



BC HYDRO

TRIPLE BOTTOM LINE REPORT 2002

INTRODUCTION

ABOUT THIS REPORT

This is BC Hydro's fourth annual Triple Bottom Line Report. Over the past four years, the company has made great progress in reporting on performance across the three bottom lines. In this year's report, the company expanded the number of reported indicators, and aligned them where possible to the revised Global Reporting Initiative guidelines.

Fiscal 2002, April 1, 2001 to March 31, 2002, has been a year of transition for BC Hydro. The business is undergoing significant change. As well, this is the first year that BC Hydro has provided the Triple Bottom Line Report entirely on-line.

The 2002 TBL Report is sectioned into two categories: the TBL story and performance indicators. You are welcome to download the entire report, or you can choose a section most relevant to your needs.

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INTRODUCTION

ABOUT BC HYDRO

BC Hydro is the third largest electrical utility in Canada and among North America's leading producers of hydroelectricity. It operates 30 hydroelectric facilities and 36 reservoirs in seven major river basins and 17 small river basins with most hydroelectric generating assets within the Peace and Columbia river systems.

BC Hydro's mission is to provide integrated energy solutions to customers in an environmentally and socially responsible manner. At present, the company serves more than 1.6 million residential, commercial and industrial customers in an operating area that contains 94 per cent of British Columbia's population. Power is delivered through an interconnected system comprising more than 72 000 kilometres of transmission and distribution lines. BC Hydro has transmission interconnections to the Alberta energy grid via two 138 kilovolt (kV) lines and one 500 kV line, and to the U.S. by way of two 500 kV lines and two 230 kV lines. It also serves a number of non-integrated communities mainly in northern B.C.

BC Hydro has 6144 employees within an operating structure recently reorganized along three Lines of Business: Generation, Transmission and Distribution. The reorganization is designed to improve performance and drive efficiencies.

There are three subsidiary companies:

- Powerex buys, sells and exchanges electricity in the competitive wholesale market;
- Powertech Labs provides testing, consulting and research services to the electrical and natural gas industries; and
- Westech Information Systems offers information technology and business consulting services to utilities, government agencies and medium-to large-sized companies.

A fourth subsidiary, BC Hydro International Ltd., ceased operations in 2002 following assessment of BC Hydro's internal business environment and outside markets for engineering services.

GOVERNANCE

BC Hydro is a Crown corporation with a single shareholder, the Province of British Columbia. Two provincial statutes are of major importance for the operation of the business:

- the Hydro and Power Authority Act creates BC Hydro and establishes general powers and governance; and
- the Utilities Commission Act creates the British Columbia Utilities Commission and establishes the framework for regulating public utilities, primarily to ensure fair, just and reasonable rates are charged for energy, and that they supply safe, adequate and secure service to their customers.

BC Hydro's Board of Directors is appointed by the Lieutenant Governor in Council. Directors are responsible for overseeing the conduct of business, supervising management and ensuring proper consideration of all major issues affecting the business affairs of the corporation.

The Board delegates responsibility for the day-to-day leadership and management of BC Hydro to the President and Chief Operating Officer.

To act and to be seen to act as an ethical corporation, BC Hydro and subsidiary companies have in place a [Director and Employee Code of Conduct](#) that documents standards expected of Directors, employees, suppliers, consultants, contractors and business associates. Corporate policies include: requirements for governance; conduct and ethics; customer service; employee and workplace; external relations and communications; information resources; financial responsibility; risk management; shared services; environment, and safety.

SUSTAINABILITY: A Driving Force for BC Hydro's Business

BC Hydro's vision for a sustainable future makes good business sense in all aspects of our work and across all three bottom lines. Building from a clean, renewable and reliable hydroelectric energy source, we made good progress towards realizing our sustainability vision last year. Other initiatives that will help sustain the company moving forward include the promotion of energy conservation, our commitment to invest in green and alternative energy, acquisition of new customer-based generation, and our on-going dedication to grow the business into new and innovative markets.

Power Smart aims to be the catalyst that encourages people to save energy through solutions-based activities that support BC Hydro's core business. Total investment in the redefined Power Smart program will be \$600 million through 2010.

We developed clear processes last year for acquiring green energy and will add about 110 gigawatt-hours of green electricity to our system in fiscal 2003.

By seeking agreements to purchase, competitively priced electricity from non-utility generation, BC Hydro aims to acquire up to 800 gigawatt-hours of installed and operating customer-based generation.

Through the BCHydroGEN program, BC Hydro and our wholly owned subsidiary Powertech Labs built a hydrogen fueling station.

However, BC Hydro's successes did not come without significant challenges during fiscal 2002. We are currently awaiting the results of the provincial government's Energy Policy Task Force Review and anticipate that recommendations will form a comprehensive, long term energy policy that could significantly influence how we do business.

In addition, BC Hydro participated in the Provincial Government's Core Services Review. In April 2002, we restructured our operational groups into three Lines of Business: Generation, Transmission and Distribution. Within this new structure, each business area will be responsible for embedding the principles of sustainability into their decision-making processes and business plans.

BC Hydro expects to be affected by decisions being made about climate change. Movement towards ratifying the proposed Kyoto Protocol could have major implications on our business, and we continue to work with the provincial and federal governments on developing greenhouse gas emission policy.

BC Hydro's vision is to be a competitive commercial Crown corporation – one that creates superior value for customers and the shareholder through the exceptional contributions of our people.

Employees play a huge part in our success and it is crucial that we retain and strengthen employee commitment to both BC Hydro and sustainability during this restructure transition period, as jobs are reshaped and work processes redefined.

BC Hydro's efforts toward becoming a leading sustainable energy company in North America were recognized last year in two benchmark studies. Investment advisory firm, Innovest, ranked BC Hydro first in the electricity industry in environmental and social performance. In the first-ever Canadian benchmark study of corporate sustainability reporting, the Ottawa-based environmental consulting firm, Stratos Inc., placed BC Hydro second among 57 companies who produce sustainability reports.

Sustainability continues to be a driving force for BC Hydro. By considering the environmental, social and economic bottom lines in all that we do, BC Hydro will continue to operate a successful business and create a viable future.

We will achieve our vision by building on a solid base of clean, renewable hydropower assets, BC Hydro's skilled and capable workforce, excellent financial and operational performance and strong public support, thereby allowing the company to become one of the leading sustainable energy companies in North America.



Larry Bell
Chair and Chief Executive Officer



Michael Costello
President and Chief Operating Officer

JOURNEY TOWARDS SUSTAINABILITY: Our Priorities

An integral part of being a sustainable energy company is the ability to balance and integrate the three bottom lines into business decision-making. BC Hydro is making good progress towards this goal, even as events over the past year caused the company to revisit how best to integrate sustainability into the core business.

For example, just over a year ago the company inaugurated a Sustainability Action Plan (SAP), a three-year program consisting of 20 initiatives developed to propel the company towards becoming a leading sustainable energy company. Due to BC Hydro's business restructuring process, only 87 per cent of the original first-year SAP milestones were met. However, the SAP initiatives have been retained by each of the business lines for managing as part of normal planning and budgeting processes for fiscal 2003.

Balancing business decision across the three bottom lines sometimes requires tradeoffs in one area over another. Some initiatives however present clear wins across all three bottom lines for customers, stakeholders and the company. For example Power Smart programs offer customers ways to reduce energy use thereby reducing their impact on the environment and putting money back in their pockets. BC Hydro's commitment to green and alternative energy promotes economic growth opportunities within British Columbia by purchasing qualified green energy from independent power producers whose projects are based in B.C. The company is also looking to large industrial customers to acquire additional supply from non-utility sources to meet a portion of BC Hydro's future load growth, lessening the need to build large energy resources. All of these initiatives add value across the three bottom lines.

ENERGY EFFICIENCY AND CONSERVATION: Power Smart

BC Hydro is determined to use every economically feasible means of conserving energy to lessen the need for new power facilities. The company rejuvenated Power Smart this year with a 10-year plan to conserve energy.

Power Smart has a number of strong social and environmental benefits, including supporting customers, building good relationships and reducing and avoiding greenhouse gas emissions. But its biggest advantages are the electricity and financial savings provided for customers and for BC Hydro.

Power Smart's goal is to move customers towards an energy-efficiency mindset. BC Hydro must work hard to encourage customers to consider energy efficiency projects ahead of other capital investment opportunities, especially at a time when low energy rates can mean limited financial savings.

Total investment in Power Smart will be \$600 million through 2010, including \$94.9 million in fiscal 2002. The [program targets](#) an incremental energy use reduction of 3500 GW·h per year by 2010, including 360 GW·h in fiscal year 2002. The goal represents more than \$1.4 billion in energy savings for customers and is equal to the output of a 450 megawatt combined-cycle gas-fired generating plant. It is also equivalent to roughly eight per cent of the generating capacity of BC Hydro's hydroelectric system under low water conditions such as those experienced last year.

Examples of [Power Smart](#) energy saving initiatives include:

- Power Smart Partner Program targeted to BC Hydro's top 1000 business customers. This program provides tools and resources for customers to develop a Power Smart Action Plan and identify potential energy efficiency projects, plus incentives to help reduce payback periods to acceptable levels for customer implementation.

BALANCING THE THREE BOTTOM LINES

- SUCH, also a Power Smart Partner Program, encourages schools, universities, colleges and hospitals to trim electricity use by 10 per cent through hardware projects such as lighting upgrades; it could save up to 120 GW-h by 2005.
- e-Points is a partnership that lets business and industrial customers earn points by capturing electricity savings in excess of three per cent of the previous year's consumption; points are redeemed for money for Power Smart retrofits. The program enrolled almost 450 customers by October 2001 and achieved 38 GW-h in electricity savings, well ahead of the 25 GW-h target for the year.
- Traffic Light Exchange LED (light-emitting diode) program could save up to 41 GW-h by replacing existing incandescent traffic lights in communities throughout B.C.
- Home Energy Learning Program (h.e.l.p) for residential customers offers ways to reduce electricity consumption, save money and help the environment; it exceeded a target of signing up 14 000 customers by the end of the fiscal year.
- Compact Fluorescent Lighting Program encourages residential customers to increase their use of compact fluorescent lighting. BC Hydro will use a combination of education, discount coupons and give-aways to increase the use of these bulbs within B.C. households. The program will achieve over 20 GW-h per year in electricity savings by the end of 2003.

ENERGY FOR THE FUTURE: Green and Alternative Energy

Green Energy

BC Hydro has set a voluntary commitment to meet at least 10 per cent of new demand through 2010 with new [green energy](#) sources. Based on success to date, the company will meet this commitment and plans to continue increasing the green content of the portfolio. In the near term, BC Hydro will purchase green energy from independent power producers (IPPs), and advance near-commercial green energy technologies for future green energy generation.

In April 2000, BC Hydro invited IPPs to propose new B.C.-based projects to supply green energy. In fiscal 2002, the company signed [electricity purchase agreements](#) for 19 projects and is discussing three others. When operational, these 22 projects will have the potential to generate approximately 800 GW-h per year. Signed projects include 16 small hydro developments, two biomass facilities and one landfill gas project.

Three different sources of green energy generation—wind, wave and small/micro-hydro—will comprise a demonstration project on Vancouver Island to evaluate the most viable green energy technologies available today and partner with private sector developers with green power expertise.

A pilot project to sell green electricity certificates to domestic business customers was developed and will be launched in September, 2002. Each certificate will be equivalent to one megawatt-hour of new green electricity generation. Certificates represent the environmental and social benefits of green electricity, separated from the actual electricity itself. BC Hydro will also test the U.S. market for green certificates through Powerex.

Customer Generation

In the spring of 2002, BC Hydro introduced a program to acquire up to 800 gigawatt-hours of installed and operating customer-based generation by 2005. The program will apply to new generation located in British Columbia on or adjacent to the site of an existing BC Hydro customer. Contracts will run for a period of 10 to 20 years for new generation available to BC Hydro by 2005, and compensation will be based on location, greenhouse gas impacts, reliability, seasonal or time of day factors and green generation, as well as other appropriate factors. A Request for Qualifications was issued and resulted in proposals totaling 980 megawatts of contracted capacity representing about 6800 gigawatt-hours of electricity per year.

BALANCING THE THREE BOTTOM LINES

SHARING THE USE OF RESOURCES: Water Use Planning

Water Use Planning is a five-year process aimed at finding a better balance among competing uses of water that are socially, environmentally and economically acceptable to British Columbians. Participants can include government agencies, First Nations, local citizens and other interested parties.

Water Use Plans (WUPs) are developed by committees that range from 15 to 40 participants representing a spectrum of water management interests including hydroelectricity generation, industrial use, recreation, community access, cultural considerations, flood management, wildlife and fish habitat. WUP is an innovative approach to hydroelectric management in North America, and is widely recognized for its scope, structured methodology and degree of partnership.

For each hydroelectric generating plant, the WUP strives for consensus on a set of operating rules that meet the full range of water use interests at stake, while respecting legislative and other boundaries.

The process will provide:

- greater long term security of operations, allowing BC Hydro to optimize generation across the system;
- greater operating flexibility in some cases;
- improved stakeholder relations and socio-economic benefits;
- enhanced environmental management; and
- knowledge of how to reduce conflict over hydro operations.

The process has fostered a number of successes beyond the requirements of the process itself. Best available information indicates WUP has delivered non-power benefits such as improved conditions for fish in rivers and reservoirs, greater recreation opportunities and better flood control. Indications are that BC Hydro may also receive additional power revenues at some facilities.

The process allows BC Hydro to build positive relations with participants and a greater understanding of the range of interests involved. As well, the company can develop planning mechanisms and other tools that will help improve facility management.

COLLABORATIONS WITH FIRST NATIONS: Building Relationships

More than 400 kilometres of transmission lines and thousands of kilometres of distribution lines are located on about 400 reserves belonging to 163 of the 197 First Nations bands in B.C. Further, the construction of many of BC Hydro's hydroelectric generating facilities affected traditional First Nations lands and resources.

