



CEA MEMBER PERFORMANCE: ECONOMIC

The electricity industry's sustainable development strategy ensures that the industry provides value to the communities in which it operates through reliable and cost-effective supply of electricity, appropriate compensation of its employees, and contribution to communities.

PRINCIPLE

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Principle 8: Economic Value

Provide economic benefits to shareholders, communities and regions in which the industry operates

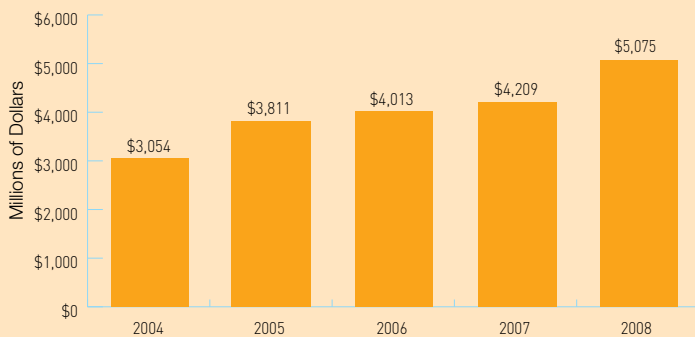
CEA member utilities operate in hundreds of cities, communities, and regions across Canada and are major economic contributors to the Canadian economy. While a reliable supply of electricity is crucial to creating growth and prosperity in local communities, CEA members also contribute to local economies in many other ways, including employee compensation, payments to investors and governments in the form of dividends, donations to local charities, and other community investments.

In 2008, total compensation (salary plus benefits) in CEA member companies accounted for over \$5 billion, an increase of more than 20 percent over 2007 (Figure 12). Appropriate compensation is a key to attracting and retaining skilled employees needed to provide

reliable and safe electricity to communities across the country. Given that most of these employees live and purchase their goods and services locally, there is a direct economic benefit to these communities.

In addition, CEA member utilities donated over \$21 million to registered charities across the country in 2008, a 21 percent increase over 2007 (Figure 13). Many of these donations were to the United Way, to support arts and culture, to safety and injury prevention programs, to youth initiatives, to food banks and to other local community causes.

Figure 12 – Annual Employee Compensation



Note: Total Employee Compensation includes T4s and T4As

Figure 13 – Annual Charitable Donations





TORONTO HYDRO

Low Income Program: Toronto Hydro-Electric System participates in a very successful ongoing program with Social Housing Services Corporation, a provincial agency which represents all publicly owned social and low income housing. In 2008, Toronto Hydro-Electric System provided financial incentives to reduce electricity use in the social housing sector by approximately 2.8 MW through a light bulb replacement program. The program reached over 12,000 tenant units in the City of Toronto, and an energy savings of approximately 6,454 MWh was achieved.



PRINCIPLE

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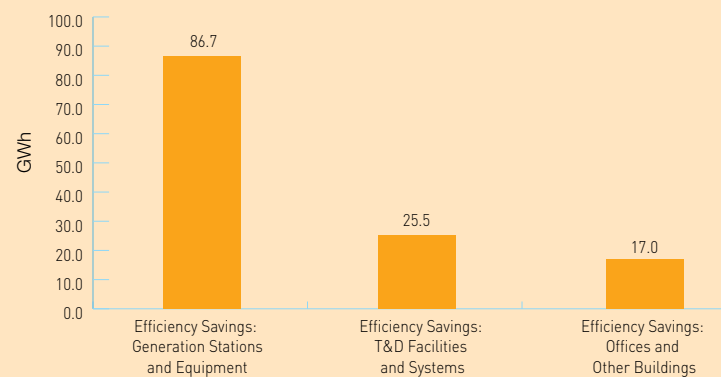
Principle 9: Energy Efficiency

Produce, deliver and use electricity in an efficient manner while promoting conservation and demand side management

For many utilities across the country, energy conservation is an important element of their business operations. Utilities encourage industrial, commercial, and residential customers to effectively manage their electricity consumption and help maximize the efficiency of the Canadian electricity supply. They also focus on improving their own internal energy efficiencies to reduce costs and increase the amount of energy available to customers, while minimizing their environmental impacts.

