wind business and announced plans for large-scale gas-fired generation in Alberta;
- Technology investments to reduce emissions from existing coal-fired plants, as witnessed by our investment in the Project Pioneer CCS effort and continued leadership of the Canadian Clean Power Coalition;
- Policy work with governments in both Canada and the U.S. to transition older coal units to other forms. In Washington we have struck an agreement with the State to phase out both units of our Centralia plant by 2020-2025 with plans to replace them with gas and renewables. In Canada we are expecting that the federal government will soon finalize regulations that will carefully transition older coal units to newer generation; and
- Pursuing offset projects in regions where offsets are part of the regulatory framework, including in Alberta and California.

As a result of these efforts, TransAlta's GHG emissions continue to decline. Our GHG emissions and emissions intensity performance are shown below:

Greenhouse gas (GHG) emissions/emissions intensity rates



This effort is necessarily a long-term one. Our emissions will not change overnight, but with careful management we believe we can continue to make reductions while still growing our generation business.



Corrado Bertolini at the Wind Control Centre in Pincher Creek.

A New Wind Control Centre

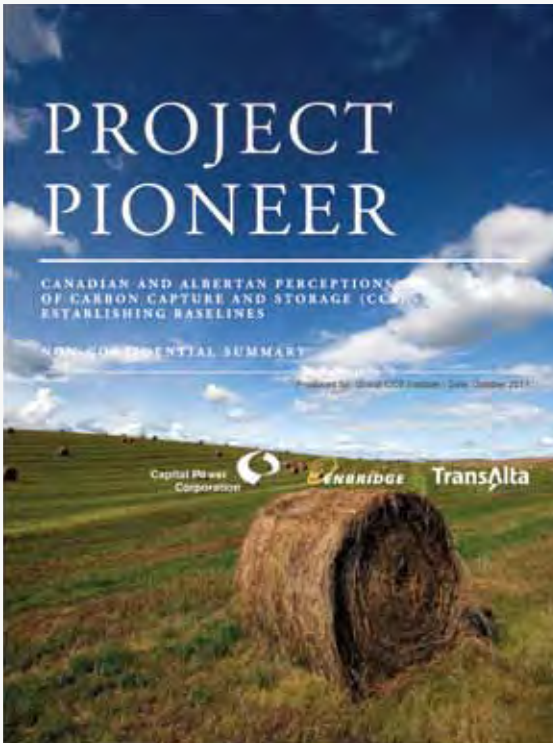
In a concentrated three-week period, TransAlta built, installed and brought a brand new Wind Control Centre online in Pincher Creek, Alberta and in doing so, introduced a greatly enhanced level of monitoring, operational flexibility and responsiveness to our wind fleet. The Wind Control Centre now enables our operators to monitor the activity of our more than 900 operating wind turbines across Canada from a single, centralized location.

It also provides one point of contact for the local grid operators to each facility, allowing TransAlta to respond to any grid emergencies or curtailments in a very timely manner. This nimbleness will help keep us in compliance to grid standards and ensure a good standing with the grid operators.

"This project was a great example of the inter-team collaboration that is possible at TransAlta," said Glenn Kennedy, manager, wind planning. "I think the team recognized the value the Centre would bring, and were prepared to give it all they had to work together and get it done."

Prior to the Wind Control Centre coming online on January 4, 2011, after-hours monitoring of TransAlta's wind turbines was primarily carried out by the original equipment manufacturers (OEMs) like GE, Siemens, and Nordex. By eliminating that process and bringing it in-house, the estimated cost savings will be approximately \$775,000 annually.

Hal Jorgensen, supervisor, Wind Operations, says, "A couple years in to my work here, a co-worker and I were trying to control our three wind farms at the time using a couple of computers. He commented he just wanted to see them all side-by-side, all connected at the same time without the connection failing. So to see the monitoring all in one room and watching as the wind touches one wind farm, then the next right across Southern Alberta, and how that compares to what is happening in Ontario, Quebec and New Brunswick – it's quite impressive."



TransAlta developed numerous research documents regarding Project Pioneer and its proposed technology.

Pioneering CCS Technology

Alberta has more than 33 billion tonnes of proven coal reserves, which is more coal than oil and which represents approximately 70 per cent of Canada's total reserves. Finding ways to keep this abundant resource in the energy mix is a key driver behind efforts to advance carbon capture and storage technologies.

For the past three years, TransAlta served as the project lead for Project Pioneer, working closely with partners Capital Power and Enbridge to develop technology that would sequester carbon from the new Keephills 3 coal facility. The project attracted \$779 million in funding from The Government of Canada, The Government of Alberta and the Global CCS Institute.

As Canada's first fully-integrated carbon capture and storage (CCS) project from the power sector, Project Pioneer was conceived to:

- safely capture, transport and store carbon dioxide (CO₂);
- make coal a carbon-neutral fuel;
- use CO₂ for enhanced oil recovery (EOR); and
- help address Canada's CO₂ emissions challenge.

After evaluating a number of technical approaches, amine solvent separation, also known as amine scrubbing, was determined to be the best technology. A number of seismic studies were also conducted to verify the integrity of the Nisku formation, an underground cavern 1.8 kilometres below the earth's surface that was identified as the project's CO₂ storage site. Preliminary engineering and design work proceeded, along with public consultation and studies evaluating project economics prior to formal sanctioning.

In April 2012, the industry partners determined that, although the technology works and capital costs were in-line with expectations, the market for carbon sales and the price of emissions reductions were insufficient to allow the project to proceed. Don Wharton, vice-president, Sustainability and Policy, explained, "While we are disappointed Project Pioneer will not proceed at this time, we have learned a great deal from this project that will advance CCS efforts and we continue to believe that CCS will ultimately play a role in reducing the carbon footprint of our energy systems."

We continue to invest in clean technology development and assessment with an eye to future opportunities for our fossil-fuel based generation assets.

Enhancing Employee Connectivity

Rapid improvements in telecommunications technology, the proliferation of wireless digital devices and the rise of social media and the online environment have dramatically changed the way people communicate, as well as how they work. TransAlta capitalized on this in 2011 by adopting Lync, a unified communications system designed to make employees more accessible, while supporting enhanced collaboration and connectivity.

TransAlta was at a crossroads with its previous PBX telephony system and after a cost-benefit analysis, opted to introduce Lync across its North American operations. Lync includes a web conferencing tool, an enterprise voice tool, instant messaging (IM) and has replaced employees' traditional telephones with headsets and a computer interface for phone calls.

Kyle Sych, senior systems analyst, Operations, says, "The Lync system is a unified communications concept. Its premise is that regardless of where you are, you can be present, aware and available to others in the organization. That accelerates decision-making. We've had terrific buy-in and are hearing that people are saving, on average, 45 minutes to an hour a day by choosing the best method of collaboration."

customer focus

Every business has unique energy requirements and uses electricity in a different way. TransAlta's energy experts view their role as facilitators who partner with customers, understand their businesses and help them gain the most value from their energy investments.

One of TransAlta's key strategies for growth is to become the number one generator in Alberta, which is Canada's strongest provincial economy and the fastest growing electricity and energy market in the country. The pathway to that position involves the acquisition of more commercial and industrial customers. TransAlta recently made the transition from a wholesale power marketing business model to become more directly engaged in providing power and related services to commercial and industrial (C&I) customers.

In 2011, we solidified this direction with the purchase of Nexen Inc.'s customer book, which added a significant boost to our C&I business.

Rob Schaefer, executive vice-president, Corporate Development, says, "TransAlta is on a path to develop our C&I business organically and we had targeted adding 400 MW by 2012. The Nexen acquisition gives us a strong base we can leverage from and takes us well beyond our initial C&I growth targets."