Forging relationships with [First Nations](#) represents a significant opportunity for BC Hydro. The company is seeking to establish mutually beneficial relationships with Aboriginal people that will be recognized as models for others to follow. A significant step was taken last year with the establishment of the First Nations Community Development Fund. The fund addresses an historic inequity where BC Hydro paid grants-in-lieu of taxes to municipal governments for power lines crossing their lands, but not to First Nations whose reserve lands are crossed by lines. The program provides annual funds for community development to First Nations who sign agreements with BC Hydro.

In its first four months, the fund signed up 57 bands representing 35 per cent of eligible First Nations. Financial offers were extended to 163 bands whose lands are crossed by BC Hydro transmission and distribution lines. If all Bands participate, BC Hydro's cost will be \$1.6 million a year.

BALANCING THE THREE BOTTOM LINES

Also last year, the company entered into an agreement with the Canadian Columbia River Inter-tribal Fisheries Commission to fund a two-year pilot project to provide a full-time hydro biologist to offer technical assistance and coordination to help Columbia Basin

First Nations protect and enhance fish habitat. The project helps bands participate in Water Use Planning and associated processes, and supports work to restore and protect aboriginal fisheries within the basin.

CASE STUDY: Vancouver Island Supply

Long term social, economic and environmental considerations are at the core of proposals we have brought forward in connection with new electricity-generating facilities on Vancouver Island.

Vancouver Island's need for electricity is growing at a rate of between 25 to 30 megawatts (MW) annually.

The challenge is to meet that growth in demand. Vancouver Island currently imports about 75 per cent of its supply for local homes, businesses and industry. Currently three submarine cable systems deliver this power from mainland B.C. One of the cable systems and a portion of the second system are nearing their life expectancy and may be decommissioned in stages prior to 2007. A refurbishment option for extending the life of the remaining portion of the second cable system and a new 230 kV cable system are being explored. To address this loss of supply capability and to meet the growth in demand, it is crucial to act now to ensure the region's supply of electricity is secure.

In 1996, the provincial government's review of Vancouver Island supply alternatives led to the agreement to purchase the output from the Island Co-Generation project (ICP), a 240 MW gas-fired co-generation power plant completed this year near Elk Falls pulp mill at Campbell River.

A second 240 MW gas-fired co-generation project at Port Alberni pulp mill was also to be part of the Vancouver Island supply. After a bid to rezone land

for the project in Port Alberni was rejected, BC Hydro is now proposing to build a 265 MW natural gas-fired electricity-generating plant in the Duke Point area of Nanaimo. Output from the plant's high-efficiency combined-cycle turbines will partially replace the lost capacity on Vancouver Island with locally generated power and overcome the shortfall in reliable supply to meet the growing need for electricity especially during peak demand periods.

The application is being reviewed by the B.C. Environmental Assessment Office (EAO), whose formal process requires integrated assessment of the project's environmental, social, economic, health, cultural and heritage impacts. Extensive consultation is also underway. If the application to build the plant is approved by EAO, the new facility will be one of the cleanest gas-fired generating plants in North America, with emission levels much lower than those permitted under federal and provincial regulations. We are proposing to start building the facility in spring 2003, and to bring it into service by fall 2004.

As well, BC Hydro, in partnership with Williams Pipeline Company, is proposing to build a second natural gas pipeline across the Strait of Georgia. The existing pipeline lacks sufficient capacity to meet all of the fuel needs of the co-generation plant at Campbell River and the new gas-fired facility at Nanaimo. This second pipeline can also supply additional gas for other on-Island users.

ENVIRONMENTAL BOTTOM LINE

ENVIRONMENTAL RESPONSIBILITY: Respecting Natural Resources

BC Hydro's [environmental policy](#) commits BC Hydro to produce and deliver electricity in an environmentally and socially responsible manner.

The first priority is to avoid impacts. However, BC Hydro knows that operating an energy system can impact the environment and other users of publicly shared resources. The company will work to reduce impacts where they are created, enhance affected habitat and sustain resources over the long term.

WATER PROTECTION

BC Hydro depends on water to generate electricity. Typically, clean, renewable hydropower accounts for over 90 per cent of the electricity produced by BC Hydro. In 2001, water levels in some BC Hydro reservoirs were at the seventh lowest level in the last 40 years, due largely to low winter precipitation and the resulting lessened snow packs. Impacts included barriers to fish migration, difficulty in supplying flows for fish downstream of plants, inadequate reservoir elevations for recreation needs, stranding of docks in some locations and decreasing air quality from erosion where reservoirs were exposed to wind. BC Hydro's annual dust control and seeding efforts were expanded to help minimize impacts along reservoir shorelines.

Fish and Fish Habitat

The [White Sturgeon Recovery Initiative](#) now in its third year is developing a long term sturgeon recovery program that already includes converting a hatchery in the Columbia-Kootenay region to rear juvenile sturgeon for research. Funded through BC Hydro's Strategic Environmental Initiatives Program, the \$1.4 million program reached a significant milestone in May 2002 with the release of 8000 hatchery-reared juvenile sturgeon into the Columbia River.

Other highlights:

- A large river fish indexing project collected data from the Peace and Columbia rivers, as well as for Kinbasket and Revelstoke reservoirs. Information on population, species composition and age class structure will help define index-monitoring methods and population sustainability.
- Work continued to determine status of fish stocks in smaller coastal rivers. Salmonid escapements and smolt migrations were monitored on many watersheds, including counts of juvenile and adult fish migrations. This information helps estimate stock status and will become a standard tool in Water Use Planning.
- Studies are underway to define shoreline and pelagic production in Stave Reservoir, nutrient cycling dynamics in Seton, Carpenter and other reservoirs, and the benefits of riparian planting on aquatic organisms in Upper Arrow Lake.

LAND PROTECTION

BC Hydro has thousands of kilometres of power lines traversing B.C.'s landscape, several hundred facilities located throughout the province, and materials that must be transported each day. The company adheres to standardized procedures for vegetation management in and around facilities and along power line rights-of-way to maintain safe and reliable delivery of power.

Vegetation Management

BC Hydro's priority on safety was underlined last year with new requirements for contractors to submit a safety plan before bidding on company contracts. A minimum standard of electrical awareness was established and the Utility Tree Workers Safety Guide was rewritten to assist with worker training.

ENVIRONMENTAL BOTTOM LINE

Other highlights:

- Consultation protocols were developed for implementing the rights-of-way pest management plan for herbicide use near First Nation communities. A first draft of the plan was completed, including all standards, guidelines and operating procedures for integrated vegetation management.
- BC Hydro partnered with Simon Fraser University on research to control big-leaf maples with a local fungus, rather than cut down the trees or use herbicides. Results from the first two years of the study show several locally-collected fungi strains have potential to control the maples.
- In co-operation with the University of British Columbia, BC Hydro is researching methods to control the spread of Scotch broom with a seed-feeding weevil, a member of the beetle family. Scotch broom is a noxious weed that threatens forested ecosystems, diminishes diversity of plant species, destroys habitat for wildlife and reduces recreational use of rights-of-way.
- BC Hydro cleared trails and planted evergreen seedlings for shelter and food for caribou on a two-kilometre stretch of right-of-way near the junction of the Telkwa and Bulkley rivers in northern British Columbia, to enhance habitat and limit the herd's exposure to the public.

Public Use of Rights-of-Way

Where system security and safety allows, BC Hydro is opening more power line rights-of-way for public use. In 2001, the company provided \$23,000 to help the Suncoaster Trail Society complete a 40-kilometre trail network near South Sakinaw Creek on the Sunshine Coast that includes the first wheelchair-accessible trail in the region.

Other highlights:

- BC Hydro co-funded the Mundy and Eagle Ridge Greenways, a combined 15-kilometre, multi-use pathway in Coquitlam, in partnership with the City of Coquitlam and the Douglas College Institute of Urban Ecology.

- Further improvements were made to the Serpentine Greenway, a multi-use pathway with interpretive signage running through a Surrey neighbourhood. As the greenway expands, it will form a portion of the official branch to the TransCanada Trail.

Waste and Hazardous Materials Management

BC Hydro worked with the Islands Trust and residents of Galiano Island on a wood pole test and treatment program that incorporated local concerns about potential impacts on environmentally sensitive areas, including domestic water wells and wetland areas. A communication protocol was drafted for test and treatment programs on Galiano and information was distributed before a community meeting to invite residents to update maps of known wells.

Other highlights:

- [Polychlorinated biphenyls \(PCBs\)](#) are synthetic chemicals once commonly used in electrical equipment such as capacitors and fireproof transformers. Importing and manufacturing PCBs was banned in Canada in the 1970s, due to health and environmental concerns. BC Hydro began PCB disposal program in 1994 with a PCB inventory of approximately 8800 tonnes. In 2001, the last PCBs in storage were transported to and incinerated at the destruction facility at Swan Hills, Alberta.
- The environmental integrity of diesel generating stations (DGS) remains a high priority due to the potential for groundwater contamination affecting aquatic life and sources of drinking water. In 2001, a remediation program at Anahim Lake DGS was implemented to mitigate the impacts of two large spills that occurred 25 years ago.
- BC Hydro recovered more than 2731 tonnes of materials in 2001-02, led by about 1200 tonnes of scrap metal, 618 tonnes of ceramic insulators and 329 tonnes of paper. Other materials regularly [diverted from landfills](#) include cardboard, wood poles, toner cartridges, fluorescent tubes, dry cell batteries and food organics.

ENVIRONMENTAL BOTTOM LINE

AIR PROTECTION

BC Hydro's natural gas-fired plant, Burrard Generating Station in Port Moody produced 3963 GW-h of electricity in 2001. To reduce impacts on local air quality the station has completed the installation of control equipment reducing NO_x emissions by 90 per cent from pre-1994 levels.

Burrard is one of BC Hydro's most valuable assets. It is also one of the largest stationary emissions sources located in the Lower Fraser Valley (LFV), a region where current and future air quality is a significant issue. We therefore have a corporate responsibility to play a proactive role in supporting the region's air quality management efforts.

We have recently initiated a study to better understand [air quality](#) issues in the LFV as well as current regional, provincial and federal policy initiatives and measures aimed at improving air quality in the region. The study will also look at air quality initiatives in other regions and review the applicability of successful measures to the LFV.

GHG Emissions

Our greenhouse gas (GHG) emissions increased to 6.7 million tonnes in 2001, largely because low water levels at our major reservoirs required us to import more power from non-hydro sources and increase generation at our natural gas-fired Burrard Generating Station by about 28 per cent.

We remain one of North America's [lowest GHG emitters](#) among utilities, but demand for power is growing in B.C. and most growth will be met from cost-effective and proven thermal sources. The resulting increase in [GHG emissions](#) are being limited through:

- Power Smart customer efficiencies, which avoided 2663 GW-h of energy consumption to our base and 1.4 million tonnes of GHG emissions in 2001.
- Internal energy efficiency programs that provided 578 GW-h in energy gains and reduced emissions by 360 000 tonnes in 2001.

- The purchase of cleaner energy from IPPs that reduced emissions by 1.5 million tonnes in 2001.

BC Hydro has committed to offset 50 per cent of the increase in GHG emissions at two new natural gas-fired facilities on Vancouver Island, through 2010.

The commitment will include offsetting up to 300 000 tonnes annually from the Island Co-generation Plant in Campbell River and up to 350 000 tonnes annually from the proposed Vancouver Island Generation project in Nanaimo.

ENVIRONMENTAL MANAGEMENT

EMS and ISO 14001

Environmental Management Systems (EMS) are a comprehensive framework to help systematically manage daily operations in an environmentally responsible manner, based on ISO 14001, the internationally recognized standard for environmental management. The EMS consists of four distinct but integrated management systems: one each for Generation; Transmission and Distribution; Shared Service, and the corporate areas. A significant portion of the Generation EMS and all components of the corporate EMS are in place.

Remaining systems are to be established and in operation by December 2002 to meet the commitment to the Environmental Commitment and Responsibility (ECR) program of the Canadian Electricity Association, of which BC Hydro is a member.

Highlights of work in progress:

- Shared Services EMS is on target to be implemented by the deadline. The system covers activities such as building and office services, property management, vehicle services and purchasing.

ENVIRONMENTAL BOTTOM LINE

- Generation EMS, developed in 1999, continues to mature. Two generating stations, Burrard and Prince Rupert, are registered under ISO 14001. Burrard Generating Station was originally registered in 1998 and re-registered in 2001 to ensure continued compliance, and to demonstrate the commitment to environmental management standards beyond government expectations.
- Transmission & Distribution continues to develop process-based systems for the 22 functions that make up its EMS. Fourteen processes have been developed and work is progressing for the remainder. Dividing Transmission & Distribution into two lines of business requires revision to the EMS. Surrey Oil Operations included under the T&D EMS obtained ISO 14001 registration in September 2001.

Environmental Incidents

Despite best efforts to prevent mistakes, environmental incidents and impacts sometimes do occur. In fiscal 2002, BC Hydro recorded 174 such events.

[Incidents](#) included:

- Equipment failure caused an explosion at Burrard Generating Station in January 2002 that released 72 kilograms of hydrogen. Environmental impact was minimal.
- A leak in one of two synthetic oil-filled strands of the underwater transmission cable delivering power to Vancouver Island released approximately 90 to 100 litres of oil per day until the cable was cut, capped and removed from service.
- Approximately 2727 litres of oil spilled at GM Shrum Generating Station when the main transformer bushing exploded. Clean-up efforts were immediate and spill containment recovered about 205 litres of oil. Most of the oil went into the soil in the transformer yard and along the dam face, as well as into the air as a result of the fire.
- Transmission & Distribution responded to a number of incidents last year involving equipment or materials that caused [spills](#) during loading, transport or unloading. As a consequence, new best management practices are being developed to address the proper handling of oil-filled equipment.

Warnings and Actions

The Water Management Branch of the former Ministry of Environment, Lands and Parks, (now the Ministry of Water, Land and Air Protection), sent a warning letter to BC Hydro for violating the Federal Fisheries Act and Provincial Water Act through unauthorized alterations to the streambed and banks of Stulkawhites Creek. An analysis was initiated and the site was rehabilitated in compliance with the ministry's instructions.

As well, the Department of Fisheries and Oceans sent a warning letter for violating the Fisheries Act through certain flow releases below Puntledge Generating Station on Vancouver Island. The violation resulted in the deaths of approximately 30 spawning salmon. To prevent a recurrence BC Hydro provided staff training on risk management and assessment, modified operating controls at the facility and improved communication.