CEA member companies are continuing to improve their internal energy efficiency performance through system improvements and utilization of new efficient technologies to produce, transmit, and deliver electricity to their customers. In 2008, CEA members achieved an annual internal energy savings of 129 GWh from all internal energy efficiency programs and initiatives, including generation, transmission and distribution systems (Figure 14).

Figure 14 – 2008 Internal Energy Efficiency



Note: Not all CEA member companies reported on this indicator.

The promotion of conservation and Demand Side Management (DSM) programs for customers is also becoming standard practice across Canada. Examples of some of the programs include: Smart Meter initiatives; old refrigerator removal programs; exchanges of old Christmas lights for LEDs; and programs to turn



down air conditioners during periods of peak summer demand. While these public and residential customer initiatives have more visibility, CEA utilities also promote DSM programs and initiatives for their larger commercial, industrial and direct customers. In 2008, CEA members achieved an annual savings of 690 GWh from DSM programs.

BC HYDRO

Power Smart Business Programs: In 2008, BC Hydro introduced its Continuous Optimization Program, designed to optimize energy use in buildings. The program offers incentives, upgrades to select meters, an online connection to an Enterprise Energy Management software service provider, and support to help customers get their buildings' energy systems in good working order.

ENMAX

Rebates for Energy Alternatives: In 2008, ENMAX announced a pilot program designed to introduce ENMAX Energy's Energy Alternatives program to its own employees. A series of rebates for installing ENMAX solar photovoltaic panels, solar domestic hot water systems, or micro-wind turbines are being offered to employees to cover the up-front cost of installing alternative energy solutions. ENMAX plans to extend this program to its customers once the pilot program with its employees proves successful.

FORTISBC

PowerSense Program: In 2008, annual energy savings by customers through FortisBC's PowerSense program totaled more than 27 million kWh. This was accomplished through the implementation of multiple rebate and incentive programs for new energy-efficient technologies and conservation practices. The company recognized 51 businesses, individuals and organizations from across its service area at the 2008 PowerSense Conservation Excellence Awards. The annual awards recognize customers who have shown a commitment to innovation, conservation and sustainability by completing energy efficiency projects that save more than 100 GWh annually.

MANITOBA HYDRO



Power Smart Bioenergy Optimization Program: In 2008, Manitoba Hydro approved a new industrial Power Smart Bioenergy Optimization Program that will encourage customers to use biomass as a renewable source of energy for facilities and businesses. A combined electricity and natural gas program, it provides technical and financial support to customers that install, operate, and maintain systems that convert waste sources of biomass to useful energy. The program is forecast to achieve annual reductions of 9 MW and 77 GWh in electricity, 3.82 million cubic meters in natural gas, and 66,000 tonnes in CO₂ emissions by 2017/18.

NEWFOUNDLAND & LABRADOR HYDRO AND LABRADOR POWER

takeCHARGE Program: Hydro and Newfoundland Power have jointly established the takeCHARGE energy conservation brand to provide a coordinated, single message on electricity efficiency in Newfoundland. The takeCHARGE brand was launched in November 2008 and provides general awareness information on conservation and efficiency as well as links to available programs and rebates for customers. The new brand has been promoted through bill inserts, print and television.

- ◀ Manitoba Hydro introduced the Bioenergy Optimization Program to encourage agricultural and industrial customers to use their readily available, low cost sources of biomass (such as waste wood, crop residues and livestock manure) as a fuel for heat and power.

NOVA SCOTIA POWER

Small Business Lighting Solutions: NS Power initiated the Small Business Lighting Solutions program to reduce customer energy use and costs by installing energy-efficient lighting technologies. This program has seen almost 100 percent uptake in the areas of the province in which it is offered. NS Power contributes 80 percent of the cost of retrofitting, while the other 20 percent is financed by the participating business. The program ran in Dartmouth and Pictou County with participation from 93 business customers including pharmacies, grocery stores and auto dealerships. These projects produced a total savings of approximately 2 GWh per year.