TransAlta now provides power to over 1,500 customers across Alberta, including blue-chip companies like WestJet, Sobeys, the University of Calgary and The Home Depot.

Our range of products and services are tailored for businesses or institutions that consume more than 250,000 kWh of electricity and/or 2,500 GJ of natural gas annually. TransAlta's product and service set is recognized for its flexibility, objectivity and focus on customers' best interests. We provide flexible contract terms, hedging programs, efficient load settlement and customized billing, reporting and analysis – all of which help customers get the most from their energy purchases.

TransAlta's generating portfolio includes about 25 per cent renewable energy, including wind, hydro and geothermal assets which have earned Clean Energy Council (CEC) Certified Accreditation. We offer a Green Energy® product category that makes it convenient for customers to purchase Renewable Energy Credits as well as offsets that are part of the Alberta Specified Gas Emitters Regulation. Energy management and asset optimization is another growing part of our product

portfolio, where asset owners and energy managers are able to outsource their risk management, optimization and operational needs, leveraging TransAlta's economies of scale and expertise.

Designing, building and maintaining power plants is one of TransAlta's core competencies and a service we provide to industrial customers requiring customized power facilities. Customers we work with who benefit from TransAlta's core competencies are oil and gas producers, oil sands developers, petrochemical operations, regulated utilities, large industrial businesses and fleet operations.

The C&I team in Customer Development has exceeded our customer and MW growth targets. We're excited for the opportunity to work with new and existing customers across Alberta and to provide them with reliable, competitively-priced energy now and in the future.

Dale Ronsky

Director, Customer Development

Building Customer Relationships

WestJet Airlines Ltd. is a well-known and highly regarded business that TransAlta recently attracted to our customer fold. WestJet's Scott Perron, senior manager, Construction and Facility Operations, Corporate Real Estate, says, "TransAlta is our trusted expert for providing extensive knowledge and fair recommendations on sustainable energy options. We are very pleased with the level of service we receive."



Dale Ronsky, Director, Customer Development

Connecting with Customers

TransAlta stays connected with our customers through regular annual surveys designed to assess customer satisfaction levels as well as gather deeper insight on the quality of their customer experience with us. We also use the survey to test awareness levels regarding corporate initiatives and to gauge interest in specific product and service offerings.

Our most recent customer survey was conducted online in January 2012 by a third-party research firm. The survey was directed to current customers, including those transitioning to our company as part of the Nexen acquisition.

Key findings indicate that TransAlta continues to convey a positive image across our customer base. The highest average customer agreement scores were recorded for the following statements:

- TransAlta is a reasonable counterparty/supplier to work with;
- TransAlta is a leader in the power industry; and
- TransAlta fulfills its obligations to my business consistently.

The survey also tested the importance of decision-making criteria customers consider most important when choosing a power supplier. The results indicated the most important decision-making criterion was “timely and accurate billing”, closely followed by “response time” and “access” to account representative.

Ask Us

Q: To address greenhouse gas reductions at a customer level, what is TransAlta’s commitment to providing a value-added product or service for innovative, small-scale renewable generation activities for its C&I customers?

– Brian Jackowich, Sr. Director, Energy Services & New Services, Alberta Municipal Services Corporation

A: TransAlta is committed to helping our current and future customers cost-effectively achieve greenhouse gas (GHG) reductions through a variety of activities. To help bridge the high cost of these GHG reduction activities (such as small-scale renewable generation, or energy efficiency projects) TransAlta is willing to assist our customers to quantify and market their GHG offsets in order to help defray the costs associated with these activities.

While TransAlta continues to convey a generally positive image, 10 of the 11 agreement statements saw a decrease in the level of agreement, suggesting there is room for improvement.

In response to these findings, TransAlta has launched a communication campaign using bill inserts and web alerts to increase the visibility of the market information we produce for customers. Our call centre scripting has also been modified to ensure all customers are asked if their inquiry was resolved to their satisfaction and to use the phone call opportunity to promote a TransAlta product or service.

In addition, we've recently launched a series of Spot Check Surveys that are designed to solicit real-time feedback. The weekly surveys involve direct follow-up with a customer that has recently contacted TransAlta to ensure their inquiry was resolved to their satisfaction and the service they received met or exceeded their expectations. Completing small surveys throughout the year is viewed as a more proactive way to access customer perspectives on an ongoing basis and provides an opportunity for TransAlta to implement process changes or enhancements throughout the year rather than relying solely on annual survey results.

TransAlta continues to share market updates with customers through our monthly e-Newsletter, Alberta Energy Insights. To reach additional customers that operate in markets outside of Alberta, TransAlta has recently launched a second e-Newsletter, Energy Insights for PacNW.

Strengthening our Energy Trading

At TransAlta, we take our corporate reputation very seriously. Recently we have implemented a number of policies and activities to continue to strengthen our energy trading function. They include:

- engaging KMPG to audit our compliance programs and strengthen our internal regime based on their recommendations;
- hiring a new Vice-President of Trading and Optimization with deep experience in trading and compliance issues; and
- initiating the search for a new Head of Compliance officer for our company.

Rob Schaefer, executive vice-president, Corporate Development, explains, "We operate in a complex business with a lot of rules. The regulatory environment is evolving rapidly requiring leading trading organizations to adapt to new rules and increased scrutiny on their businesses. We are taking a number of steps to adapt and strengthen compliance in our trading operation so that we can continue to demonstrate that our core values include playing by the rules. We are moving forward with a highly controlled and disciplined approach."



The trading floor at TransAlta's head office.

about this report

Our Report on Sustainability is an open book with the singular purpose of providing clear and comprehensive coverage about TransAlta's sustainability practices, progress and performance.

As a progressive power generation company, TransAlta is producing more electricity with less impact. Through increased development of new technology and the expansion of all available power sources, we are helping meet the growing demand for clean, reliable and competitively priced electricity.

Putting the commitment, expertise and active involvement of our people and our stakeholders at the core of our day-to-day business and strategy development is having a profound impact on our success and approach to sustainability.

We are making changes to improve our business, maintain our operational excellence, target better forms of generation and mitigate our impacts on society. And, ever conscious of our responsibility to the places where we live and work, we are ensuring a mindset of stewardship guides our every step.

TransAlta is, without question, a better company for the steps we have taken. But being better is as much a journey as it is a destination.

In the preceding pages, we have asked our people to share our achievements, our challenges and the context for our sustainability performance in 2011. The following section examines the facts and numbers behind the sustainable growth TransAlta strives for every day.

About this Report

We provide regular reports on our progress; our 2011 Report on Sustainability is our 16th annual report and was produced in May 2012.

This report follows the intent of the Global Reporting Initiative (GRI) G3 Guidelines. The GRI is an independent, multi-national and multi-stakeholder organization representing business, the environment, labour and human rights issues. By reporting in the spirit of the GRI, we are able to ensure we provide accurate, consistent, credible and transparent reporting that is comparable to other leading sustainable organizations.

Reporting on what matters

The topics and indicators in this report have been selected according to an extensive iterative process that included:

- Interviews with a diverse range of TransAlta employees as well as several people external to the company, selected to represent key stakeholder groups;
- Continual review of emerging issues in sustainability by our Sustainable Development team;
- Identification of material risks to the organization through our comprehensive enterprise risk management process;
- Indicators and issues that are tracked and reported internally;
- Involvement in numerous external policy groups and task forces that identify key challenges for our industry at all of our locations;
- Social and environmental responsibility investor reports and indices; and
- At a minimum, information and data that is deemed significant and that requires reporting by regulators and industry associations.