Other investigations:

- two alleged violations of the Federal Fisheries Act, including one allegation of stranding of fish below Keenleyside Dam in July 2001 and one concerning possible harmful alteration, disruption or destruction of fish habitat through removal of trees from the banks of the Fraser River near the Knight Street Bridge in Vancouver; and
- flow changes at Duncan Dam last October that allegedly led to juvenile fish stranding and mortality.

Audits and Corrective Actions

Each year, BC Hydro commissions external specialists to conduct audits and evaluate the status of the EMS. External verification ensures environmental management is in accordance with the Environmental Responsibility Policy and ISO 14001 provisions. Corrective Action Plans (CAPs) are prepared following each environmental audit to ensure the appropriate remedial steps are taken. Audits are usually closed when CAPs have been completely implemented.

ENVIRONMENTAL BOTTOM LINE

Two environmental audits were conducted in fiscal 2002:

- Transmission & Distribution EMS within Distribution, including links to Field Services; and
- Generation EMS within the Upper Columbia generation area.

CAPs completed in 2001:

- Non-Integrated Area (NIA) generation;
- Field practices for wood pole testing and treating; and
- Maintain substations.

Reorganization of BC Hydro into Lines of Businesses caused some delays in internal audit and CAP, completion due to changing roles and responsibilities. These include:

- Deferral of some action items concerning EMS roles and responsibilities from the Audit of the Generation EMS within the Peace Generation Area. The delayed items are expected to be completed after changing roles are confirmed by the planned date of March 31, 2002.
- Deferral of approximately 85 per cent of the action items from the Contaminated Sites Management Audit due to changing roles and budget responsibilities. The action items are expected to be completed by the overall CAP completion date of December 31, 2002.

MANAGING FOR FUTURE VALUE

Strategic Environmental Initiatives Program (SEIP)

SEIP is a capital project launched in 1999 to enhance the value of BC Hydro's assets, reduce risks, and encourage innovative approaches to environmental management with stakeholders. At the close of the program, 18 of 31 projects were completed.

Remaining projects are being integrated into regular planning and budget processes of the appropriate Lines of Business.

Compensation and Restoration Programs

Three programs are in place to mitigate historic impacts on fish and wildlife habitat resulting from the construction of hydroelectric facilities.

Established by BC Hydro and the former Ministry of Environment, Lands and Parks, the programs involve multi-stakeholder consultation, priority research projects and other compensation efforts.

Columbia Basin Fish and Wildlife Compensation Program

The Columbia Basin Fish and Wildlife Compensation Program (CBFWCP) operates in the Canadian portion of the Columbia Basin. In fiscal 2002, CBFWCP allocated \$3.8 million to deliver 42 fish and wildlife projects with 96 partners.

Peace-Williston Fish and Wildlife Compensation Program

The Peace-Williston Fish and Wildlife Compensation Program (PFWWCP) operates within the watersheds of the Williston and Dinosaur reservoirs in north central B.C. The program directed \$1.1 million to 31 projects in fiscal 2002.

Bridge Coastal Restoration Program

The Bridge Coastal Restoration Program was established in fiscal 2000 and provided over \$1 million in funding in fiscal 2002 to support 29 eligible fish and wildlife projects on Vancouver Island and in southwestern B.C.

SOCIAL BOTTOM LINE

SOCIAL RESPONSIBILITY: Working Together

BC Hydro's long term success depends on how well the company works with people, including employees and the individuals who make up the many communities outside the company. Treating others with respect and adhering to fundamental principles of honesty and fairness creates the positive social environment that will sustain BC Hydro.

WITH EMPLOYEES

Human capital is essential to building the strong and capable organization BC Hydro requires to thrive as a competitive business. The company supports employees in pursuing learning and development opportunities that enhance their future contribution to the workplace, and enable them to realize their career potential. For example, in fiscal 2002 a record 95 per cent of employees had **professional development plans** in place. BC Hydro also endeavours to create a workplace that attracts and retains the talents that will grow BC Hydro into one of North America's leading sustainable energy companies.

Encouraging Effective Leadership

BC Hydro introduced the **Cornerstones of Leadership** program in 2001 to help new managers understand the strategic direction of the company, their role within the organizations and how to influence the culture of their work group. Last year about 107 new managers attended the program. As well, nearly 500 managers attended one of 30 strategic management seminars profiling performance results for operational areas and how efforts align with BC Hydro's strategic business direction.

The company also sponsored eight employees in the Leadership Vancouver Program intended to develop, promote and encourage effective community leadership.

Building a Strong and Capable Organization

BC Hydro works to ensure an **inclusive and respectful**

work environment, where hiring and retaining a **diverse workforce** is key to continued success. The company's ongoing efforts were recognized last year with a Diversity Award for Business from the Surrey-Delta Immigrant Services Society. Activities included developing guidelines to help managers ensure appropriate workplace implementation of **human rights protection**, new recruitment and selection guidelines, and hiring practices training for managers.

The company has an aging workforce with large numbers of employees eligible to retire over the next few years. Retirements will occur at a time when unprecedented shortages of skilled labour are predicted across North America. A **strategic workforce planning** initiative is underway to renew critical workforce capability in the occupational groups most impacted by retirements. Approximately \$11 million was invested by the end of fiscal 2002 to hire 156 apprentices and trainees in trades, engineering, technical and management positions. Additional funding was committed to continue this initiative in 2003.

Labour Relations

BC Hydro reached agreement on renewal Collective Agreements with the two **unionized workforces** in 2002. Both the International Brotherhood of Electrical Workers (IBEW) and the Office and Professional Employees' Union (OPEIU) ratified three-year agreements that contain no general wage increases, but provide for specified market adjustments under certain conditions. The company also modified the gainsharing plan to provide financial incentives for all unionized employees for realizing specific corporate performance targets.

As well, a new tool to help guide the **transition to a Lines-of-Business** model was created. The tool, a set of principles and guidelines for populating the new organizations, is designed to ensure fair treatment of employees and provide effective and timely communications about the transition.

SOCIAL BOTTOM LINE

Employee Safety and Training

Following a safety management evaluation in 2000 and a leveling off of the frequency of [workplace accidents](#), BC Hydro identified safety leadership and personal accountability as key areas for improvement. Safety leadership training was provided to over 500 managers last year. The program educates participants about ways to change safety behaviour among staff.

BC Hydro also issued a [statement of strategic intent](#) for safety leadership that committed management to accept that all accidents are preventable, and to accept responsibility for providing a safe workplace. As well, an incident at one of the generating stations and changes in Workers' Compensation Board requirements resulted in an improved equipment lock-out system at all generating facilities.

Health and Wellness

BC Hydro employees are offered a range of [health and wellness](#) programs to ensure good psychological, emotional and physical health. Programs include:

- Employee and Family Assistance provides confidential, professional counseling services to employees and their family members who need assistance with personal or work-related issues.
- Respectful Workplace offers employees services that include consulting, coaching, counselling, conflict resolution and education, and a formal harassment investigation process. The program responded to 44 employee concerns last year.
- Care Management works with employees and their physicians to ensure employees with medical problems are receiving a high standard of care.
- Return to Work helps employees who are recovering from an illness or injury to develop a return to work plan for a less stressful transition.
- Lifestyle supports and encourages employees to adopt positive behaviour for a healthy and well-balanced life. The program is the number one case

study of corporate Canada's leading comprehensive workplace health promotion programs. Participation was 35 per cent of employees in fiscal 2002. Also, 4193 participants attended 255 health workshops and 649 individual wellness-counselling sessions.

IN COMMUNITIES

BC Hydro operates and maintains facilities across the province, supplies power to roughly 94 per cent of the population and contributes to the well-being of British Columbians everywhere by offering access to recreational and educational opportunities. The company also employs a network of Community Relations staff throughout B.C. who interact with stakeholders on a daily basis.

Public Safety

Ongoing [public safety programs](#) are in place at all generating facilities and dams, as well as for associated transmission and distribution facilities and equipment to minimize risk of injury to employees, contractors and the [public](#).

BC Hydro's dam safety program, in place since 1982, includes the use of sophisticated technologies and techniques to assess the capabilities of dams to withstand earthquakes and floods, and to find the most effective safety enhancement when needed. Last year we completed designs for upgrades to Seven Mile dam on the Pend d'Oreille river in southeastern B.C. and allocated funds to implement the safety enhancements over the next few years.

Other highlights:

- safety improvements at eight facilities included installing surveillance equipment at Coquitlam, dam remediation and instrumentation upgrades at Elsie and debris boom replacement at Keenleyside;
- security improvements were implemented at various facilities immediately following September 11; and

SOCIAL BOTTOM LINE

- an emergency response exercise with representatives from local municipalities, regional districts, the RCMP and the provincial government was conducted in the Peace area to train staff and prepare external emergency responders.

Public Education and Training

BC Hydro is acknowledged as an industry leader in providing electrical [safety programming and education](#) about energy use and public safety around facilities and power lines.

Highlights include:

- in partnership with the Pembina Institute for Appropriate Development and the Ministry of Water, Air, and Land Protection, and Wild BC, BC Hydro delivered teacher workshops and Climate Change Action and Awareness education kits to 106 secondary schools in B.C.;
- 240 science kits were delivered to B.C. educators linking hydrogen technology to secondary schools and post secondary institutions;
- the “Living Safety with Electricity” video was distributed to 560 B.C. secondary schools; and
- nearly 500 safety-related presentations were delivered to an estimated 36 000 program participants, including elementary school students, construction workers and emergency response personnel.

Recreational Opportunities

BC Hydro maintains picnic sites, campgrounds, swimming areas and opportunities for mountain biking, boating, fishing and hiking. Sites received 1.35 million [visitors](#) last year. Activities included the opening of the new Stave Falls Visitor Center in the original 1912 powerhouse that was decommissioned during the generating site’s recent redevelopment. The facility features a gallery, science centre with theatre and interactive displays and an alternative energy forum.

Corporate and Regional Donations

A total of \$1.15 million was [donated to non-profit organizations](#) that promote the vitality and well being of B.C. communities. Recipients included over 500 arts and culture, Aboriginal, education and environmental organizations.

Highlights include:

- \$10,000 to the Outdoor Recreation Council of B.C.’s annual provincial B.C. Rivers Day event;
- \$10,000 to the Artist for Kids program held by the Paradise Valley Summer School; and
- \$8,000 to B.E.S.T.’s (Better Environmentally Sound Transportation) annual Bike to Work Month program.

Scholarships

Over \$144,000 was provided to students who excelled in academics and who are leaders in their school and communities. We supported the L’ecole Polytechnique Memorial Fund for female engineers, Bill Reid First Nations scholarships for Emily Carr Institute of Art and Design students and Jack Webster Foundation scholarship program for journalism. As well, scholarships were provided to students pursuing careers in engineering and the electrical and mechanic trades.

Other scholarships:

- 25 winners of the new Power Smart Scholarship, created to increase Power Smart awareness among the next generation;
- four recipients of the inaugural BC Hydro Seventh Generation Scholarships, awarded to First Nations students who are enrolled in high school or a public post-secondary institution and who are or have been members of the Seventh Generation Club; and
- five winners of the Sustainability Scholarship program for students enrolled in an environmental or resource management program at a public post-secondary institution in British Columbia.

SOCIAL BOTTOM LINE

Sponsorships

BC Hydro committed over \$1.4 million to sponsorships and events that support both the Power Smart message and BC Hydro's community involvement. Sponsorships include the B.C. Place Home Show, Orca Bay, and the Celebration of Lights fireworks festival.

Sponsorship also included Globe 2002, one of North America's largest international conference and trade fair on business and the environment that drew more than 10 000 business and environment leaders. Staff participated in the information sessions, held in Vancouver, B.C. in March 2002, and staffed a booth to promote BC Hydro's Power Smart and Green Energy initiatives.

Youth Employment

The Power Smart Youth Team (PSYT) program enables BC Hydro to build public awareness of energy conservation at the community level while providing [youth](#) with valuable work experience. Nine PSYT groups were created from the 90 youth hired, and they made 68 900 direct customer contacts at 600 events, including home shows, community festivals and corporate events such as the Air Canada Championship, the HSBC Power Smart Celebration of Light and the Vancouver International Children's Festival.

BC Hydro also provided co-op positions for 150 students, and career and personal planning work experience opportunities for 100 high school students.

Employee Involvement

Active and retired BC Hydro employees contribute time and dollars to activities that strengthen the collective social fabric. The BC Hydro Employees Community Services Fund (HYDRECS) raised \$1,033,518 and made a special contribution of \$160,000 to the Multiple Sclerosis Society of Canada. HYDRECS, the largest employee fund in B.C., collected contributions from 41 per cent of employees last year.

Other highlights:

- BC Hydro Employees' Multicultural Society (HEMS) marked its 11th anniversary with initiatives that included a multicultural food fair to raise funds for a student competition, sponsorship of Asian Heritage Month activities and a celebration of Asian Heritage Month.
- Power Pioneers, the association of retired BC Hydro employees, won the B.C. Solicitor-General's 'Provincial Community Crime Prevention and Safety Award' for outstanding contributions to crime prevention and community service. The award was bestowed for the organization's Wise Owl program, which educates seniors about fraud prevention.

THROUGH RELATIONSHIPS

Building relationships is a key part of BC Hydro's commitment to social responsibility. The company encourages dialogue to build knowledge of the concerns and attitudes others have about BC Hydro activities, in order to ensure the company operates in the broadest possible public interest.

Community Involvement

BC Hydro has a network of Community Relations staff throughout the province who interact on a daily basis with stakeholders, from customers and special interest groups to mayors, municipal councils, and local residents. Staff provides information to communities regarding Hydro's operations and to facilitate dialogue and consultation on a wide range of issues. Some of the key areas for community consultation last year were the proposed Georgia Strait Crossing gas pipeline, the proposed Vancouver Island Generating Project, Water Use Planning for various facilities and the unusually low water levels in BC Hydro reservoirs.