SAINT JOHN ENERGY

Refrigerator Round Up: In 2008, Saint John Energy held several successful energy-saving initiatives to complement the compact fluorescent (CFL) and LED lighting campaigns it undertook in 2006 and 2007. In the spring, a “Refrigerator Round Up” of old, inefficient second fridges was held. Saint John Energy picked up the appliances free of charge and gave customers a \$50 rebate on their bills. A total of 265 customers took advantage of this program for a total cost of \$20,000.

TORONTO HYDRO

Peaksaver® Initiative: The Peaksaver program is one of Toronto Hydro-Electric System’s core peak reduction programs. *Peaksaver®* is a switch that is installed on central air conditioners to cycle them down when electricity demand is high. Toronto Hydro-Electric System had installed 49,967 *Peaksaver®* switches by the end of 2008; if the switches are activated at 35°C, demand in Toronto can be reduced by approximately 58 MW.



PRINCIPLE

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Principle 10: Security of Supply

Provide electricity to customers in a safe, reliable and cost effective manner to meet current and future needs

This principle reflects the basic mandate for all CEA member utilities. Electricity reliability is often taken for granted by consumers, yet it requires a great deal of short-term and long-range planning, constant maintenance and repair, and continual infrastructure investments to ensure that all components of the electricity supply chain are coordinated and that there is a system in place to meet current and future needs.

Historical demand trends and future electricity demand projections indicate the scale of investment that could be required to meet Canada's electricity needs. Over the last decade, overall electricity demand in Canada increased by approximately 12 percent, fueled in large part by a growing population, an expanding economy, and greater use of electrical equipment. Despite improvements realized through energy efficiency and conservation, electricity demand is projected to increase by an annual average growth rate of approximately one percent.

This growth will be met through a combination of generation technologies. CEA member interest in wind power, biomass, geothermal energy, and hydrogen fuel cells continues to grow. Renewable generation is expected to play a significant role in the decades ahead, driven not only by environmental goals, but also by energy security concerns such as electricity supply adequacy (such as in Ontario), and energy supply diversification. Although many of these technologies are becoming cost-competitive, CEA members are facing inherent issues, including limited transmission infrastructure to deliver electricity from remote communities where many renewable energy facilities are located.

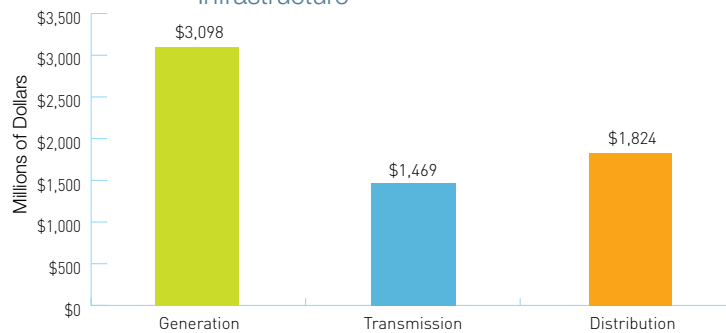
Investments in New and Refurbished Infrastructure

In 2008, CEA members invested \$3.1 billion in generation, along with \$1.5 billion in transmission and \$1.8 billion in distribution equipment, for a total investment of \$6.4 billion



in 2008 (Figure 15). This reflects the ongoing requirement for capital expenditure to maintain and enhance the reliability of the electricity system and the increased cost of meeting electricity supply needs.

Figure 15 – 2008 Investments in New and Refurbished Infrastructure

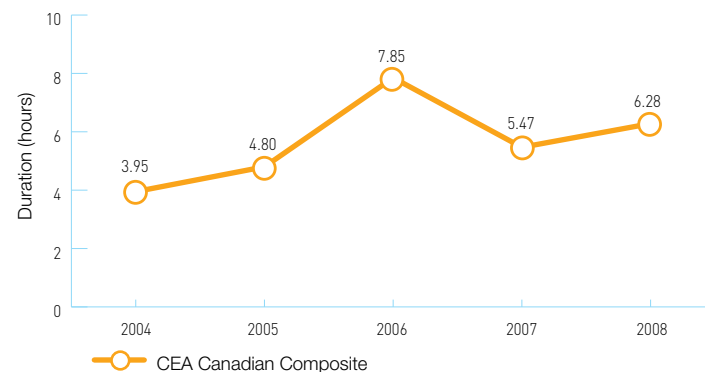


Service Interruptions to Customers

While investment in new electricity infrastructure is crucial for meeting future needs, maintenance of the existing system and avoiding customer service interruptions is also important to CEA members. CEA annually collects reliability data to track distribution system