Inclusion principles

This report covers the calendar year ending December 31, 2011, though in some instances we have also included significant events from early 2012. All dollar amounts are in Canadian funds unless otherwise noted.

We report environmental data for power plants for which TransAlta holds the operating permit, regardless of financial ownership. We report on the health and safety aspects of all TransAlta operated facilities where the employees and contractors are hired by TransAlta.

The following facilities are not reported in this statistical summary because TransAlta does not hold the operating permits, but may be reported in TransAlta's 2011 Annual Report (available at www.transalta.com) with respect to financial performance:

- Genesee 3, Alberta;
- Imperial Valley geothermal assets, California;
- Power Resources Inc., Texas;
- Sheerness plant, Alberta;
- Yuma plant, Arizona;
- Wailuku, Hawaii; and
- Saranac, New York.

The following facilities are not reported in this statistical summary because TransAlta transferred ownership before December 31, 2011:

- Meridian Cogeneration Plant
- Grande Prairie Combined Heat and Power Plant

The following facility's environmental performance is not included in this statistical summary but the health and safety indicators reflect the performance of TransAlta employees and contractors onsite:

- Poplar Creek plant, Alberta (operating permit not held by TransAlta)

Megawatt hours used to calculate environment, health and safety data in this report differ slightly from electricity production reported in our 2011 Annual Report due to the exceptions noted above. Reporting of financial performance in this report is based on the proportion of financial ownership and the scope is consistent with our 2011 Annual Report, regardless of the exclusions cited above.

Reporting entity

We report our activities corporately and by country. We cover direct operational impacts and do not include supply chain impacts such as emissions from product suppliers.

Reporting scope

We discuss achievements that result directly from our actions. We report performance frequently through totals and ratios. We use total emissions to show environmental impacts. We use emissions intensity rates (for example, emissions per megawatt hour) to measure our operations' efficiency in controlling emissions.

Reporting integrity

We collect data on various parameters from our facilities in the areas that we operate. The data presented in this report is gathered from the subject experts at those facilities in a standardized template with set methodologies and uncertainty factors at the end of each year. All data is reviewed by the subject expert and is entered into a corporate database where the data is again reviewed for accuracy and comparability to previous year's data and similar operations data by an independent internal data manager. When anomalies in data are detected, the data manager seeks clarification and explanation for the anomaly and notes are made on the results of the follow-up.

Ernst & Young conducted a limited assurance open engagement* in relation to selected key performance indicators for the year ending December 31, 2011. Details of the scope and conclusions of the assurance engagement can be found in the Independent Assurance Statement found on pages 52 and 53.

In 2007, as required by Alberta Environment's Specified Gas Emitter's Regulation, TransAlta calculated and submitted its baseline GHG emissions intensity rate for our Alberta thermal plants (Sundance, Keephills and Wabamun), Highvale Mine and Fort Saskatchewan plant. Third-party verification of the application was conducted by CH2MHill. In March 2012, an annual compliance report was submitted for each location cited above, with the exception of Wabamun, under this regulation. These reports were verified by Ernst and Young.

* Procedures in a limited assurance engagement will be deliberately more limited in nature, timing or extent than in a reasonable assurance engagement.

independent limited assurance statement

To the Board of Directors and Management of TransAlta Corporation (“TransAlta”)

Our Responsibilities

Our limited assurance engagement has been planned and performed in accordance with the International Standard on Assurance Engagements ISAE 3000 “Assurance Engagements other than Audits or Reviews of Historical Financial Information”.

Subject Matter

We have performed a limited assurance engagement on the following quantitative sustainability performance indicators that are presented on page 52 and 53 of the TransAlta Report on Sustainability (“the Report”) for the year ended December 31, 2011:

- Sulphur dioxide emissions and emission intensity
- Nitrogen oxide emissions and emission intensity
- Particulate matter emissions and emission intensity
- Mercury emissions and emission intensity
- Carbon dioxide emissions
- Methane emissions
- Nitrous oxide emissions
- Total transportation greenhouse gas emissions
- Gross greenhouse gas emissions and emission intensity
- Employee and contractor fatalities
- Injuries to employees and contractors
- Employee and contractor injury frequency rates
- Community investments

Criteria

TransAlta has prepared its specified performance information in accordance with the GRI G3 Guidelines, industry standards and where relevant, internally developed criteria.

TransAlta Management Responsibilities

The Report was prepared by the management of TransAlta, who is responsible for the collection and presentation of the performance indicators, statements, claims in the Report and the criteria used in determining that the information is appropriate for the purpose of disclosure in the Report. In addition, management is responsible for maintaining adequate records and internal controls that are designed to support the reporting process.

Level of Assurance

Our procedures were designed to obtain a limited level of assurance on which to base our conclusions. The procedures conducted do not provide all the evidence that would be required in a reasonable assurance engagement and accordingly, we do not express a conclusion conveying a reasonable level of assurance. While we obtained an understanding of management’s internal processes when determining the nature and extent of our procedures, our limited assurance engagement was not designed to express a conclusion on internal controls.

Work Performed

In order for us to express a conclusion in relation to the above scope of work, we have sought to answer the following questions for the performance indicators reviewed:

Completeness

- Has TransAlta fairly presented performance information concerning the selected performance indicators with respect to the boundaries and time period defined in the Report?
- Has TransAlta included sustainability performance information from all material entities in its defined boundary for its reporting of the selected performance indicators?
- Has TransAlta accurately collated corporate data relating to the selected performance indicators from operations level data?

Accuracy

- Is the data reported for the selected performance indicators sufficiently accurate and detailed for stakeholders to assess TransAlta's performance?

Our assurance procedures at TransAlta's corporate head office included but were not limited to:

- Interviewing selected personnel at Corporate and selected sites to understand the key sustainability issues related to the selected performance data and processes for the collection and accurate reporting of performance information
- Where relevant, obtaining an understanding of the design and implementation of systems and processes for data aggregation and reporting
- Checking key assumptions against the evidence to support the assumptions
- Checking the accuracy of calculations performed, on a test basis, primarily through inquiry, variance analysis, re-performance of calculations, and analytical procedures
- Checking that data and statements had been correctly transcribed from corporate systems and/or supporting evidence into the Report

Limitations of our Work Performed

Our scope of work did not include expressing conclusions in relation to:

- The materiality, completeness or accuracy of data sets or information relating to areas other than the selected performance data, and any site-specific information
- Information reported outside of TransAlta's 2011 Corporate Responsibility Report
- Management's forward looking statements
- Any comparisons made by TransAlta against historical data
- The appropriateness of definitions for internally developed criteria

Our Conclusion

Based on our procedures for this limited assurance engagement described in this Report, nothing has come to our attention that causes us to believe that the Subject Matter is not, in all material respects, reported in accordance with the relevant criteria.