Establishing Alliances

BC Hydro signed a memorandum of understanding with the Pembina Institute for Appropriate Development in 2001, committing both organizations

SOCIAL BOTTOM LINE

to continue to work together on leading-edge sustainability projects. The first formal partnership between BC Hydro and a non-governmental organization, the understanding produced last year's Climate Change Education Kit.

Maintaining good relationships with provincial and federal agencies is essential for BC Hydro. Last year's staff continued to work closely with the federal Departments of Fisheries and Oceans and the provincial Ministry of Water, Land and Air Protection.

Commitment to Corporate Social Responsibility (CSR)

BC Hydro commissioned an external company to conduct a 'Social Responsibility Gap Analysis' in 2001. Results found BC Hydro performs well in relation to standards and benchmarks for formal governance processes, marketplace ethics, employee programs and benefits and safety. Gaps included the absence of a social responsibility policy, [human rights screens for purchasing and social criteria](#) in supply chain risk assessments. It was also noted that meaningful consultation is sometimes lacking on issues of importance to stakeholders.

Initiatives taken to improve corporate social responsibility included planning to create a CSR policy and helping Canadian Business for Social Responsibility develop 'The Good Company Guidelines' to serve as a tool to help companies assess, improve and report on their social, environmental and financial performance.

CASE STUDY: December Storm Response

BC Hydro has a well-earned reputation for [reliability](#), ensuring power is available to customers over 99 per cent of the time. The company also has a reputation for making supreme efforts to restore power if service is interrupted; a reputation that was enhanced last December when south-western British Columbia suffered one of the most severe windstorms in living memory.

The storm struck on December 14, 2001, causing widespread power outages and major inconvenience for many customers. Approximately 150 000 customers were without power at the storm's peak, and several thousand more customers on Vancouver Island were affected the next day when intense salt spray tripped out the 500 kV transmission circuits to the region. Some communities were buffeted by multiple storms and repeatedly lost and regained power as conditions ranged from bad to good and back again. Between Friday and Tuesday mornings, staff fielded five times the number of calls expected on a typical day, for a total of more than 72 300 calls, including approximately 50 000 on the first day of the storm.

The cost of repairing damage caused by the storms was \$2.1 million. BC Hydro deployed all available crews in the Lower Mainland to cope with the conditions, including construction and contractor crews. Some crews were also brought into the Lower Mainland from the Southern Interior and Vancouver Island regions, although the support was limited by local efforts to combat outages in those areas.

The effort of BC Hydro crews was noted in letters of thanks to the editors of local newspapers, and by a CBC radio announcer who was startled to see people working in such adverse conditions.

ECONOMIC BOTTOM LINE

ECONOMIC RESPONSIBILITY: Delivering Results

Sound financial management helps BC Hydro realize the profits that make the business sustainable. The company aspires to operate efficiently, to provide maximum value to customers and diversify the business to ensure continued financial strength.

FINANCIAL PRODUCTIVITY AND OPERATING PERFORMANCE

BC Hydro has a responsibility to create economic value for the people of British Columbia. Most of the profits the company generates are returned to the Provincial Government to fund various programs. BC Hydro had revenues of \$6,311 million for the twelve months ended March 31, 2002. We paid \$333 million, or 85 per cent of BC Hydro's net income, to the Government of British Columbia as a dividend.

Focus on Operational Change

As this fiscal year ended, BC Hydro continued to reposition ourselves in the electricity marketplace to successfully [deliver value](#) under a variety of economic, market and restructuring scenarios. A number of key business and financial initiatives are underway to position BC Hydro as a competitive, sustainable, effective and efficient electric utility in whatever form and role is determined by government deliberation and policy.

Consistent with industry trends and best practices, BC Hydro management made a decision during the fiscal year to move to a Lines of Business structure within the company as the best way to become more competitive, focus resources on distinct customer groups and more effectively meet those customers' needs. By the end of March, the Generation, Transmission and Distribution Lines of Business had been created along with two service groups, Field Services and Engineering Services. Together with the Corporate Operations, Shared Support Services and subsidiaries, the company began operating under the new structure effective April 1, 2002.

Participation in the Province of B.C.'s Core Services Review process initiated a comprehensive and rigorous examination of BC Hydro to ensure operations are run as effectively and efficiently as possible and consistent with core services and competencies. As well, the company issued a Request for Expressions of Interest (RFEI) in joint venture partnership arrangements or other options for delivering a number of services to BC Hydro and enabling us to focus on core competencies. Included in the call were: Customer Services, Fleet and Vehicle Services, and Westech, BC Hydro's information technology subsidiary. Bids for Customer Services and Westech were narrowed to one proponent, Accenture, and the scope was expanded to include additional BC Hydro services, Network Computing Services, Human Resource Services, Financial Systems, Purchasing, Disbursement Services, Property Services, and Building and Office Services. Negotiations towards a business agreement are underway. The RFEI process involving Fleet Services continues to move forward as well with the project team evaluating proposals from two proponents.

Delivering on Targets

Last year, Value Based Management (VBM) provided the framework for integrating sustainability and other key business objectives into the core of BC Hydro's business, and focused the entire organization on achieving business results.

For this fiscal year, VBM was simplified for planning purposes and implementation will be completed in the following year.

MAXIMIZING EFFICIENCIES

BC Hydro is a large and complex organization, as befits the full and comprehensive role the company plays in delivering energy solutions to customers. [Operating business efficiently](#) ensures maximum value to the shareholder and to the people of British Columbia.

ECONOMIC BOTTOM LINE

Generation Assets

Much of the attention to efficiencies in fiscal 2002 centered on existing generation assets. For example BC Hydro's internal efficiency program, [Resource Smart](#) initiated in 1987, delivered 578 gigawatt-hours of electricity last year. Twenty additional internal efficiency projects are underway or planned. When implemented these projects will improve the efficiency of the generating facilities by 1100 GW·h by 2007 and reduce greenhouse gas emissions by an estimated 570 000 tonnes a year.

Other highlights:

- BC Hydro is evaluating each generating facility based on its current value and potential value over the next decade, and preparing detailed maintenance and replacement plans for aging Generation assets.
- Flexible maintenance planning continues to take advantage of price fluctuations in the marketplace. Planned maintenance outages can be moved or compressed when market prices are high. Financial benefits are generally five to six times the cost of delaying maintenance by a week or two.

Transmission and Distribution Assets

Many of the circuit breakers, transformers, underground cables and other physical assets in the Transmission and Distribution Lines of Business are approaching the end of their projected life expectancy. Significant maintenance work and equipment replacements are planned for the next decade. This work will ensure continued efficiency and reliability of the electrical grid.

Other highlights:

- Work continued on the cable replacement project from Hill Avenue to Newell Substation in the Lower Mainland. This \$30 million undertaking is being completed in several stages and included extensive fish and wildlife enhancement work in areas near the project.

- Our 60 kV transmission line from Squamish to Horseshoe Bay is being refurbished by removing 'danger trees' within the corridor, replacing many poles and crossarms, and replacing the conductors.

Customer Efficiencies

In early 2002, BC Hydro closed five Power Smart Centres and 10 walk-in offices throughout the province. The Power Smart Centres were opened more than two years ago as a pilot project. Low customer traffic, less than one per cent of BC Hydro customers visiting these locations, made it uneconomical to continue operating the facilities. Forty-four unionized employees were affected by the closures, and BC Hydro is working with these employees to identify new opportunities within the company.

Other highlights:

- Additional steps were taken last year to help serve customers more efficiently. Improvements included streamlining options to pay bills, encouraging customers to adopt low-cost payment options and leveraging technologies to [better manage call volumes](#).
- Implementation of a new [meter reading system](#) was completed in March 2002, and the new system improves efficiency and helps provide timely and accurate meter readings.
- A project was initiated in the fall of 2001 to build and install a new customer information system. The new system is required to replace our aging legacy system and avoid costly enhancements necessary to extend its life. The new system will also provide increased customer efficiencies. Work on the project continues.

ECONOMIC BOTTOM LINE

BUSINESS DIVERSIFICATION

BC Hydro continually seeks and considers opportunities to diversify interests into fields that will consolidate and expand the business, providing additional revenues to sustain the company well into the future.

Economic Growth and Development

In fiscal 2002, BC Hydro earned a five-year contract to continue to provide meter-reading services to BC Gas customers in the Lower Mainland and Fraser Valley. The contract provides an estimated \$3.3 million in annual revenue. The new meter reading system installed last year was instrumental in securing the contract renewal.

Other highlights:

- Funding to create economic benefits for businesses owned by Aboriginals was doubled last year. BC Hydro granted \$300,000 to 33 businesses under the [Aboriginal Business Partnership Program](#) in fiscal 2002. The program allocated \$225,000 in its first two years of operation. Recipients include eco-tourism operators, guitar manufacturers and roofing companies.
- An agreement was signed to supply steam from Burrard Generating Station to the adjacent Imperial Oil loco Terminal Facility. The agreement reduces operating costs for Imperial and reduces total local emissions.

Electricity Trade

To further facilitate electricity trade, Regional Transmission Organizations are being created in U.S. markets to enhance open access to wholesale transmission. BC Hydro is participating in discussions with other utilities regarding the structure and operation of electricity transmission in the Pacific Northwest. Participation helps ensure continued access to U.S. energy markets.

Innovation and New Technologies

BC Hydro continued to pursue [hydrogen as a business growth opportunity](#) and as a means of investing in energy sustainability. Through the BCHydroGEN program, established in 2001, BC Hydro and subsidiary company, Powertech Labs, built a hydrogen fueling station in Surrey. Powertech is engaging internationally-recognized firms from the petroleum, automotive and hydrogen industries to join in further developing the station, making this project one of the world leaders in developing hydrogen fueling infrastructure.

BC Hydro also converted three natural gas vehicles to operate on a mixture of 51 per cent hydrogen and 49 per cent compressed natural gas. Air emissions from these vehicles are well below the California Air Resources Board standard for super ultra low emissions vehicles. The ultra-low-emission vehicles will be introduced to the BC Hydro vehicle fleet, helping to reduce emissions while providing load for the hydrogen fueling station. The vehicles will also be used for customer demonstrations and public education about hydrogen-powered vehicles.

TRIPLE BOTTOM LINE PERFORMANCE INDICATORS

PERFORMANCE RESULTS

BC Hydro is building a successful [track record](#) in managing business across the three bottom lines and ensuring performance results align with the company's corporate objectives:

- **Financial Performance:** targeting first quartile costs when compared with similar utilities;
- **Quality of Service:** focusing on custom satisfaction and reliability;
- **Environment:** continuing to manage priority environmental and social issues; and
- **Employees:** providing employees with the means to be successful, ensuring safety and incentives to achieve corporate and personal development goals.

Areas where BC Hydro has performed well over the past year include:

- implementation and customer satisfaction levels for Power Smart programs are increasing;
- number of green gigawatt hours are estimated to exceed the 10 per cent target;
- SF₆ gas leakage rate continues to decline;
- Return to work cost savings increased by about 88 per cent;
- the Statement of Strategic Intent for Safety Leadership drives toward zero injuries;
- expenditures for the Aboriginal Business Partnership program has doubled each year since 1999;
- public accidents involving BC Hydro facilities and infrastructure continue a steady decline from 1998;
- percentage of employees with active professional development plans exceeded targets; and
- electricity rates continue to be well below regional market in all categories.

ALIGNMENT WITH GLOBAL REPORTING INITIATIVE

Since introducing Triple Bottom Line reporting at BC Hydro in 1999, the company has attempted to align performance indicators where possible to the internationally recognized sustainability reporting guidelines developed through the Global Reporting Initiative (GRI).

ALIGNMENT WITH ANNUAL REPORT

To avoid duplication of information in BC Hydro's two corporate performance reports, more complete information on BC Hydro's financial position is available in the [2002 Annual Report](#). Triple Bottom Line provides an overview of our economic growth and development performance as well as environmental and social performance.

TRIPLE BOTTOM LINE PERFORMANCE INDICATORS

ENVIRONMENTAL PERFORMANCE INDICATORS

Materials	.25
Energy	.25
Biodiversity	.27
Emissions, Effluents and Waste	.27
Suppliers	.32
Compliance	.33
Overall	.33

SOCIAL PERFORMANCE INDICATORS

LABOUR PRACTICES	.34
Employment	.34
Employee Health and Safety	.36
Training and Education	.39
Diversity and Opportunity	.40
HUMAN RIGHTS	.41
Strategy and Management	.41
Non-Discrimination	.41
Freedom of Association and Collective Bargaining	.41
Disciplinary Practices	.42
Indigenous Rights	.42
General	.43
SOCIETY	.43
Public Health and Safety	.43
Public Education	.44
Corporate Citizenship	.45

ECONOMIC PERFORMANCE INDICATORS

Shareholder Value Added	.46
Customers	.46
Suppliers	.48
Employees	.49
Funders	.50
Public Sector	.50
Indirect Economic Impacts	.50

ENVIRONMENTAL PERFORMANCE INDICATORS

MATERIALS

Insulating Oil Reused				
Percentage	Calendar Year	2001	2000	1999
BC Hydro		43.4	81.5	72.5
Canadian utilities		77.6	77.2	69.6

This indicator provides a measure of the extent to which BC Hydro and other utilities reduce consumption and purchases of new insulating oil by reusing existing inventories of insulating oil that may have otherwise been disposed of as waste or recycled for another purpose. It does not include the volume of oil reclaimed from mobile processors. BC Hydro decontaminates PCB contaminated oil generated by its own facilities and by others at its Surrey Oil Operations site. In 2001, the process used an imported elemental sodium dispersion that varied in quality and availability and thus drastically limited the amount of PCB oil that could be processed and, thus, reused this year. The remaining shortfall had to be made up with new oil rather than by oil reclaimed by the process. To assure supply and quality control in future years, BC Hydro has constructed its own elemental sodium dispersion production facility at Surrey Oil Operations, which will expand its capabilities to also treat PCB solids. This indicator corresponds with GRI nos. EN13 and 6.17.