performance. There are many reasons for customer service interruptions, including scheduled outages for the purpose of construction and preventative maintenance, in addition to damage caused by contact with trees, lightning, and adverse weather events. In 2008, the System Average Interruption Duration Index (SAIDI) for customers served was 6.28 hours per year, an increase of 15 percent over the 2007 level of 5.47 hours. SAIDI increased at an annual rate of 10 percent over the 5 year period ending in 2008 (Figure 16).

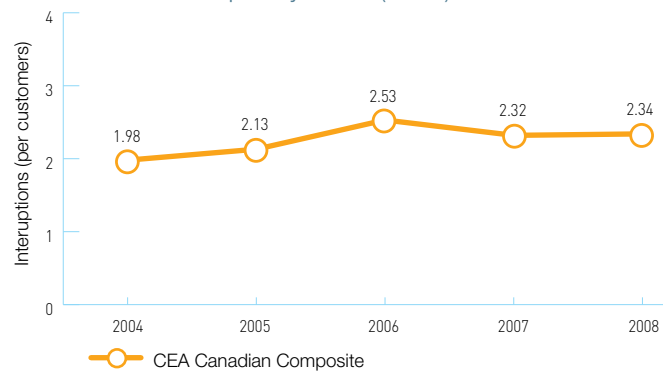
Figure 16 – System Average Interruption Duration Index (SAIDI)



The System Average Interruption Frequency Index (SAIFI), which measures the average number of interruptions per customer, also increased slightly in 2008. The average number of interruptions per customer per year in 2008 was 2.34, an increase of approximately 1 percent over the 2007 level of 2.32. SAIFI increased at an annual rate of 4.2 percent over the 5 year period ending in 2008 (Figure 17).

Overall, the reliability of the Canadian distribution system has been deteriorating over the past five-year period. The CEA Service Continuity Committee has examined this issue of reliability and has determined that utility efforts in addressing problems with defective equipment and trees/vegetation maintenance will have the largest effect on improving distribution system performance in the future.

Figure 17 – System Average Interruption Frequency Index (SAIFI)



▼ The “plugging in ceremony” for the Kent Hills Wind Farm Project.



Did You Know?

Emergency preparedness of companies in 2008

- 74 percent of CEA member companies had a pandemic plan
- 92 percent of companies had a natural disaster plan
- 63 percent of companies had a plan against terrorist attack
- 78 percent of companies had a business continuity plan

NEW BRUNSWICK POWER

Reaches Agreement on Wind Power: NB Power signed a 20-year power purchase agreement to acquire 99 MW of wind energy from SUEZ Energy, an affiliate of SUEZ Renewable Energy NA. SUEZ Energy will develop two facilities in Caribou Mountain, one with sixteen wind turbines and the other with seventeen. The sites will generate approximately 330,500 MWh of electricity per year. This will be enough power to meet the electricity needs of about 19,000 homes.

NOVA SCOTIA POWER

Adds Additional Renewable Capacity: NSPI has signed contracts to add 246 MW of additional renewable capacity for a total of over 300 MW by 2010. These contracts represent approximately \$0.5 billion of capital investment in Nova Scotia.

SASKPOWER

Invests in Waste Heat Recovery Units: During 2008, SaskPower and NRGreen Power completed construction of three waste heat recovery units at Alliance Pipeline's compressor stations at Loreburn, Alameda and Estlin. One unit was previously commissioned at Kerrobert. Together, the four units generate 20 MW — enough power to meet the needs of about 20,000 homes — by using waste heat exhaust in a process that creates no new emissions.

HYDRO ONE

Pilot PowerHouse Program: In an effort to promote alternative energy, Hydro One launched its pilot PowerHouse program in several of its service areas in May 2008. The program offers zero-interest loans or rebates to customers in order to defray the high initial investment required to install renewable energy systems in their homes. Eligible technologies include solar photovoltaic, solar water heating, wind turbines, and geothermal systems.