Ernst & Young LLP

Calgary, Canada

May 30, 2012

corporate-wide statistics

Management systems	2009	2010	2011
Facilities with ISO 14001 and/or OHSAS 18001-based management systems	29	29	29
Generation capacity with ISO 14001 and OHSAS 18001-based management systems (%)	94	94	96
Management system audits ¹	11	13	4
Compliance audits ¹	8	7	11

Environmental performance	2009	2010	2011
---------------------------	------	------	------

Air emissions ²

Sulphur dioxide (tonnes)	46,300	47,500	35,300
Sulphur dioxide emissions intensity (kg/MWh)	1.25	1.16	1.06
Nitrogen oxide (tonnes)	58,100	60,700	41,700
Nitrogen oxide emissions intensity (kg/MWh)	1.57	1.48	1.25
Particulate matter (tonnes)	4,800	5,000	3,600
Particulate matter emissions intensity (kg/MWh)	0.13	0.12	0.11
Mercury (kilograms)	390	420	180
Mercury emissions intensity (mg/MWh)	10.52	10.22	5.39

Greenhouse gas emissions ³

Carbon dioxide (tonnes CO ₂ e)	36,391,700	37,179,900	28,363,600
Methane (tonnes CO ₂ e)	130,800	131,800	126,500
Nitrous oxide (tonnes CO ₂ e)	232,100	225,900	169,100
CFCs (tonnes CO ₂ e)	231	0	36
Sulphur hexafluoride (tonnes CO ₂ e)	10	10	10
Total transportation greenhouse gas emissions (tonnes CO ₂ e)	112,100	108,800	104,800
Gross emissions (tonnes CO ₂ e) ⁴	35,754,841	37,537,610	28,659,246
Gross emissions intensity (kg CO ₂ e/MWh)	964	913	859

Land and materials management

Land used in mining activities (hectares)	18,540	18,740	17,040
Land used by plants, offices and equipment (hectares)	2,890	3,130	3,736
Non-hazardous waste disposed (tonnes) ⁵	1,281,700	1,226,200	726,300
Non-hazardous waste disposed (L)	499,000	82,400	54,600
Non-hazardous waste recycled (tonnes) ⁵	3,700	3,500	25,200
Non-hazardous waste recycled (L)	153,200	898,600	593,600
Hazardous waste disposed (tonnes)	300	100	100
Hazardous waste disposed (L)	1,900	4,300	900
Hazardous waste recycled (tonnes)	10	0	40
Hazardous waste recycled (L)			457,130
By-product use (% sold) ⁶	33	42	43
By-product use (% stored) ⁶	67	58	57
Paper used (tonnes)	52	52	47
Paper recycled (tonnes) ⁷	81	109	103
Land use - disturbed (cumulative hectares)	6,505	6,399	6,706
Land use - reclaimed (cumulative hectares)	4,083	4,393	4,549
Land reclamation (% of former land reclaimed) ⁸	38	40	40

Water ⁹

Total water intake (million m ³)	573	338	213
Water intake - river (million m ³)	202	233	210
Water intake - lake (million m ³)	368	102	1
Water intake - purchased (million m ³)	2	3	2
Water intake - other (million m ³)	1	0	0
Total water discharge (million m ³)	487	281	181
Water consumption (million m ³)	86	57	32
Water consumption intensity (m ³ /MWh) ¹⁰	2.31	1.40	0.95

corporate-wide statistics

Environmental performance (continued)	2009	2010	2011
Regulatory performance			
General air regulatory contraventions	11	4	5
Spills to land regulatory contraventions	2	2	2
Spills to water regulatory contraventions	5	8	12
Other regulatory contraventions ¹¹	2	2	1
Administrative regulatory contraventions	5	4	1
Environmental enforcement actions ¹²	9	8	4
Environmental fines (\$ thousands)	1.1	1.5	2.0
Spills			
Volume of significant spills (m ³) ¹³	240.6	0.1	2.4
Volume of significant spills recovered (m ³)	228.0	0.0	0.0

Production	2009	2010	2011
Coal generation net ownership capacity (MW)	4,511	4,012	3,920
Natural gas generation net ownership capacity (MW)	1,349	1,266	1,211
Hydro generation net ownership capacity (MW)	916	887	913
Wind generation net ownership capacity (MW)	972	1,064	2,234
Total net ownership capacity (MW) ¹⁴	7,748	7,229	8,278
Coal net generation (MWh)	27,683,000	29,572,000	22,922,000
Natural gas net generation (MWh)	7,465,000	7,787,000	5,738,000
Hydro net generation (MWh)	1,353,000	1,622,000	2,069,000
Wind net generation (MWh)	587,000	2,128,000	2,650,000
Total net generation (MWh) ¹⁵	37,088,000	41,109,000	33,379,000
Resource use			
Coal (tonnes)	17,032,000	17,702,000	13,281,000
Natural gas (GJ)	86,060,000	85,169,000	58,829,000
Diesel (GJ)	392,000	285,000	408,000
Total vehicular gasoline consumption (L)	1,342,097	1,395,499	1,398,820
Total vehicular diesel consumption (L)	39,310,895	37,746,524	36,896,698
Building operations energy usage - energy (MWh)	233,670	234,077	208,690
Building operations energy usage - natural gas (GJ)	57,485	59,280	77,864

Economic performance	2009	2010	2011
Revenues (\$ millions)	2,770.0	2,673.0	2,663.0
Operating costs (\$ millions)	550.0	510.0	545.0
Net earnings (\$ millions)	181	255	290
Cash flow from operating activities (\$ millions) ¹⁶	580	838	694
Net earnings per share (\$/share)	0.90	1.16	1.31
Retained earnings (\$ millions)	495.00	431.00	527.00
Income tax expense (\$ millions) ¹⁷	15.0	24.0	106.0
Providers of capital - dividends (on common shares) (\$ millions)	226.0	216.0	216.0
Providers of capital - interest (\$ millions)	149.0	142.0	197.0
Performance stock option shares (share options) ¹⁸	1,500,000	2,200,000	1,700,000
Performance stock option shares (weighted average exercise price) ¹⁸	26.36	24.94	25.1
Employee future benefits (\$ millions) ¹⁹	299	308	299
Employee compensation (\$ millions)	306.3	288.5	272.6
Investment in environment, research and technology (\$ millions) ²⁰	47.5	56.0	48.6

corporate-wide statistics

Social performance	2009	2010	2011
Workplace practices			
Number of employees ²¹	2,336	2,389	2,235
Number of part-time employees ²¹	169	154	124
Number of contingent employees ²¹	110	101	81
EH&S full-time equivalent employees ²²	54	65	56
Employees represented by independent trade union organizations (%)	1,040	1,069	935
Employee turnover rate (%) ²³	16	17	10
Number of employees leaving employment, male to female ratio ²³	3.06	3.22	3.02
Employee, age less than 30, turnover rate (%) ²³	23	30	19
Employee, aged 30 to 50, turnover rate (%) ²³	43	41	62
Employee, age greater than 50, turnover rate (%) ²³	34	29	19
Diversity			
Women in workforce (%)	21	21	23
Women in senior management (%)	19	20	28
Full-time employee positions in workforce (%)	88	89	91
Part-time employee positions in workforce (%)	7	6	6
Contingent employee positions in workforce (%)	5	5	3
Workforce under age 30	340	332	281
Workforce between ages 30 and 50	1,275	1,285	1,146
Workforce over age 50	721	769	768
Training and development			
Health and safety training per employee (hours/employee)	—	—	—
Environmental training per employee (hours/employee)	—	—	—
Environment, health and safety training per employee (hours/employee)	13.8	8.8	8.4
% of non-unionized employees receiving performance reviews	100	100	100
Health and safety ²⁴			
Health and safety enforcement actions ²⁵	0	0	0
Health and safety fines (\$ thousands)	0	0	0
Employee fatalities	0	0	0
Injuries to employees	29	22	17
Employee injuries requiring absence from work	10	3	6
Employee recordable injury frequency rate (injuries/200,000 hours) ²⁶	1.28	0.91	0.81
Employee disabling injury frequency rate (injuries/200,000 hours) ²⁷	0.44	0.12	0.28
Contractor fatalities	0	0	0
Injuries to contractors	27	25	9
Contractor injuries requiring absence from work	3	5	1
Contractor recordable injury frequency rate (injuries/200,000 hours) ²⁶	1.59	1.64	1.11
Contractor disabling injury frequency rate (injuries/200,000 hours) ²⁷	0.18	0.33	0.12
Short-term disability rate (days/1,000 employees) ²⁸	1,106	2,210	1,758
Long-term disability rate (cases/1,000 employees) ²⁹	20.55	16.35	8.66
Reportable vehicle incidents	25	23	33
Community relations			
Community investments (\$ millions) ³⁰	3.9	4.7	5.0
Community investments per employee (\$/employee)	1,660	1,980	2,260
Company-initiated volunteer hours per employee (hours/employee) ³¹	5.3	6.8	7.3