Radioactive Substances Inventory	2003-05 Projection	2002	2001	2000	1999	1998
Maximum activity (mega becquerel)	1555	2813	13 813	14 109	14 109	14 109

BC Hydro uses small, sealed radioactive sources contained inside various measurement instruments. All sources are maintained in compliance to permits issued by the Canadian Nuclear Safety Commission. They consist of isotopes of Sr-90, Ni-63, Cs-137, Am/Be-241, and Cm-244. Actual activity may be less due to radioactive decay. Our inventory continues to decline as equipment is decommissioned and non-radioactive substitutes are found. This indicator corresponds with GRI nos. EN1 and 6.9.

ENERGY

Power Smart Projections	2005	2004	2003
Conservation gigawatt hours	500	450	240

This indicator measures how well BC Hydro is managing priority environmental issues by efficiently managing demand for energy through Power Smart programs. It is defined as gigawatt hours saved as a result of economic demand side management. This indicator corresponds with GRI nos. EN20 and 6.3.

Power Smart Programs – Levels of Implementation		
Percentage	Mar 2002	Nov 2001
Residential customers (in their homes)	44	41
Tier 2, 3, 4 businesses (in their businesses)	36	30
Top 1000 businesses (in their businesses)	44	no data

This indicator represents the percentage of surveyed customers who have implemented Power Smart energy savings measures in the past 12 months. This indicator corresponds with GRI nos. EN13, EN20 and 6.3.

ENVIRONMENTAL PERFORMANCE INDICATORS

Power Smart Programs – Satisfaction Levels		
Percentage	Mar 2002	Nov 2001
Residential customers (for their homes)	67	63
Tier 2, 3, 4 businesses (for their businesses)	45	43
Top 1000 businesses (for their businesses)	51	no data

This indicator represents the percentage of surveyed customers who responded they were either "satisfied" or "very satisfied" that the Power Smart programs were meeting their needs. This indicator corresponds with GRI nos. EN13, EN20 and 6-3.

Resource Smart Energy Gains (GW·h per year)	2002	2001	2000	1999	1998
Restored energy	0	0	288	0	25
Cumulative restored energy	908	908	908	620	620
New energy	49	0	77	52	0
Cumulative new energy	627	578	578	501	449
Total cumulative energy gains	1535	1486	1486	1121	1069

BC Hydro launched its Resource Smart Program in the early 1990s to improve efficiencies at our generation facilities to maximize our generation capacity and help defer the need for construction of new facilities. Over time generating facilities lose some of their capability. The Resource Smart Program helps restore facilities to their original capabilities. New energy is energy over and above a facility's original capability. This indicator corresponds with GRI nos. EN20 and 6.3.

Green Gigawatt Hours	2005 Plan	2004 Plan	2003 Plan	2002 Plan	Actual 2002	
Gigawatt hours	700 to 1000	450 to 500	350	350	393	441
Number of contracts	3 to 5	5 to 10	5 to 10		19 signed	3 at offer

The purpose of Green Gigawatt Hours is to indicate how well BC Hydro is managing priority environmental issues by changing its future resource mix to focus on green energy. Green Gigawatt Hours is defined as gigawatt hours contracted from green sources that meet purchase price limits. By the end of fiscal 2002, 20 contracts had been signed totalling 498 GW·h. Nineteen of these contracts were signed in fiscal 2002 and totalled 393 GW·h. This indicator corresponds with GRI nos. EN20 and 6.3.

Internal Energy Efficiency						
For Generation	Calendar Year	2001	2000	1999	1998	1997
Gross generation (GW·h)		42 932	51 498	50 207	51 077	50 774
Net generation (GW·h)		42 666	51 266	50 034	50 874	50 612
Generation energy efficiency (%)		99.4	99.6	99.7	99.6	99.7

Canadian Utilities - For Generation						
Generation energy efficiency (%)		97.5	97.4	97.3	97.0	97.3

For Transmission and Distribution (T&D)						
T&D system energy input (GW·h)		50 486	60 425	57 526	58 559	58 130
T&D system energy output (GW·h)		48 706	58 267	54 023	53 978	54 441
T&D energy efficiency (%)		96.5	96.4	93.9	92.2	93.7

Generation efficiency is calculated by dividing the gross amount of electricity generated less the sum of electricity our facilities use and losses that occur during generation, by gross amount generated.

T&D efficiencies are calculated by dividing the amount of power delivered to the combined T or D network by the amount of power supplied to it. It is less than 100 per cent due to cumulative losses from sending the power down our power lines and converting or conditioning it at substations and pole-top transformers. These indicators correspond with GRI nos. EN20 and 6.3.

ENVIRONMENTAL PERFORMANCE INDICATORS

BIODIVERSITY

Pilot Indicator for Species at Risk and Habitat Stewardship

In 2000 BC Hydro undertook a study to assess species at risk in the province and the potential overlap of these species and/or habitats with BC Hydro facilities and operations. The project resulted in a comprehensive database of species at risk in regions where BC Hydro has facilities. The need to rank the potential impacts of BC Hydro activities on listed species, biological data gaps and further study needs were identified in the study. BC Hydro is currently developing a strategy to further prioritize and monitor species at risk issues relating to company activities. This indicator corresponds with GRI nos. EN29 and 6.34.

Columbia White Sturgeon Recovery Planning

BC Hydro negotiated a Letter of Understanding with the federal and provincial fisheries agencies and provided significant findings for development of the Columbia White Sturgeon Recovery Planning process. BC Hydro has also committed longer term funding for implementation of the plan upon completion of the multi-stakeholder planning process. This indicator corresponds with GRI nos. EN29 and 6.34.

EMISSIONS, EFFLUENTS AND WASTE

Greenhouse Gas Intensity Comparisons				
Tonnes CO ₂ e/GW-h	Calendar Year	2002 Plan	2001	2000
U.S. utilities (average)		610	610	610
Canadian utilities (average)		230	233	233
BC Hydro		34	125	42

Sources: Canadian average - Canadian Electricity Association, 2000.

U.S. average - U.S. Department of Energy's Energy Information Agency, 1999

The numbers shown above are "Actual GHG Intensity" in tonnes of carbon dioxide equivalents per gigawatt hour and include emissions from BC Hydro facilities, from independent power producers contracted by BC Hydro, and from net power imported into B.C. They do not include purchased offsets or reductions accrued from power exports. Power supplied by the BC Hydro system typically has a very low GHG intensity. In 2001, lower than average water levels in our hydroelectric reservoirs caused us to rely heavily on markets outside the province and thermal power generation within B.C. to meet customers needs. While this has resulted in a temporary spike in BC Hydro's intensity over last year's values, it still remains well below the average GHG intensities for Canadian and U.S. utilities. This indicator corresponds with GRI nos. EN10 and 6.14.

GHG Emission Reduction Sources			
Percentage	Calendar Year	2001	2000
Customer efficiencies (Power Smart)		43	43
Internal efficiencies (Resource Smart, Burrard Generating Station)		13	11
Purchase/development of cleaner power		44	46

As the data shows, the vast majority of our GHG reductions come from the efforts and investments of our customers in either demand-side efficiencies achieved through participation in Power Smart programs or from independent power projects and customer generation that deliver low- or GHG-free power. This indicator corresponds with GRI nos. EN10 and 6.14.

ENVIRONMENTAL PERFORMANCE INDICATORS

Sulphur Hexafluoride (SF ₆)				
Gas Leakage Rate	Calendar Year	2001	2000	
Percentage of total inventory		2.4	2.8	

SF₆ is used to cool and insulate electrical equipment to prevent arcing and outages. Unfortunately it is also a powerful greenhouse gas with no viable substitute. BC Hydro continues to look for ways to reduce losses while replacing older, leak-prone equipment with newer, smaller units that leak less and contain less gas. Transmission approved replacement of 10 high voltage breakers with SF₆ leaks over the next year or two. This indicator corresponds with GRI no. EN32.

Releases of Ozone-Depleting Substances						
	Calendar Year	2001	2000	1999	1998	1997
Number of incidents		3	2	4	0	1
Kilograms (Kg) released		254	28	79	0	32
CFC-11 equivalent (kg)		2092	2	276	0	318

Ozone-depleting substances (ODS) are regulated provincially and federally and will eventually be phased out. While our existing inventory has been decreasing, BC Hydro still uses ODS as air conditioner refrigerants (Freons) and fire extinguishing agents (Halons). Releases were predominantly due to equipment failure and one fire response. The large increase in 2001 was due to a single incident in which 200 kg of Halon 1301 fire-extinguishing agent accidentally discharged while the system was being decommissioned. Halons have up to ten times the ozone depleting potential of standard R-11 refrigerant. This indicator corresponds with GRI nos. EN11 and 6.15.

Emission of Sulphur Dioxide	Calendar Year	2001	2000	1999	1998	1997
Total gross annual SO ₂ emissions (tonnes)		68	61	50	75	40
Mass gross SO ₂ emitted per unit of net fossil gen. (g/kW-h)		0.016	0.02	0.028	0.028	0.028
Mass gross SO ₂ emitted per unit of net system Gen. (g/kW-h)		0.002	0.001	0.0009	0.0015	0.0008

Emissions of Sulphur Dioxide from Canadian Utilities						
	2001	2000	1999	1998	1997	
Total gross annual SO ₂ emissions (tonnes)	642 701	621 791	598 133	628 128	501 841	
Mass gross SO ₂ emitted per unit of net fossil gen. (g/kW-h)	4.77	4.86	5.06	5.14	5.22	
Mass gross SO ₂ emitted per unit of net system gen. (g/kW-h)	1.32	1.21	1.21	1.30	1.05	

BC Hydro emits small quantities of SO₂ compared to the Canadian average because our primary fossil fuel source for thermal generation is natural gas, which is low in SO₂ emissions.

ENVIRONMENTAL PERFORMANCE INDICATORS

Emissions of Nitrogen Oxides	Calendar Year	2001	2000	1999	1998	1997
Total gross annual NO _x emissions (tonnes)		1458	1048	801	1213	638
Mass gross NO _x emitted per unit of net fossil gen. (g/kW·h)		0.33	0.34	0.45	0.45	0.45
Mass gross NO _x emitted per unit of net system gen. (g/kW·h)		0.033	0.02	0.016	0.024	0.013

Emissions of Nitrogen Oxides from Canadian Utilities						
	2001	2000	1999	1998	1997	
Total gross annual NO _x emissions (tonnes)	233 752	232 273	234 323	246 935	203 047	
Mass gross NO _x emitted per unit of net fossil gen. (g/kW·h)	1.73	1.82	1.98	2.02	2.11	
Mass gross NO _x emitted per unit of net system gen. (g/kW·h)	0.48	0.45	0.48	0.51	0.42	

BC Hydro has limited cost effective opportunities to slow the growth of emissions from our power generating system, which already ranks as one of the most GHG-efficient in North America. Realizing this, we are looking beyond BC Hydro's own operations to identify and develop opportunities to abate future emissions growth. Burrard Generating Station and Prince Rupert Generating Station were operated more this year than last due to lower water levels, thus increasing emissions. These air quality indicators correspond with GRI nos. EN12 and 6.21.

High Level Polychlorinated Biphenyls (PCBs) Destroyed and Remaining in Service or Storage						
	Calendar Year	2002	2001	2000	1999	1998
Cumulative tonnes destroyed		2906	2906	2317	2317	1320
Tonnes remaining		732	732	1300	1300	2297
Percentage remaining		20.12	20.12	35.94	35.94	63.51
Percentage destroyed		79.88	79.88	64.06	64.06	36.49

Tonnes remaining has been corrected to reflect up-to-date inventory information. No PCB wastes were destroyed during fiscal year 2002. Capacitors from Abbotsford Substation were taken out of service in January 2002 but were not sent for destruction until May 2002. BC Hydro's system plan anticipates the removal of all high level PCB material from in service by 2007. This indicator corresponds with GRI no. 6.9.

ENVIRONMENTAL PERFORMANCE INDICATORS

Polychlorinated Biphenyls (PCB) Activity			
Tonnes	Calendar Year	2001	2000
High Level in storage		22	0
Low Level in storage		253	184
High Level sent for destruction		198	641
Low Level sent for destruction		578	131

Up until the 1970s, many pieces of electrical equipment used PCBs in cooling and insulating oil. Due to health concerns related to PCBs, BC Hydro and other utilities have been removing PCB-contaminated materials from equipment and disposing of it at licensed facilities for destruction.

High Level PCB material is any material with a PCB concentration of greater than one per cent. BC Hydro is continually removing high level PCB material and staging it in a designated PCB storage facility prior to destruction.

Low level PCB material is any material with a PCB concentration of greater than 0.005 per cent but less than one per cent. BC Hydro decontaminates its own PCB contaminated oil at our Surrey Oil Operations site using a sodium process. Our decontamination facility accepts oil from external sources, and these amounts are included in our storage total. The amounts of low level PCB oil stored at our decontamination facility will fluctuate year to year based on amounts processed, amounts accepted from external sources and the sodium supply. Due to an inadequate supply of sodium this year, the decontamination plant operated below its capacity.

During 2002, BC Hydro eliminated 5100 tonnes of stored PCB contaminants located at our Rock Bay storage facility. This material was the result of an historical surplus property that BC Hydro had taken ownership of cleaning up and therefore was not included in the PCB inventory numbers reported. The PCB contaminants were transported to and incinerated at the Swan Hills Treatment Centre in Alberta at a cost of \$14 million. This indicator corresponds with GRI nos. EN13, and 6.18.

Landfill Diversion Rate	2002	2001	2000	1999	1998
Percentage of total non-hazardous solid waste	63	63	53	48	38

Landfill diversion rate is a measure of the percentage of total solid, non-hazardous wastes that was prevented from going to landfill due to reuse, refurbishment, and recycling programs. These programs save money as well as landfill space. This indicator corresponds with GRI nos. EN17 and 6.19.

Waste Shipped to Landfill	2002	2001	2000	1999	1998
Tonnes	1559	1537	1954	2181	2590

This indicator corresponds with GRI nos. EN13, 6.16 and 6.19.