Country totals may not sum to Corporate totals due to rounding.
Please see "Discussion and Notes" section for explanation.

systemic indicators

Environmental performance	Regional	National/International
CO₂	19.7% of Alberta's emissions 3.6% of Ontario's emissions	4.3% of Canada's emissions 0.2% of U.S.'s emissions 0.2% of Australia's emissions
SO₂	12.4% of Alberta's emissions <0.1% of Ontario's emissions 0.8% of Washington's emissions	3.3% of Canada's emissions <0.1% of U.S.'s emissions <0.1% of Australia's emissions
NO_x	5.3% of Alberta's emissions 0.5% of Ontario's emissions 5.3% of Washington's emissions	2.3% of Canada's emissions 0.1% of U.S.'s emissions 0.2% of Australia's emissions
Particulate matter	0.1% of Alberta's emissions <0.1% of Ontario's emissions 0.8% of Washington's emissions	0.6% of Canada's emissions
Mercury	24.9% of Alberta's emissions 27.1% of Washington's emissions	3.8% of Canada's emissions
Economic performance	Regional	National/International
Electricity production	34.9% of Alberta's production 2.5% of Ontario's production 4.4% of Washington's production	4.6% of Canada's production 0.1% of U.S.'s production 0.6% of Australia's production
Electricity workers	8.3% of Alberta's electricity workers 0.4% of Ontario's electricity workers	1.4% of Canada's utility workers 0.1% of U.S.'s utility workers <0.1% of Australia's utility workers
Social performance	Regional	National/International
Ratio of TransAlta lowest wage to legal minimum wage	Alberta: 1.81 Ontario: 1.37 Washington: 2.27	U.S.: 2.83 Australia: 0.97

The regional and national mercury indicator represent total on-site mercury releases.

Sources: Environment Canada, United States Environmental Protection Agency, North American Electric Reliability Council, Alberta Energy and Utility Board, Statistics Canada, Canadian Electricity Association, United States Bureau of Labor Statistics, Ontario Ministry of Labour, Australian Council of Trade Unions, Energy Supply Association of Australia Limited, Alberta Human Resources and Employment, Washington State Department of Labor and Industries

Canada statistics

Management systems	2009	2010	2011
Facilities with ISO 14001 and/or OHSAS 18001-based management systems	21	21	21
Generation capacity with ISO 14001 and OHSAS 18001-based management systems (%)	93	93	96
Management system audits ¹	9	10	2
Compliance audits ¹	7	5	9
Environmental performance	2009	2010	2011
Air emissions ²			
Sulphur dioxide (tonnes)	43,000	45,100	34,200
Sulphur dioxide emissions intensity (kg/MWh)	1.53	1.46	1.27
Nitrogen oxide (tonnes)	45,200	46,300	34,400
Nitrogen oxide emissions intensity (kg/MWh)	1.61	1.50	1.28
Particulate matter (tonnes)	3,900	4,200	2,900
Particulate matter emissions intensity (kg/MWh)	0.14	0.14	0.11
Mercury (kilograms)	230	270	80
Mercury emissions intensity (mg/MWh)	8.21	8.77	2.98
Greenhouse gas emissions ³			
Carbon dioxide (tonnes CO ₂ e)	25,857,500	26,553,800	21,988,900
Methane (tonnes CO ₂ e)	125,300	128,000	124,000
Nitrous oxide (tonnes CO ₂ e)	182,200	182,900	143,200
CFCs (tonnes CO ₂ e)	231	0	36
Sulphur hexafluoride (tonnes CO ₂ e)	0	0	0
Gross emissions (tonnes CO ₂ e) ⁴	26,165,200	26,864,700	22,256,100
Gross emissions intensity (kg CO ₂ e/MWh)	934	872	828
Land and materials management			
Land used in mining activities (hectares)	13,210	13,420	11,260
Land used by plants, offices and equipment (hectares)	2,749	2,989	3,595
Non-hazardous waste disposed (tonnes) ⁵	1,169,200	1,056,600	614,700
Non-hazardous waste disposed (L)	499,000	82,400	54,600
Non-hazardous waste recycled (tonnes) ⁵	3,600	1,800	23,200
Non-hazardous waste recycled (L)	153,200	898,600	593,600
Hazardous waste disposed (tonnes)	280	37	32
Hazardous waste disposed (L)	1,927	4,303	931
Hazardous waste recycled (tonnes)	10	0	40
Hazardous waste recycled (L)			457,130
Paper used (tonnes)	45	45	37
Paper recycled (tonnes) ⁷	77	104	96
Water ⁹			
Total water intake (million m ³)	548	315	200
Total water discharge (million m ³)	485	278	179
Water consumption (million m ³)	63	36	20
Water consumption intensity (m ³ /MWh) ¹⁰	2.24	1.18	0.76
Regulatory performance			
General air regulatory contraventions	9	2	3
Spills to land regulatory contraventions	2	2	2
Spills to water regulatory contraventions	3	8	10
Other regulatory contraventions ¹¹	1	1	1
Administrative regulatory contraventions	4	2	1
Environmental enforcement actions ¹²	0	3	0
Environmental fines (\$ thousands)	0	0	0

Canada statistics

Production	2009	2010	2011
Coal generation net ownership capacity (MW)	3,171	2,672	2,580
Natural gas generation net ownership capacity (MW)	801	718	663
Hydro generation net ownership capacity (MW)	887	887	913
Wind generation net ownership capacity (MW)	972	1,064	2,234
Total net ownership capacity (MW) ¹⁴	5,860	5,341	6,390
Coal net generation (MWh)	20,232,000	20,977,000	17,773,000
Natural gas net generation (MWh)	5,851,000	6,067,000	4,380,000
Hydro net generation (MWh)	1,353,000	1,622,000	2,069,000
Wind net generation (MWh)	587,000	2,128,000	2,650,000
Total net generation (MWh) ¹⁵	28,023,000	30,794,000	26,872,000
Resource use			
Coal (tonnes)	12,518,000	12,502,000	10,174,000
Natural gas (GJ)	67,840,000	67,017,000	43,826,000
Diesel (GJ)	—	200	0
Economic performance			
Employee compensation (\$ millions)	264	251	234
Investment in environment, research and technology (\$ millions) ²⁰	20.5	32.2	28.8
Social performance			
Workplace practices			
Number of employees ²¹	1,990	2,030	1,841
Number of part-time employees ²¹	167	152	122
Number of contingent employees ²¹	104	98	81
EH&S full-time equivalent employees ²²	46	54	46
Employee turnover rate (%) ²³	13	16	11
Number of employees leaving employment, male to female ratio ²³	2.26	2.52	2.79
Employee, age less than 30, turnover rate (%) ²³	32	37	21
Employee, aged 30 to 50, turnover rate (%) ²³	48	46	63
Employee, age greater than 50, turnover rate (%) ²³	20	17	16
Diversity			
Workforce under age 30	319	314	266
Workforce between ages 30 and 50	1,119	1,116	982
Workforce over age 50	552	600	593
Training and development			
Health and safety training per employee (hours/employee)	—	—	—
Environmental training per employee (hours/employee)	—	—	—
Environment, health and safety training per employee (hours/employee)	12.9	7.5	6.8

Canada statistics

Social performance (continued)	2009	2010	2011
Health and safety ²⁴			
Health and safety enforcement actions ²⁵	0	0	0
Health and safety fines (\$ thousands)	0	0	0
Employee fatalities	0	0	0
Injuries to employees	25	20	10
Employee injuries requiring absence from work	8	3	3
Employee recordable injury frequency rate (injuries/200,000 hours) ²⁶	1.32	0.98	0.57
Employee disabling injury frequency rate (injuries/200,000 hours) ²⁷	0.42	0.15	0.17
Contractor fatalities	0	0	0
Injuries to contractors	23	23	7
Contractor injuries requiring absence from work	1	5	0
Contractor recordable injury frequency rate (injuries/200,000 hours) ²⁶	1.58	1.70	1.14
Contractor disabling injury frequency rate (injuries/200,000 hours) ²⁷	0.07	0.37	0.00
Short-term disability rate (days/1,000 employees) ²⁸	1,065	2,321	1,768
Long-term disability rate (cases/1,000 employees) ²⁹	20.10	15.76	7.60
Reportable vehicle incidents	19	19	25
Community relations			
Community investments (\$ millions) ³⁰	3.5	3.6	4.6
Community investments per employee (\$/employee)	1,780	1,770	2,480
Company-initiated volunteer hours per employee (hours/employee) ³¹	5.71	7.46	8.13

Country totals may not sum to Corporate totals due to rounding.
Please see "Discussion and Notes" section for explanation.

United States statistics

Management systems	2009	2010	2011
Facilities with ISO 14001 and/or OHSAS 18001-based management systems	3	3	3
Generation capacity with ISO 14001 and OHSAS 18001-based management systems (%)	100	100	100
Management system audits ¹	2	3	2
Compliance audits ¹	1	2	2
Environmental performance	2009	2010	2011
Air emissions ²			
Sulphur dioxide (tonnes)	3,200	2,400	1,000
Sulphur dioxide emissions intensity (kg/MWh)	0.42	0.27	0.19
Nitrogen oxide (tonnes)	9,100	10,800	3,900
Nitrogen oxide emissions intensity (kg/MWh)	1.20	1.22	0.76
Particulate matter (tonnes)	800	800	700
Particulate matter emissions intensity (kg/MWh)	0.11	0.09	0.14
Mercury (kilograms)	160	150	110
Mercury emissions intensity (mg/MWh)	21.09	16.96	21.36
Greenhouse gas emissions ³			
Carbon dioxide (tonnes CO ₂ e)	8,689,200	9,791,800	5,586,000
Methane (tonnes CO ₂ e)	3,800	2,200	1,000
Nitrous oxide (tonnes CO ₂ e)	49,400	42,400	25,300
CFCs (tonnes CO ₂ e)	0	0	0
Sulphur hexafluoride (tonnes CO ₂ e)	0	0	0
Gross emissions (tonnes CO ₂ e) ⁴	8,742,400	9,836,400	5,612,300
Gross emissions intensity (kg CO ₂ e/MWh)	1,153	1,112	1,090
Land and materials management			
Land used in mining activities (hectares)	5,330	5,330	5,790
Land used by plants, offices and equipment (hectares)	129	129	129
Non-hazardous waste disposed (tonnes) ⁵	112,400	169,100	111,200
Non-hazardous waste recycled (tonnes) ⁵	20	1,700	2,000
Hazardous waste disposed (tonnes)	60	50	70
Hazardous waste recycled (tonnes)	—	—	—
Hazardous waste recycled (L)	—	—	—
Paper used (tonnes)	2	1	5
Paper recycled (tonnes) ⁷	1	1	3
Water ⁹			
Total water intake (million m ³)	24	22	13
Total water discharge (million m ³)	2	2	2
Water consumption (million m ³)	23	20	11
Water consumption intensity (m ³ /MWh) ¹⁰	2.99	2.24	2.14
Regulatory performance			
General air regulatory contraventions	2	2	2
Spills to land regulatory contraventions	0	0	0
Spills to water regulatory contraventions	2	0	2
Other regulatory contraventions ¹¹	1	1	0
Administrative regulatory contraventions	1	2	0
Environmental enforcement actions ¹²	9	5	4
Environmental fines (\$ thousands)	1.1	1.5	1.5

United States statistics

Production	2009	2010	2011
Coal generation net ownership capacity (MW)	1,340	1,340	1,340
Natural gas generation net ownership capacity (MW)	248	248	248
Hydro generation net ownership capacity (MW)	—	—	—
Wind generation net ownership capacity (MW)	—	—	—
Total net ownership capacity (MW) ¹⁴	1,588	1,588	1,588
Coal net generation (MWh)	7,451,000	8,595,000	5,149,000
Natural gas net generation (MWh)	134,000	250,000	0
Hydro net generation (MWh)	—	—	—
Wind net generation (MWh)	—	—	—
Total net generation (MWh) ¹⁵	7,585,000	8,845,000	5,149,000
Resource use			
Coal (tonnes)	4,513,000	5,200,000	3,107,000
Natural gas (GJ)	2,050,000	2,070,000	0
Diesel (GJ)	147,000	114,000	113,000
Economic performance			
Economic performance	2009	2010	2011
Employee compensation (\$ millions)	36	32	32
Investment in environment, research and technology (\$ millions) ²⁰	22.2	18.4	14.4
Social performance			
Social performance	2009	2010	2011
Workplace practices			
Number of employees ²¹	294	306	303
Number of part-time employees ²¹	0	0	0
Number of contingent employees ²¹	6	3	5
EH&S full-time equivalent employees ²²	7	10	10
Employee turnover rate (%) ²³	29	24	6
Number of employees leaving employment, male to female ratio ²³	12.22	15.17	18.00
Employee, age less than 30, turnover rate (%) ²³	3	4	0
Employee, aged 30 to 50, turnover rate (%) ²³	25	16	8
Employee, age greater than 50, turnover rate (%) ²³	72	79	11
Diversity			
Workforce under age 30	13	11	7
Workforce between ages 30 and 50	124	139	135
Workforce over age 50	157	156	161
Training and development			
Health and safety training per employee (hours/employee)	—	—	—
Environmental training per employee (hours/employee)	—	—	—
Environment, health and safety training per employee (hours/employee)	21.6	17.5	18.3

United States statistics

Social performance (continued)	2009	2010	2011
Health and safety ²⁴			
Health and safety enforcement actions ²⁵	0	0	0
Health and safety fines (\$ thousands)	0	0	0
Employee fatalities	0	0	0
Injuries to employees	3	2	6
Employee injuries requiring absence from work	2	0	2
Employee recordable injury frequency rate (injuries/200,000 hours) ²⁶	0.92	0.60	1.89
Employee disabling injury frequency rate (injuries/200,000 hours) ²⁷	0.61	0.00	0.63
Contractor fatalities	0	0	0
Injuries to contractors	4	2	1
Contractor injuries requiring absence from work	2	0	0
Contractor recordable injury frequency rate (injuries/200,000 hours) ²⁶	1.69	1.19	0.53
Contractor disabling injury frequency rate (injuries/200,000 hours) ²⁷	0.85	0.00	0.00
Short-term disability rate (days/1,000 employees) ²⁸	1,582	1,833	1,993
Long-term disability rate (cases/1,000 employees) ²⁹	27.21	22.88	16.50
Reportable vehicle incidents	1	2	3
Community relations			
Community investments (\$ millions) ³⁰	0.3	1.1	0.4
Community investments per employee (\$/employee)	980	3,451	1,228
Company-initiated volunteer hours per employee (hours/employee) ³¹	3.2	3.1	3.3

Country totals may not sum to Corporate totals due to rounding.
Please see "Discussion and Notes" section for explanation.