ENVIRONMENTAL PERFORMANCE INDICATORS

Summary of Recycling Efforts	2002	2001	2000	1999	1998
Paper (tonnes)	329	354	408	330	335
Cardboard (tonnes)	74.5	68	64	56	54
Scrap Metal (tonnes)	1215	1370	1370	1470	1352
Wood Poles (number)	4100	4062	4200	4000	4000
Wood Poles (tonnes)	316.16	307.09	317.52	302.4	302.4
Toner Cartridges (number)	1089	975	679	604	740
Toner Cartridges (tonnes)	0.55	0.49	0.34	0.3	0.37
Fluorescent Tubes (number)	14 146.5	13 281	13 100	8360	12 297
Fluorescent Tubes (tonnes)	3.54	3.32	3.27	2.09	3.07
Dry Cell Batteries (tonnes)	1.76	1.4	n/a	n/a	n/a
Lead Acid Batteries (tonnes)	16.5	n/a	n/a	n/a	n/a
Wet Acid Batteries (tonnes)	32.76	n/a	n/a	n/a	n/a
Non-spillable/Gel cell batteries (tonnes)	8.45	7.16	n/a	n/a	n/a
Ceramic Insulators (tonnes)	617.63	500	154	135	76
Organic Waste (tonnes)	40	32.6	6	n/a	n/a
Landscape Organics (tonnes)	18.2	n/a	n/a	n/a	n/a
Computer Packages (numbers)	1504	953	n/a	n/a	n/a
Computer Packages (tonnes)	40.9	25.9	n/a	n/a	n/a
E-waste (tonnes)	12.5	n/a	n/a	n/a	n/a
Silica Gel (tonnes)	3.69	n/a	n/a	n/a	n/a
Total Waste Recycled (tonnes)	2731	2670	2323	2296	2123

Total waste recycled is measured in tonnes. Numbers are provided for information purposes only. The above indicator corresponds with GRI nos. EN13 and 6.17.

Special Wastes Shipped	2001	2000	1999	1998
Solids (kg)	574 916	303 495	226 320	240 221
Liquids (L)	673 472	520 240	504 604	414 947

Special wastes are materials with hazardous properties that are no longer suitable for their original use. By law, they require special documentation, handling, storage, shipping, and treatment prior to reuse, recycling, or disposal. Amounts shown do not include shipments of contaminated soil. This indicator corresponds with GRI no. EN33.

ENVIRONMENTAL PERFORMANCE INDICATORS

Packaging Material on Goods Received

On the receiving end, BC Hydro attempts to reduce, reuse, and recycle all packaging material wherever possible. Reusable cardboard boxes are segregated and reused as required. Damaged, wet, and marked packaging is recycled in the Cardboard Recycling Program. Blister sheets, popcorn and styrofoam are reused as required in shipping. With markets now becoming available for shrink wrap and styrofoam these items will also become part of our existing Comprehensive Resource Recovery Program. This indicator corresponds with GRI nos. EN13 and 6.8.

SUPPLIERS

BC Hydro's Environmental Purchasing Clause in Tender Documents

The policy of BC Hydro is to protect and preserve the natural environment. Contract award decisions made by BC Hydro shall take into consideration products, services or construction methods that are environmentally sensitive and products that are recycled, and give preference to tenders where the products, services or construction methods are proven to be environmentally superior, as well as cost effective, to products, services or construction methods offered in other tenders. Tenderers must disclose sufficient information with their tenders to demonstrate that they will perform the services in an environmentally responsible manner. This indicator corresponds with GRI nos. EN35 and 6.25.

Green Energy Criteria

Green projects must meet comprehensive market-based green criteria. To briefly summarize, a green project must be:

Renewable: The energy source must be replenishable by natural processes within a reasonable length of time—at the longest, within about one average human life span. For example, hydroelectric generation relies on water, that is a renewable resource. Natural gas electricity generation relies on a fossil fuel, a resource that does not meet this renewable criterion.

Licensable: The project must meet all relevant regulations and standards.

Socially responsible: The project must be developed in a socially responsible manner. This criterion must be judged on a site-specific basis. Every project within BC Hydro's acquisition process is reviewed according to specific social responsibility criteria.

Low environmental impact: The project must avoid unacceptably high environmental impacts such as damage to fish populations, endangered species or air quality. This criterion is evaluated on a site and technology-specific basis.

This indicator corresponds with GRI nos. EN35 and 6.25.

ENVIRONMENTAL PERFORMANCE INDICATORS

COMPLIANCE

Incidents Involving Provincial/Federal Standards	2002	2001	2000
Number of fish incidents	32	29	10
Number of pesticide incidents	3	0	1

Fish incidents refer to those incidents that involve the Fisheries Act, Fish Protection Act, Water Act, or that fall under the Water License Agreements issued to the individual generating facilities. Pesticide incidents are those which involve the Canadian Environmental Protection Act, Pesticide Products Act, Waste Management Act, Special Waste Regulations, or Pesticide Product Control Act. This indicator corresponds with GRI no. 6.26.

Spills (oil and petroleum)	2002	2001	2000	1999	1998
Number of legally reportable incidents	34	34	36	37	38
Total volume (L)	7675	11 714	13 150	5323	932

Reportable petroleum spills are any amount over 100 litres to land or any amount to water. Spills of other substances are reported if released in amounts varying from one litre or kilogram to 200 litres or kilograms, depending on the substance. We use this measure to assess the frequency and severity of environmental incidences and as a proxy for the overall adequacy of systems and practices relating to compliance. This indicator corresponds with GRI nos. EN14, 6.19, 6.22 and 6.26.

OVERALL

BC Hydro's Environmental Policy

BC Hydro is committed to producing and delivering electricity in an environmentally and socially responsible manner. Our first environmental priority is to avoid causing impacts. However, we know that operating our energy system causes impacts on the environmental and on other users of publicly shared resources. Therefore, where impacts are created, we will work to reduce those impacts, enhance affected habitat, and sustain resources over the long term.

Specifically, BC Hydro is committed to:

- meeting or exceeding environmental requirements defined by legislation, regulation, government directives and guidelines, and our commitments and agreements;
- expanding our understanding of the effects of our business as a means to reduce impacts and continually improve our environmental performance; and
- working cooperatively with stakeholders on resource use, management, and conservation to increase public benefits from affected resources.

This indicator corresponds with GRI no. EN19.

SOCIAL PERFORMANCE INDICATORS

LABOUR PRACTICES

EMPLOYMENT

Employee and Workplace Policy

This policy states: BC Hydro is committed to providing a work place that maximizes each employee's contribution to the success of the corporation. BC Hydro and its employees are committed to:

- providing a safe and healthy work place that values diversity and is free of discrimination and harassment;
- treating each individual with dignity and respect, communicating openly and honestly, contributing to a positive workplace;
- continuously seeking opportunities to learn and improve, setting high goals and accepting responsibility; and
- evaluating performance, providing positive feedback for improvement, and recognizing results and acting in accordance with all laws, regulations and collective agreements.

This indicator corresponds with GRI nos. LA8 and HR1.

Workforce by Employment Type (Full Time/Part Time Employees).								
		FTR	PTR	TOTAL	FTT	PTT	TOTAL	TOTAL
HYDRO	IBEW	1275	2	1277	43	-	43	1320
	M&P	1413	32	1445	59	25	84	1529
	OPEIU	2252	163	2415	350	119	469	2884
		4940	197	5137	452	144	596	5733
POWERTECH	IBEW			-			-	-
	M&P	35		35	1		1	36
	OPEIU	46	5	51	7		7	58
		81	5	86	8	-	8	94
CBU	IBEW	13		13	266		266	279
	M&P	10		10			-	10
	OPEIU	13		13	9	6	15	28
		36	-	36	275	6	281	317
TOTAL	IBEW	1288	2	1290	309	-	309	1599
	M&P	1458	32	1490	60	25	85	1575
	OPEIU	2311	168	2479	366	125	491	2970
		5057	202	5259	735	150	885	6144

IBEW: International Brotherhood of Electrical Workers union; OPEIU: Office and Professional Employees International Union; M&P: Management and Professional (non-union). This indicator corresponds with GRI nos. LA1 and LA3.

SOCIAL PERFORMANCE INDICATORS

Youth Hires, by Designated Group				
Percentage	2002	2001	2000	1999
Women	40	43	44	51
Visible Minorities	16	21	19	16
Aboriginal People	**	3	1	2
People with Disabilities	1	2	1	1

** Data suppressed since there are fewer than 3 people. This indicator corresponds with GRI no. LA18.

Workforce Profile				
Percentage	January 2002**		May 2000*	
Demographic Profile	BC Hydro	BC Labour Force	BC Hydro	BC Labour Force
Under 20	0	6	1	6
20 - 34	18	32	16	34
35 - 44	27	28	24	28
45 - 53	38	24	36	23
54 - 60	13	7	18	6
60 plus	4	5	5	4

* Source: PAHR May 2000, 1999 Strategic Projections Inc.

** Source: January 2002 PAHR & BC Stats

BC Hydro's workforce is older, the baby boom generation is more dominant, the retirement bulge will come earlier and the cumulative effect of retirement will be greater. This indicator corresponds with GRI no. LA1.

Attrition	2002	2001
Overall rate of attrition (percentage)	4	4.6
Overall attrition (number of employees - based on FTRs)	208	n/a
Percentage retired	2	n/a
Number retired	106	n/a
Percentage resigned voluntarily	1.4	n/a
Number resigned voluntarily	71	n/a
Percentage terminated for other reasons, were dismissed or deceased	0.6	n/a
Number terminated for other reasons, were dismissed or deceased	31	n/a
New hires (numbers)	289	312
Number of base employees eligible to retire	583	536
Retirement uptake (number)	106	113
Retirement uptake rate (percentage)	18.2	21.1

This indicator corresponds with GRI nos. LA2 and 6.60.

SOCIAL PERFORMANCE INDICATORS

Strategic Workforce Planning

BC Hydro has an aging workforce with more than 70 per cent of current employees over 40 years of age, 30 per cent of employees eligible to retire within five years, and 50 per cent eligible to retire within a decade. The occupational groups that are most affected by looming retirements—managers, engineers, trades, technologists and technicians—are also the most critical to maintaining BC Hydro’s core operations in the Generation, Transmission and Distribution Lines of Business. These retirement impacts will occur at a time when unprecedented skilled labour shortages are anticipated across North America.

Given the risks associated with the loss of critical workforce capabilities through retirements and other attrition, Strategic Workforce Planning (SWFP) was identified as a key priority in the corporate business planning process in fiscal 2001. A SWFP project was established to conduct a comprehensive risk analysis, identify future workforce requirements, and coordinate workforce planning strategies across business units. The SWFP project confirmed the need for additional investments in workforce renewal, and initiative funding allocations were approved in 2001 and 2002 to build critical workforce capability and benchstrength, and enable knowledge transfer between new hires and retiring incumbents. Targets were established to drive completion on the hiring of new key positions, that included engineers-in-training, graduate technologists-in-training, apprentices, journeyed trades, technical and professional positions and “early replacement” of managers. This indicator corresponds with GRI nos. LA1 and LA17.

Procedures to Inform Employees of Changes to Operations

The BC Employment Standards Act, BC Labour Code and the negotiated collective agreements (IBEW & OPEIU) require BC Hydro to give “notice of changes in work methods”. For example, IBEW Article 12 addresses the need to inform and consult with employees regarding “technological change”. Case law supports that “technological change” includes corporate restructuring. Another article deals with “lay-off notice and severance pay”, for example. The OPEIU agreement contains similar clauses. In fiscal 2002, the President and the CEO initiated a weekly on-line newsletter to summarize activities and company development as they affect changes to BC Hydro’s operation. This indicator corresponds with GRI no. LA4.

EMPLOYEE HEALTH AND SAFETY

BC Hydro Safety Leadership - Statement of Strategic Intent

This year, BC Hydro developed a Safety Leadership Statement of Strategic Intent which states:

BC Hydro is committed to integrating safety in all we do. We will work for continual improvement in safety performance, driving our vision for zero injuries. We believe that the following principles, and their application throughout BC Hydro, are the core of this effort: 1) management accepts that all incidents are preventable, 2) management accepts responsibility for providing a safe workplace, 3) employee involvement is essential, 4) training to work safely is essential, and 5) all employees are accountable for health and safety.

This indicator corresponds with GRI nos. LA13, LA6, and SO1.

SOCIAL PERFORMANCE INDICATORS

Occupational Health and Safety Standards at BC Hydro

BC Hydro is subject to government legislation for occupational health and safety, including the Workers' Compensation Act of British Columbia. The corporation has a legal obligation to comply with the Occupational Health and Safety Regulation (OHSR) and other regulations issued by the Workers' Compensation Board (WCB) of British Columbia. BC Hydro's Occupational Safety and Health Standards are classed as supplementary to the WCB OHSR. Compliance is mandatory for all workers and managers, including contractors who work for BC Hydro.

BC Hydro uses a Continuous Improvement Safety Management System that exceeds the regulatory requirements of the WCB of British Columbia. In March 2002, BC Hydro hired a world-renowned safety expert to evaluate our Safety Management System. Their report concluded: "The structure of BC Hydro's safety management system is excellent. BC Hydro's current systems are sound: processes and systems are excellent, personnel are competent, and there is an abundance of safety resource personnel."

The BC Employment Standards Act, BC Labour Code and the negotiated collective agreements (IBEW & OPEIU) cover health and safety at work. Related to this is the existence of joint management-union committees, created by Workers Compensation Board law, to oversee adherence to health and safety regulations.

BC Hydro has developed a standard for addressing and minimizing exposure to bloodborne pathogens, including HIV.

This indicator corresponds with GRI nos. LA5, LA6, LA13, LA14, and LA15.

Health and Safety at Work

The BC Employment Standards Act, BC Labour Code and the negotiated collective agreements (IBEW & OPEIU) cover health and safety at work. Related to this is the existence of joint management-union committees, created by Workers Compensation Board law, to oversee adherence to health and safety regulations. Provincial occupational health and safety regulations require BC Hydro to establish joint health and safety committees comprising of management and worker representatives. BC Hydro complies with these regulations and in some instances exceeds regulations. One hundred per cent of the workforce are covered by these regulations and are covered by a hierarchical structure of committees. This indicator corresponds with GRI nos. LA6 and LA14.