Australia statistics

Management systems	2009	2010	2011
Facilities with ISO 14001 and/or OHSAS 18001-based management systems	5	5	5
Generation capacity with ISO 14001 and OHSAS 18001-based management systems (%)	100	100	100
Management system audits ¹	0	0	0
Compliance audits ¹	0	0	0

Environmental performance	2009	2010	2011
Air emissions ²			
Sulphur dioxide (tonnes)	7	7	7
Sulphur dioxide emissions intensity (kg/MWh)	0.00	0.00	0.00
Nitrogen oxide (tonnes)	3,800	3,700	3,400
Nitrogen oxide emissions intensity (kg/MWh)	2.57	2.52	2.50
Particulate matter (tonnes)	30	30	30
Particulate matter emissions intensity (kg/MWh)	0.02	0.02	0.02
Mercury (kilograms)	—	—	—
Mercury emissions intensity (mg/MWh)	—	—	—

Greenhouse gas emissions ³			
Carbon dioxide (tonnes CO ₂ e)	845,100	835,300	788,700
Methane (tonnes CO ₂ e)	1,600	1,600	1,500
Nitrous oxide (tonnes CO ₂ e)	500	500	500
CFC-11 (tonnes CO ₂ e)	0	0	0
Sulphur hexafluoride (tonnes CO ₂ e)	10	10	10
Gross emissions (tonnes CO ₂ e)	847,200	837,400	790,700
Gross emissions intensity (kg CO ₂ e/MWh)	572	570	582

Land and materials management

Land used in mining activities (hectares)	—	—	—
Land used by plants, offices and equipment (hectares)	12	12	12
Non-hazardous waste disposed (tonnes) ⁵	40	460	460
Non-hazardous waste recycled (tonnes) ⁵	1	1	0
Hazardous waste disposed (tonnes)	1	1	1
Hazardous waste recycled (tonnes)	—	—	—
Hazardous waste recycled (L)	—	—	—
Paper used (tonnes)	6	6	6
Paper recycled (tonnes) ⁷	3	5	5

Water ⁹

Total water intake (million m ³)	0.32	1.18	0.29
Total water discharge (million m ³)	0.03	0.03	0.03
Water consumption (million m ³)	0.29	1.15	0.26
Water consumption intensity (m ³ /MWh) ¹⁰	0.19	0.78	0.19

Regulatory performance

General air regulatory contraventions	0	0	0
Spills to land regulatory contraventions	0	0	0
Spills to water regulatory contraventions	0	0	0
Other regulatory contraventions ¹¹	0	0	0
Administrative regulatory contraventions	0	0	0
Environmental enforcement actions ¹²	0	0	0
Environmental fines (\$ thousands)	0	0	0

Australia statistics

Production	2009	2010	2011
Coal generation net ownership capacity (MW)	—	—	—
Natural gas generation net ownership capacity (MW)	300	300	300
Hydro generation net ownership capacity (MW)	—	—	—
Wind generation net ownership capacity (MW)	—	—	—
Total net ownership capacity (MW) ¹⁴	300	300	300
Coal net generation (MWh)	—	—	—
Natural gas net generation (MWh)	1,481,000	1,469,000	1,358,000
Hydro net generation (MWh)	—	—	—
Wind net generation (MWh)	—	—	—
Total net generation (MWh) ¹⁵	1,481,000	1,469,000	1,358,000
Resource use			
Coal (tonnes)	—	—	—
Natural gas (GJ)	16,170,000	16,081,000	15,003,000
Diesel (GJ)	245,000	170,000	294,000
Economic performance			
Economic performance	2009	2010	2011
Employee compensation (\$ millions)	5.9	5.6	6.4
Investment in environment, research and technology (\$ millions) ²⁰	0.50	0.37	0.11
Social performance			
Social performance	2009	2010	2011
Workplace practices			
Number of employees ²¹	52	50	51
Number of part-time employees ²¹	2	3	2
Number of contingent employees ²¹	0	0	0
EH&S full-time equivalent employees ²²	1	1	0
Employee turnover rate (%) ²³	15	23	16
Number of employees leaving employment, male to female ratio ²³	1.25	4.00	2.33
Employee, age less than 30, turnover rate (%) ²³	0	27	0
Employee, aged 30 to 50, turnover rate (%) ²³	89	66	90
Employee, age greater than 50, turnover rate (%) ²³	11	7	10
Diversity			
Workforce under age 30	8	7	8
Workforce between ages 30 and 50	32	30	29
Workforce over age 50	12	13	14
Training and development			
Health and safety training per employee (hours/employee)	—	—	—
Environmental training per employee (hours/employee)	—	—	—
Environment, health and safety training per employee (hours/employee)	4.0	5.0	7.2

Australia statistics

Social performance (continued)	2009	2010	2011
Health and safety ²⁴			
Health and safety enforcement actions ²⁵	0	0	0
Health and safety fines (\$ thousands)	0	0	0
Employee fatalities	0	0	0
Injuries to employees	1	0	1
Employee injuries requiring absence from work	0	0	1
Employee recordable injury frequency rate (injuries/200,000 hours) ²⁶	1.94	0.00	2.10
Employee disabling injury frequency rate (injuries/200,000 hours) ²⁷	0.00	0.00	2.10
Contractor fatalities	0	0	0
Injuries to contractors	0	0	1
Contractor injuries requiring absence from work	0	0	1
Contractor recordable injury frequency rate (injuries/200,000 hours) ²⁶	0.00	0.00	14.75
Contractor disabling injury frequency rate (injuries/200,000 hours) ²⁷	0.00	0.00	0.00
Short-term disability rate (days/1,000 employees) ²⁸	0	0	0
Long-term disability rate (cases/1,000 employees) ²⁹	0	0	0
Reportable vehicle incidents	5	2	5
Community relations			
Community investments (\$ millions) ³⁰	0.038	0.037	0.023
Community investments per employee (\$/employee)	731	740	451
Company-initiated volunteer hours per employee (hours/employee) ³¹	1.92	4.20	2.22

Country totals may not sum to Corporate totals due to rounding.
Please see "Discussion and Notes" section for explanation.

discussion and notes on numbers

TransAlta continually strives to improve the accuracy, precision and extent of our sustainability performance reporting to stakeholders.

We have reviewed our processes and controls relating to the measurement, calculation, consolidation and reporting of some of our key sustainability data. As a result, we have revised historical data to reflect these improvements. If you would like additional information on the nature of the changes for specific indicators, please contact us at sustainability@transalta.com.

Several footnotes appear throughout the statistical summaries and are intended to provide clarity on specific boundary conditions, changes in methodology and definitions.

1. Represents the number of facilities that were audited during the year. In past reports, we reported the number of audits conducted in the year. We audit facilities simultaneously if we have several facilities in a region with one integrated Environment, Health and Safety (EH&S) management system. The figures do not include audits that were conducted that were outside of the scope of this statistical summary.

2. Nitrogen oxide (NO_x) emissions are expressed in tonnes of nitrogen dioxide.

The methodology used to calculate the 2009 and 2010 mercury emissions from the Sundance and Keephills coal-fired plants uses the capture performance monitoring results of the mercury control program. This methodology produces more accurate emissions than the method used historically. Mercury emissions in 2011 for Sundance, Keephills, and K3 are determined using a Mercury Analyzer Continuous Emission Monitoring System (CEMS). Numbers are as reported to government agencies.

The Australia air emissions (NO_x, SO₂ and PM) reported within this report will differ from those reported under the National Environment Protection Measures legislation, due to specific reporting requirements.

3. In keeping with the reporting format recommended by the Greenhouse Gas (GHG) Protocol, TransAlta reports the impact of each GHG separately. GHG's have been converted into tonnes of carbon dioxide equivalent (CO₂e), using global warming potential factors developed by the Intergovernmental Panel on Climate Change.

We have revised historical corporate emission intensities and emission totals to reflect better emission factors and improved calculation methodologies at some facilities. These updates are the reason for discrepancies between the data in this report and previous reports.

The Australia greenhouse gas emissions reported within this report will differ from those reported under the National Greenhouse and Energy Reporting Act, due to specific reporting requirements.

4. With the implementation of mandatory GHG reporting in Canada and an anticipated Canadian climate change regulatory regime, as of 2003 TransAlta has not reported offsets, credits, net GHG emissions or net GHG emission intensities. The concept of net emissions (direct emissions reduced by offsets and credits) has been subjective, and, while satisfactory in a voluntary reporting world, can be confusing in one that is regulatory. Therefore, TransAlta will report our GHG gross emissions consistent with the requirements of federal and provincial reporting policies. We will continue to undertake emission reduction actions through international and domestic offset purchases and internal projects that have GHG benefits. In a compliance regime, these will ultimately take the form of compliance instruments or credits used to meet reduction obligations and are, therefore, treated as proprietary information.
5. Non-hazardous waste includes, but is not limited to, the disposal of water treatment chemicals, coal refuse, paper, rubber, cardboard and building materials. In previous reports, the quantities of by-products disposed were not included in this total. However quantities of fly ash, bottom ash and gypsum that cannot be sold for other uses are classified as non-hazardous wastes and are included in these revised totals.
6. Byproducts include ash, gravel, gypsum and cenospheres.
7. Due to the tracking process at our head office in Calgary, Alberta, the quantity of paper recycled by TransAlta cannot be determined separately from other building tenants. This results in a quantity of recycled paper that is greater than that used.
8. Land reclaimed includes the percentage of mined land reclaimed at the Whitewood and Highvale coal mines at Wabamun, Alberta, and our surface mine in Centralia, Washington.
9. Total water consumed by TransAlta's operations as measured by total water removed from the environment and total water returned to the environment.

Water is used primarily for cooling by the thermal power plants and evaporative losses from the cooling ponds and cooling towers account for over 95 per cent of the consumptive use. The water lost to evaporation is not returned directly to the water body but the water remains in the hydrologic cycle. The amount of water used for domestic and boiler water usage amounts to less than five per cent of the total consumption.
10. Due to the methodology used to calculate water intake and discharge, the consumption intensity tends to be overstated as these figures do not account for precipitation gains or evaporation and transpiration losses from our cooling ponds. These values are estimates only.
11. Other environmental incidents are incidents that may impact the environment, but are out of the scope of air, land and water contraventions that require reporting to an external regulatory agency. Examples could include equipment failures and permit non-compliance.

12. Contraventions reported to an external regulatory agency and resulting in a fine, penalty or corrective action.
13. The substances released to the environment include, but are not limited to, glycol, diesel, oils, and other chemicals.
14. The 8,257 MW value and net ownership capacity graph reported on page 7 of this Report represent current net ownership capacity of all TransAlta facilities, including plants that we do not operate, but in which we have financial ownership. The values reported in the "Performance Indicators" represent the current net ownership capacity of only those facilities in which TransAlta holds the operating approval.
15. Megawatt hours (MWh) used to calculate intensity values in the "Performance Indicators" section of his report differ slightly from electricity production reported in our 2011 Annual Report due to the exceptions noted in the "Inclusion Principles" section of "About This Report".
16. Cash flow from operating activities only and does not include cash flow from investing or financing activities.
17. During 2010, TransAlta recognized a \$30 million income tax recovery related to the resolution of certain outstanding tax matters, which was received in 2010. Interest expense also decreased by \$14 million as a result of tax-related interest recoveries.
18. One of three stock-based compensation programs offered to TransAlta employees. The company grants stock options to employees based on the market price of the shares as determined on the date of the grant. Historic stock option share values have been updated per restatements in the 2011 Annual Report.
19. Includes TransAlta's registered pension plan with defined benefits and defined contribution options and a supplemental defined benefits plan. All employees have a future benefits plan, although the defined benefit of the pension plan ceased for new employees on June 30, 1998.
20. Includes all expenditures for environmental protection, such as environmental monitoring, pollution abatement, waste management and administrative costs. The increases of expenditures can be attributed to growth in site reclamation and focus on environmental protection and restoration of wildlife habitat.
21. Represents all TransAlta employees on December 31, 2011. For the purposes of this report, a contingent employee is defined as a retired consultant, a temporary employee or a term employee.
22. Accounts for all TransAlta employees who have full time Environment, Health and Safety roles. Each non-full time employee (part time or contingent) is the calculated equivalent of 0.70 full-time employees.
23. Turnover rate includes dismissals and voluntary leave for all full-time, part-time and contingent workers.

The number of employees leaving employment, reported as a male to female ratio, represents to the number of males who left the company, divided by the number of females who left the company.

Turnover by age represents specific age ranges of employees who left the company as compared to total number of employees leaving employment during the reporting period.
24. Corporate and Canadian health and safety data includes performance data from the Poplar Creek Power Station, as all employees at this site are TransAlta employees and contractors hired by TransAlta.
25. Health and safety incidents resulting in a regulatory enforcement action. Enforcement actions could take the form of a warning letter, fine or non-financial reprimand or restriction on operations.
26. The injury frequency rate (IFR) measures work-related medical aid and lost-time injuries per 200,000 hours worked. IFR is calculated using a combination of actual and estimated exposure hours. During the course of the year, all work-related safety incidents are investigated. These investigations may provide new information which would result in an incident being reclassified.
27. The disabling injury frequency rate is calculated based on the number of injuries requiring absence from work (lost-time incidents) only.
28. Reflects the number of days lost due to absenteeism from work, up to six months in duration. Absence may be due to work related incidents or injuries incurred outside of work.
29. Reflects the number of employees absent from work for more than six months. Absence may be due to work-related incidents or injuries incurred outside of work.
30. Community investments include all community donations and community sponsorships and are aggregated based on budget allocation, not location of recipient.
31. Volunteer activities organized by TransAlta such as volunteering during work hours as part of United Way campaigns. This does not include volunteer activities that employees and retirees engage in outside of their employment at TransAlta.

For More Information

TransAlta's 2011 Report on Sustainability is also available at www.transalta.com/sustainability

How Are We Doing?

Send us your thoughts on our performance and reporting at:

email: sustainability@transalta.com

fax: 403.267.7372

mail: TransAlta Corporation
Box 1900, Station "M"
110 - 12th Avenue SW
Calgary, Alberta, Canada T2P 2M1

Mohawk Options Paper

Environmental Benefits Statement

The cover and text pages of this report are printed on Mohawk Options paper containing 100% post-consumer waste fibres that is process chlorine free (PCF) and is manufactured with windpower. By using this environmentally friendly paper in a print run of 500 copies, TransAlta saved the following resources:



Trees

43 fully grown



Water

18,433 gallons



Energy

31 million BTUs



Solid waste

2,039 pounds



Emissions

4,016 pounds

Calculated based on data research provided by Environmental Defense Fund.



RECYCLED
Paper made from
recycled material
FSC® C014515

Design & Production: Johnson Dixon Design Group Inc.

Writing: Perspectives MGM Inc.

Original Photography: Roth and Ramberg Photography Inc., TransAlta photo collection

Printing: Rhino Print Solutions

www.transalta.com

TransAlta Corporation

Box 1900, Station "M"

110 - 12th Avenue SW

Calgary, Alberta

Canada T2P 2M1

403.267.7110