SOCIAL PERFORMANCE INDICATORS

Funding and Usage of Health and Safety Programs and Services				
Program funding (\$'000's):	2001	2000	1999	1998
Return to Work	435.1	492.5	310.3	254.4 (1)
Employee and Family Assistance	505.2	458.1	462.3	454.6
Physiotherapy	61.5	63.0	63.1	81.0
Respectful Workplace	254.0	132.0	143.2	115.3
Safety	5,101.5	4,532.5	4,243.1	4,131.0
Health Promotion	1,128.7	1,090.2	794.5	724.9 (2)
Total	7,486.1	6,768.3	6,016.6	5,761.2

Cost Savings (\$'000's)	2001	2000	1999	1998
Return to Work program (net)	819.2	436.6	1732.5	(3)

Number of Employees/Workgroups Assisted	2001	2000	1999	1998
Employees returned to work or assisted to stay at work	136	69	142	106
Employees using the Employee and Family Assistance Program	747	706	701	733
Family members using the Employee and Family Assistance Program	566	505	461	497
Physiotherapy treatments	1473	1507	1397	1072 (4)
New Respectful Workplace cases	65	22	28	42
Employee participation in the Lifestyle incentive program	2397	2149	2345	2280
Lifestyle workshop participants	2370	4476	3351	1423 (5)
Employees with access to occupational safety programs	5871	5507	5369	5281

- (1) Fiscal 2000 Return to Work (RTW) Program costs included the training of replacement and backup RTW Facilitators.
- (2) This is the total cost for Health Promotion (Lifestyle and Surges)—it does not reflect cost recoveries from Surges (\$260,000/year). Prior to Fiscal 2000, health promotion costs were calculated regionally. The costs shown here for fiscal 1998 and 1999 are for the Lower Mainland region only.
- (3) The Return to Work cost savings for fiscal are the combined cost savings for the 14 months ended December 31, 1998. The cost savings for fiscal 2001 are estimated using 67 per cent of total salaries (actual savings will vary from 67 to 75 per cent depending on program usage).
- (4) In fiscal 2001 the duration of some of the physiotherapy treatments increased to one hour from 1/2 hour resulting in a reduced number of treatments for fiscal 2000; in fact the hours of treatment actually increased during fiscal 2001.
- (5) The method of counting attendees at multi-session Lifestyle workshops changed in fiscal 2001.

These indicators correspond with GRI no. 6.68.

SOCIAL PERFORMANCE INDICATORS

All Injury Frequency	2001	2000	1999	1998	1997
BC Hydro	3.90	4.02	4.58	5.00	4.37
Canadian utilities	3.78	3.46	3.73	4.48	4.00

According to provincial occupational health and safety regulations to which BC Hydro complies, all work-related occupational accidents and diseases are reported to the Workers' Compensation Board of British Columbia. BC Hydro monitors safety performance and benchmarks against BC industry and its electric utility peers in the Canadian Electricity Association (CEA) using the All Injury Frequency Rate. It measures the number of medical aid and disabling injury incidents against hours worked in a 12 month period. It may or may not result in time lost from work. BC Hydro has only recently converted to using this comparative measure, and statistical adjustments have been made to align our reporting with the CEA definition. This accounts for the variation that appears between the data shown above and that presented in BC Hydro's 2002 Annual Report. The measure corresponds to GRI nos. LA5, 6.66 and 6.67.

TRAINING AND EDUCATION

Personal Development Plans (PDPs)		
Percentage	2002 Target	2002 Actual
Union employees with a PDP	75	94
Management and professional employees with a PDP	80	96

Leader/Manager Performance (based on 360° Pulse Check with Employees)		
Combined September 2001 and February 2002 Results		
Percentage	2002 Target	2002 Actual
Effective communication	40	66
Organizational & business awareness	47	77

For fiscal 2002, all employees were expected to have a current PDP as part of BC Hydro's gainsharing program requirements. As well, a sample of employees were asked to rate leader-managers on the two leadership competencies noted above, selected for corporate-wide improvement. These indicators correspond with GRI nos. LA16 and LA17.

SOCIAL PERFORMANCE INDICATORS

Retirement Seminars	2003 Target	2002
No. of retirement seminars	12	31

BC Hydro offers retirement seminars to employees over 55 and their spouses to help them with financial planning and to prepare for the big shift in lifestyle that retirement brings. As well, participants are interviewed regarding their retirement intentions to help Hydro with workforce planning. Approximately 800 employees attended these seminars in fiscal 2002. These indicators correspond with GRI no. LA16.

Face to Face Training Program

Within the Face to Face Program a disabled person teams up with a BC Hydro employee—usually a manager—to facilitate awareness-raising among both parties. The program is coordinated by an external non-profit organization. This indicator corresponds with GRI nos. LA18 and HR9.

DIVERSITY AND OPPORTUNITY

Harassment Complaints	2002	2001	2000
Total cases	44	65	48
Number of Complaints by Type			
Personal	32	41	27
Discrimination	3	3	5
Sexual	4	4	1
Other	5	12	15
Resolution of Harassment Complaints			
Informal	42	63	47
Formal	2	2	1

These indicators correspond with GRI nos. LA8 and HR3.

Diversity of Workforce	Mar 2002			Mar 2001		
	BC Hydro	BC Population	BC Total Workforce	BC Hydro	BC Population	BC Total Workforce
Percentage						
Women	33	51	47	33	51	47
Visible minorities	14	18	16	13	18	16
Aboriginal people	2	4	3	2	4	3
People with disabilities	3	8	7	4	8	7

This indicator corresponds with GRI nos. LA8 and LA18.

SOCIAL PERFORMANCE INDICATORS

HUMAN RIGHTS

STRATEGY AND MANAGEMENT

Investment Screen Criteria and Supplier or Contractor Contracts

As part of our investment assessment process, we voluntarily assess a variety of relevant social impacts, including, among others, impacts to First Nations, the public, customers, and employees. Where any investment decision may impact First Nations or the public, BC Hydro has a duty to consult.

BC Hydro does not directly address human rights impacts in the selection of suppliers or contractors. However, a clause in all supplier or contracts stipulates the requirement to meet all laws of British Columbia, that includes the Human Rights Act of B.C. This indicator corresponds with GRI nos. HR8, and 6.85.

BC Hydro International Work - Screen Criteria for Consulting Services

BC Hydro undertakes a limited number of professional contract consulting services in the international arena. BC Hydro has no formal process for screening international projects for environmental or social issues, but we do consider all issues on a project-by-project basis. The company will not participate in controversial projects. If an issue arises during the course of a project that is in apparent conflict with our (domestic) policies and standards, BC Hydro's involvement in the project will be reviewed in light of the new information. This indicator corresponds with GRI nos. HR8 and 6.85.

Cross Cultural Training Program

BC Hydro's Cross Cultural training is designed to help employees work more effectively with First Nations across the province. We focus on three main objectives: knowledge of the cultural linguistic demographic and geographic characteristics of BC aboriginal people; understanding of major aboriginal issues and approaches to their resolution; and knowledge of the business reasons for an aboriginal relations strategy.

71 BC Hydro employees and 201 non-BC Hydro employees participated in cross-cultural training sessions. BC Hydro delivered this training to six new client companies. This indicator corresponds with GRI no. HR9.

NON-DISCRIMINATION

Duty to Accommodate

The Duty to Accommodate, which is part of Canadian Human Rights law, arises under any of the protected grounds in the B.C. Human Rights Code, including such things as sex, sexual orientation, family status, race, religion, mental or physical disability, and political belief. Under the Duty to Accommodate, employers are required to ensure that employees are accommodated on these grounds. BC Hydro began producing a new set of guidelines for managers to ensure that the duty to accommodate is implemented appropriately. This indicator corresponds with GRI no. HR3.

FREEDOM OF ASSOCIATION AND COLLECTIVE BARGAINING

Freedom of Association Policies, Procedures, and Programs

BC Hydro is unionized, and employees are allowed to organize per the provisions of the BC Labour Code.

The Labour Relations Policy and Principles also states in part that: The unions, who are certified bargaining agents of BC Hydro employees, have legal status and are the legitimate representatives of the unionized staff. They will be recognized as such throughout the organization at all managerial levels and treated with courtesy and respect. This indicator corresponds with GRI no. HR4.

SOCIAL PERFORMANCE INDICATORS

DISCIPLINARY PRACTICES

Code of Conduct

The Director and Employee Code of Conduct provides general guidance on the standards of conduct expected of Directors, Employees and contractors of BC Hydro including guidelines on conflict of interests.

Directors and Officers of BC Hydro and its subsidiaries are required to sign a declaration stating that they have read and understand the Code of Conduct. A newly developed Manager Training Kit is provided to assist managers with Interpreting and applying the code. Further, an online training program is also available to all employees who are encouraged to undertake the training on an annual basis.

BC Hydro recognizing the need for a neutral and independent resource to provide a clear interpretation of its standards of business conduct and guidelines for conflict of interest, has established a Code of Conduct Advisor. This indicator corresponds with GRI nos. HR12, SO6, and SO7.

Grievance Trends Among Unionized Workforce

Number	2002	2001	2000	1999	1998
IBEW grievances	28	33	49	30	32
OPEIU grievances	58	48	30	25	40
IBEW arbitrations	1	3	2	1	3
OPEIU arbitrations	3	3	3	2	3

A grievance procedure is an integral part of the collective agreements and is deemed to exist by the BC Labour Code. IBEW: International Brotherhood of Electrical Workers; OPEIU: Office and Professional Employees International Union
This indicator corresponds with GRI nos. HR13 and 6.82.

INDIGENOUS RIGHTS

Statement of Principles for Relations with Aboriginal People

In 1992 BC Hydro developed its Statement of Principles for Relations with Aboriginal People. Through our Statement of Principles for Relations with Aboriginal People, BC Hydro recognizes that the Aboriginal population of British Columbia has a distinct legal, historical and cultural status, and we commit to working with the Aboriginal population according to the principles of co-operation, communication, minimizing the negative and maximizing the positive impacts of Hydro's operations, dispute resolution, and community and economic development. In 1999, BC Hydro surveyed British Columbia's First Nations opinion leaders who confirmed that the goals contained within BC Hydro's relationship building strategy are critical issues for the Aboriginal communities. This indicator corresponds with GRI nos. HR16, SO9 and 6.88.

Jointly Managed Community Grievance Mechanisms/Authority

BC Hydro is committed to resolving disputes with First Nations through negotiation as per its Statement of Principles for Relations with Aboriginal People. BC Hydro is currently involved in grievance negotiations with several First Nations, all of whom have jointly signed negotiation framework agreements. This indicator corresponds with GRI no. HR15.

SOCIAL PERFORMANCE INDICATORS

GENERAL

Supply Chain Management
 BC Hydro does not have policies or procedures to evaluate and address human rights performance within our supply chain and contractors; however, equity conditions for contractor employees are stipulated in the Purchasing Policy. This indicator corresponds with GRI no. HR7.

SOCIETY

PUBLIC HEALTH AND SAFETY

Corporate Safety Policy
 BC Hydro will respond effectively to emergencies to limit injury and loss of life, to restore electric service and to restore corporate functions. Each Line of Business will prepare emergency response plans and ensure employees are qualified and equipped for emergency response.

Our Board of Directors is responsible for ensuring appropriate safety strategies are in place for the corporation. The Board has delegated implementation, coordination and authority for safety issues through the President to the Vice-Presidents and, in the case of dam safety, to the Director of Dam Safety. Within their respective Lines of Business, these individuals will implement, coordinate and oversee all things necessary to fulfill BC Hydro’s commitment to safety, to effective emergency response and to dam safety, and are accountable for completing all necessary safety activities and training.

The Board has delegated, through the President and the appropriate Vice-President to the Manager of Corporate Safety & Health, the authority to identify safety risks, other than for dam safety, to strategically advise the corporation with respect to safety and to prepare policies and standards to follow. This indicator corresponds with GRI no. SO1.

Public Fatalities	2002	2001	2000	1999
Actual	0	0	1	2
Target	0	0	0	0

While BC Hydro has no control over public fatalities, when numbers increase the company increases safety advertising. This indicator corresponds with GRI no. SO1.

SOCIAL PERFORMANCE INDICATORS

Public Accidents Involving BC Hydro Facilities	2002	2001	2000	1999	1998
No. of incidents	942	995	1046	1278	1284

This indicator includes any public incidents that involve our system including vehicle accidents that cause damage to our poles, lines or other infrastructure. While we have no control over public accidents, we increase spending on public awareness programs if the number of incidents increases. This indicator corresponds to GRI no. SO1.

PUBLIC EDUCATION

Involvement In Education (IIE) Program

Through IIE, BC Hydro gives British Columbia's young people the knowledge and tools to make informed decisions on our common energy interests. Educational school programs have the potential of reaching approximately 50 000 teachers and 660 000 students and their families.

BC Hydro's IIE program distributed "Living Safely with Electricity" to 565 secondary schools in British Columbia in November 2001. This video targets young people just entering the workforce. ElectroJuice materials complement the "Living Safely with Electricity" video. These materials are available free and contain electrical safety information, student activities (including a self test) and a 28-minute video.

BC Hydro's IIE program launched a new education module for teachers—"Powering Our Future: Green Energy Options"—which links to the grades four to seven science curriculum and introduces students to alternative energy sources. It also raises issues about energy efficiency and how B.C. uses and generates electricity. Approximately 1900 modules were sent to each school library in the province.

BC Hydro promoted hydrogen education in BC schools as well by subsidizing 260 Solar Hydrogen Fuel Cell Science Kits, that link solar hydrogen technology to curriculum topics in chemistry and physics for grades 8 to 12.

Daily Visitors to the IIE Web Site	2002	2001
	216	126

IIE Web site: A growing number of teachers rely on the IIE Web site, using it extensively to view, download and order energy education materials. Three to four per cent of the bchydro.com visitors go to the IIE section of the site. The above two indicators correspond with GRI no. SO1.

SOCIAL PERFORMANCE INDICATORS

Safety Education and Training		
Awareness of Electrical Safety		
Percentage	Oct 2001	Mar 2000
No, not aware	55	67
Yes, aware	45	33

Results are based on a survey of males between the ages of 18 and 35 who work with or around electricity. One of the key elements of BC Hydro's public safety program last year was an advertising campaign on the "7 Steps to Electrical Safety". Print, radio, and other advertisements promoting safety targeted high risk groups, such as construction workers. Last year, we reported the findings of a small omnibus survey with McIntyre & Mustel Research that was smaller in size and scope than those reported above and which will therefore no longer be used within this measure. The above safety indicator corresponds with GRI no. SO1.

CORPORATE CITIZENSHIP

Corporate and Regional Donations	2002	2001
Amount Allocated (Million Dollars)	1.15	3
Percentage Allocation		
Arts and Culture	9	22
Education	4	20
Environment	12	9
United Way	26	9
Aboriginal	5	13
Regional	24	10
Scholarships	12	11
Hydro Employees Community Services Fund (HYDRECS)	8	3
Community Investment	0*	3

This year, the Community Investment allocation included fully-depreciated in-kind assets rather than assets that were valued and recorded as their market recoverable value. This indicator corresponds with GRI no. SO21.

Visitors to BC Hydro Recreation Sites				
Calendar Year	2001	2000	1999	1998
Number of visitors	1 354 890	1 243 172	1 269 715	1 426 711

BC Hydro has enhanced recreational opportunities in many of the watersheds in which it has facilities. The number of day visits is considered a proxy for the success of these improvements. This indicator corresponds with GRI nos. SO5, SO21 and EN8.

ECONOMIC PERFORMANCE INDICATORS

To avoid duplication of information in BC Hydro's two corporate performance reports, more complete information on BC Hydro's financial position is available in the [2002 Annual Report](#). Triple Bottom Line provides an overview of our economic growth and development performance as well as environmental and social performance.

Shareholder Value-Added (SVA)					
In million dollars	2002	2001	2000	1999	1998
Actual	(145)	103	129	(11)	33
Target	(306)	(55)	30	28	0

Shareholder Value Added (SVA) is a measure of how well BC Hydro performed beyond the return expected for a company with a similar level of risk. It is calculated as: Net Operating Profit less Capital Charge. Net operating profit is net income before finance charges and the transfer to/from the Rate Stabilization Account. Capital Charge is Invested Capital x Cost of Capital. Lower energy costs and lower finance charges were the primary reasons for the favourable SVA variance from target. The lower electricity trade revenues and lower total energy costs were due mainly to lower electricity market prices. Average market prices were significantly higher for the months of April and May, but declined substantially since late June, largely as a result of lower cooling demand, rising Northwest hydro production, conservation, and lower demand due to a slowing economy. This same decline in market prices as well as the impact of lower water inflows this year, also accounts for most of the negative SVA variance from the prior year. This indicator corresponds with GRI no. 6.37.

CUSTOMERS

Proportion of Revenue from Customer Groups					
Percent	2002	2001	2000	1999	1998
Residential	37.97	36.69	38.03	37.11	37.91
Light industrial & commercial	35.67	35.62	36.11	36.37	37.42
Large industrial	19.67	21.56	20.50	21.18	19.16
Other & miscellaneous	6.69	6.13	5.36	5.34	5.51
Total	100.00	100.00	100.00	100.00	100.00

Does not include Electricity trade revenue. This indicator corresponds to GRI no. EC1.

Electricity Trade Market Prices			
Average rates in			
Canadian dollars/megawatt hour	2002	2001	2000
Mid Columbia On-Peak Prices	115.51	266.36	42.64
BC Hydro industrial electricity rate	33	33	33

This table compares electricity trade market prices to the average BC Hydro transmission service rate, typical of what large users pay. Electricity trade market prices relevant to BC Hydro are strongly influenced by market conditions in the Pacific Northwest and in California, where the majority of BC Hydro's electricity trade transactions occur. Market prices at the Mid-Columbia trading hub in central Washington State are considered indicative of the prices in the Pacific Northwest. As can be seen, market prices have been extremely volatile over the last several years and are significantly above BC Hydro's domestic tariff prices.

ECONOMIC PERFORMANCE INDICATORS

Revenue by Region					
Percentage	2002	2001	2000	1999	1998
Lower Mainland	49.0	48.8	49.5	48.5	49.4
Northern Region	15.8	16.4	16.2	16.7	16.7
South Interior	12.5	11.6	10.9	11.7	12.0
Vancouver Island	22.7	23.3	23.4	23.0	21.9
Total	100.0	100.0	100.0	100.0	100.0

BC Hydro's domestic revenue has grown by eight per cent in the last five years due to an 8.8 per cent growth in energy sales. Throughout this period we have had a rate freeze. The per cent of revenue by region varies over the short term due to regional changes in industrial and commercial activity. The Northern Region has seen a decline over this period as mining and forestry have been slowing. Vancouver Island revenue has grown somewhat but has been volatile as a result of the influence of the pulp industry. The South Interior has had revenue growth in four out of the last five years, and its share of revenues has grown slightly. The Lower Mainland has had a slight overall decline in per cent of BC Hydro revenues. However, it has had revenue growth for four of the last five years, with almost seven per cent overall growth in revenues over the five years. This indicator corresponds with GRI no. EC2.

Customer Satisfaction Rating for Call Centres		
Percentage	2002	2001
Customer overall satisfaction (Actual)	64	76
Customer overall satisfaction (Target)	68	59

This rating is a measure of the percentage of surveyed customers who responded that they are "very satisfied" with the service received when contacting BC Hydro call centres. The decline in the rating for fiscal 2002 is due primarily to a drop in customer satisfaction in two areas: ease of contact and use of our automated voice menu (IVR). Action implemented to reverse the decline include technology updates to reduce customer wait times, improvements to the IVR, and the piloting of a system to determine the root cause of a customer complaint. This indicator corresponds to GRI no. SO5

Customer Care Calls Answered Within 30 Seconds (Average of All Four Call Centres)			
Percentage	2003	2002	2001
Actual		80	76
Target	80	80	80

Meter Reading Timeliness			
Percentage	2003	2002	2001
Meters read on schedule			
Actual		96	93
Target	96	92	91

ECONOMIC PERFORMANCE INDICATORS

Meters Read Accurately	2003	2002	2001
Actual		99.90	99.92
Target	99.85	99.70	99.50

The previous three indicators correspond with GRI no. EC13.

Reliability of Service to Customers					
Percentage	2002	2001	2000	1999	1998
BC Hydro (Actual)	99.959	99.972	99.974	99.952	99.977
BC Hydro (Target)	99.973	99.972	99.970	99.970	99.970
Canadian utilities		99.963	99.951	99.962	99.958

Canadian Utilities' data spans a calendar year whereas BC Hydro's data spans a fiscal year. For example, the data for BC Hydro's fiscal 2001 (April 2000 – March 2001) corresponds to the Canadian Utilities' calendar 2000 (January 2000 – December 2000). The Canadian Utilities' data for 1999 excludes the impact of the ice storm in Quebec and Ontario. With the impact factored in, the Average System Availability Index (ASAI) would have been 99.654 per cent. Fiscal 2002 year-end ASAI results were heavily impacted by the December 14-16, 2001 windstorm that hit the Lower Mainland and Vancouver Island. The three-day storm accounted for 36 per cent of total customer-hours lost during the 12-month period. Other major events included the May 28, 2001 windstorm that affected almost the entire province and the October 22-23, 2001 windstorm in the Lower Mainland and on Vancouver Island. Excluding the impacts of the December storm, ASAI would have been on target at 99.974 per cent. This indicator corresponds with GRI no. EC13.

SUPPLIERS

Monetary Payments/Payables to Suppliers for All Goods, Materials, and Services Purchased by BC Hydro			
(in million dollars)	2002	2001	2000
Payments/payables to suppliers	634	566	525

Disbursement of Revenue	2002	2001	2000	1999	1998
Energy Costs	69.83	65.43	38.33	34.77	23.45
Operation, Maintenance & Administration (OMA)	8.71	9.57	13.65	14.56	16.09
Taxes	2.63	2.20	4.94	5.69	6.93
Depreciation	6.12	4.82	10.77	11.40	13.39
Finance charges	8.62	7.08	16.64	20.21	22.91
Payment to the Province	5.28	4.72	9.86	10.71	14.33
Restructuring costs	0.00	0.00	0.00	0.00	0.00
Customer profit sharing	0.00	3.93	0.00	0.00	1.25
ETO costs	0.00	0.00	0.00	0.39	0.00
Rate Stabilization Account (RSA)	-2.30	1.31	3.71	0.00	0.00
Retained earnings	1.11	0.94	2.10	2.27	1.65
	100.00	100.00	100.00	100.00	100.00

ECONOMIC PERFORMANCE INDICATORS

Operation, Maintenance & Administration Unit Cost, \$/GW-h					
	2002	2001	2000	1999	1998
Canadian utilities		12.12	8.11	7.75	7.81
BC Hydro	8.03	7.73	6.80	6.87	7.28

Operation, Maintenance & Administration unit cost measures the cost of operating, maintaining and administering the system per unit of energy delivered, including all labour and materials, per fiscal year. Canadian Utilities' data spans a calendar year whereas BC Hydro's data spans a fiscal year. For example, the data for BC Hydro's fiscal 2001 (April 2000 – March 2001) corresponds to the Canadian utilities' calendar 2000 (January 2000 – December 2000). The aggregate Canadian utilities data may fluctuate significantly from one year to the next due to annual changes in member utilities. All three indicators above correspond with GRI no. EC4.

EMPLOYEES

Wage Expense (Million Dollars)	2002	2001	2000
Total	492	438	386

The fiscal 2002 increase over fiscal 2001 was caused primarily by more hours worked due to a number of major projects, pay increases including pay equity, and retroactive pay. In addition, BC Hydro's Strategic Workplace Planning initiative increased the head count as BC Hydro is proactively preparing for the impacts of its aging workforce. Also, the cost of employee benefits increased, partially due to changes in what were previously provincially funded programs. This indicator corresponds with GRI nos. EC7 and 6.48.

Benefit Expense (Million Dollars)	2002	2001	2000
Total	123	105	93

The cost of employee benefits increased partially as a result of changes in what were previously provincially funded programs. This indicator corresponds with GRI nos. EC7 and 6.49.

Internal Energy Efficiency	2002	2001	2000	1999	1998
*Generation energy efficiency (percentage)		99.4	99.6	99.7	99.6
*Transmission & distribution energy efficiency (percentage)		96.5	96.4	93.9	92.2
Energy generated (GW-h) per FTE	7.27	8.58	9.36	9.5	9.9
Energy transmitted (GW-h) per FTE	11.75	12.77	13.16	12.43	11.09
Energy distributed (GW-h) per FTE	5.58	5.64	5.85	5.83	5.78

*Data generated over a calendar year.
FTE means Full Time Equivalent Employee.

Generation efficiency is calculated by dividing the gross amount of electricity generated at our facilities less the sum of electricity our facilities use and losses that occur during generation, by gross amount generated. It does not include imports or purchases. Transmission and Distribution (T&D) efficiencies are calculated by dividing the gross amount of power delivered by the T or D network by the amount of power supplied to it. It is less than 100 per cent due to cumulative losses from sending the power down our lines and converting or conditioning it at substations and pole top transformers. Energy generated, transmitted or distributed per employee is one measure of our productivity. Our averages are competitive with other Canadian utilities—public or private. The number of FTEs is the same for each measure. It is the weighted sum of all full-time and part-time employees of BC Hydro and all subsidiaries. The efficiency indices are not directly comparable to Canadian Electricity Association averages due to differences used in calculating them.

ECONOMIC PERFORMANCE INDICATORS

FUNDERS

Ratio of long term Debt to Retained Earnings	2002	2001	2000	1999	1998
Percentage	82.8	84.0	84.1	84.4	85.9

BC Hydro's long term debt comprises bonds, notes, and debentures, all of which have annual sinking fund requirements and revolving borrowings obtained under an agreement with the Province. BC Hydro's debt is either held or guaranteed by the Province. This indicator corresponds with GRI nos. EC8 and 6.47.

PUBLIC SECTOR

Sum of Provincial Taxes Paid	2002	2001	2000	1999	1998
In Million Dollars	166	174	172	173	177

These taxes are Corporation capital taxes and school taxes/grants. As a Crown corporation, BC Hydro is exempt from Canadian federal and provincial income tax. BC Hydro is provincially owned and therefore does not pay federal taxes. This indicator corresponds with GRI nos. EC10 and 6.51.

Taxes Per Unit of Energy Delivered					
Taxes Unit Cost (\$/GW·h)	2002	2001	2000	1999	1998
BC Hydro	5.75	5.96	6.43	6.82	8.09
Canadian utilities		2.85	4.11	4.42	5.51

Taxes unit cost includes water rental, school taxes and grants, and corporation capital taxes. Canadian utilities' data spans a calendar year whereas BC Hydro's data spans a fiscal year. For example, the data for BC Hydro's fiscal 2001 (April 2000 – March 2001) corresponds to the Canadian utilities' calendar 2000 (January 2000 – December 2000). The aggregate Canadian utilities data may fluctuate significantly from one year to the next due to annual changes in member utilities. This indicator corresponds with GRI nos. EC10, EC13, and 6.51.

INDIRECT ECONOMIC IMPACTS

Strategic Research & Development	2003 Plan	2002	2001	2000	1999
Expenditures (in million dollars)	3.4	3.7*	3.8	4.1	4.8

* Does not include funding to Research & Development (R&D) from the Sustainability Action Plan.

BC Hydro's Strategic R&D Program champions the long range discovery, development and application of new technologies that have the potential to enhance the strategic position, competitiveness and sustainability of BC Hydro's generation, transmission and distribution lines of business. Examples include development of high pressure hydrogen storage and dispensing for hydrogen-powered vehicles, technologies for asset life extension and condition monitoring, technologies for increasing the reliability and utilization of generation and power delivery assets, and technologies for improving customer power quality and utilization of electricity. This indicator corresponds with GRI nos. EC12, EC16 and 6.45.

Aboriginal Business Partnership Program	2002	2001	1999
No. of participants	33	26	8
Expenditures (in thousands of dollars)	300	150	75

BC Hydro has a number of programs to support the economic and social development of aboriginal communities. For example, the Aboriginal Business Partnership Program helps aboriginal businesses to grow and develop. This indicator corresponds with GRI nos. EC12, HR17, LA8 and 6.74.



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