



BC HYDRO SERVICE PLAN

For Fiscal Years 2004/2005 to 2006/2007

February 2004

Chair, BC Hydro
Vancouver
February 2004

The Honourable Richard Neufeld
Minister of Energy and Mines
Government of British Columbia

Dear Minister,

I am pleased to submit BC Hydro's Service Plan for the fiscal years 2004/05 to 2006/07.

2003/04 SERVICE PLAN RESULTS

BC Hydro made significant progress in 2003/04, meeting or exceeding the targets for all measures except "reliability". Despite being below target, the overall level of reliability and customer satisfaction with reliability remains high. Reliability is below target largely due to events beyond BC Hydro's control, such as major weather events and the McLure forest fire in the B.C. Interior. BC Hydro continues to deliver quality performance to meet financial, social and environmental bottom lines.

In terms of reporting, relative to other Canadian and international organizations and utilities, BC Hydro's reputation and deliverables as a triple bottom line performer remain strong. For more information about BC Hydro's current performance, please refer to BC Hydro's most recent performance report that is published on its web site: <http://www.bchydro.com/info/reports/reports851.html>.

STRATEGIC ISSUES

BC Hydro's rates have remained unchanged for 10 years and have not kept pace with inflation. The BC Utilities Commission (BCUC) denied the last application for a rate increase in February 1994, and BC Hydro rates were subsequently frozen by a succession of government enactments. During this period, BC Hydro's generating capability exceeded domestic demand. Gross energy requirements to serve domestic load have now grown beyond the capability of BC Hydro's low-cost Heritage resources. As a result, BC Hydro will meet annual load growth through the acquisition of new resources. BC Hydro has an extensive conservation program (Power Smart) in place to help offset expected load growth.

BC Hydro can no longer keep pace with increasing cost pressures while maintaining and improving service levels and meeting the objectives of the Provincial Government's Energy Plan. The cornerstones of the Energy Plan are: continued low electricity rates and public ownership of BC Hydro's core assets; a secure, reliable supply of energy; more private sector opportunities in wholesale electricity supply; and environmental responsibility. Cost pressures over the last 10 years were offset by net trade revenues and

reduced financing costs. Additional benefits from these two sources are not expected. The most significant cost pressures over the next three years include:

- An increase in cost of energy as the capacity of low-cost Heritage resources has been reached and new sources of energy to meet demand growth are more costly. To mitigate this increase, BC Hydro has adopted competitive procurement through tendering to capture the benefits of a competitive marketplace on behalf of its customers. BC Hydro's resource procurement strategy puts particular emphasis on ensuring that customers have reliable, long-term supply with limited exposure to the volatility of the market.
- An increase in maintenance and capital expenditures to ensure long term health of BC Hydro's assets as they age. These expenditures are necessary for BC Hydro to maintain its reliability and service levels, and to ensure low rates over the long term.
- An increase in pension costs due to BC Hydro's demographic changes and to new accounting rules that pertain to all forms of post-retirement benefit plans.
- An increase in demand-side management program (Power Smart) spending.
- An increase in finance costs (in 2005/06) due to an increasing interest rate environment and increasing cash flow requirements to finance capital expenditures.
- An increase in costs related to the provision of transmission services.
- An increase in the cost of meeting environmental regulations and conducting negotiations with First Nations and building mutually beneficial relationships with First Nations and communities.

KEY INITIATIVES

BC Hydro has been working to implement components of the Provincial Government's Energy Plan, introduced in late 2002. The Energy Plan sets out a number of policy actions that will shape BC Hydro's direction into the future. BC Hydro's goal is to support Energy Plan direction to serve the best interests of its customers, its shareholder, and all British Columbians.

The major activities underway that support Energy Plan direction are:

- **Regulation:** BC Hydro has been returned to full rate regulation by the independent regulator, the BC Utilities Commission (BCUC). BC Hydro filed a revenue requirement application with the BCUC on December 15, 2003, requesting rate increases of 7.23 per cent effective April 1, 2004 and an additional 2.00 per cent effective April 1, 2005. The BCUC will make a decision on the rate increases subsequent to the hearing.
- **Heritage Contract and Stepped Rates:** The process to establish a Heritage Contract and Stepped Rates is nearing completion. Government accepted the BCUC-recommended Heritage Contract to lock in the value of BC Hydro's existing low-cost electricity for British Columbians. A stepped rate structure will encourage industrial customers to conserve electricity and allow them to access a portion of the power they need from suppliers other than BC Hydro.
- **British Columbia Transmission Corporation:** The British Columbia Transmission Corporation (BCTC) was officially formed as a provincial Crown corporation in May 2003 to provide equal access to the transmission system for all users and ensure continued electricity trade. While BC Hydro continues to own the transmission assets, BCTC is responsible for planning, maintaining,

managing and operating the BC Hydro-owned transmission system. BC Hydro is currently in phase one of a two-phase transition.

- **Resource Strategy:** BC Hydro is developing the 2004 Integrated Electricity Plan, which will examine its long-term supply and demand-side resource options to ensure that BC Hydro can meet customers' future needs in a way that reflects Energy Plan direction.

BC Hydro expects to make significant progress on its strategic initiatives as it strives to achieve the 2004/05 to 2006/07 Service Plan goals.

Yours respectfully,

A handwritten signature in black ink, appearing to read "Larry Bell". The signature is written in a cursive, slightly slanted style.

L. I. (Larry) Bell
Chair

ACCOUNTABILITY STATEMENT

The 2004/05 to 2006/07 BC Hydro Service Plan was prepared under our direction in accordance with the Budget Transparency and Accountability Act. We are accountable for the contents of the plan, including the selection of performance measures and targets. The plan is consistent with the Provincial Government's Strategic Plan 2003/04 to 2005/06. All significant assumptions, policy decisions, and identified risks as of January 2004 have been considered in preparing the plan. We are accountable for ensuring BC Hydro achieves its specific goals and objectives identified in the Service Plan.



Larry I. Bell
Chair



Bob G. Elton
President and Chief Executive Officer

BC Hydro's Service Plan for Fiscal Years 2004/2005 to 2006/2007

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1. INTRODUCTION

This is the fourth annual Service Plan prepared by BC Hydro for presentation to the B.C. Legislature under the *Budget Transparency and Accountability Act* (BTAA). This plan outlines BC Hydro's goals and objectives, which align with the company's commitment to sustainability. It also includes the results BC Hydro expects to achieve in the three-year period from 2004/2005 to 2006/2007, and provides key strategies that BC Hydro will implement to continue to deliver highly reliable, low-cost electricity to British Columbians in an environmentally and socially responsible manner. As internal and external environments change, BC Hydro will continue to refine its strategic objectives and provide performance measures by which the Legislature and the public will be able to track its progress over time.

The service plan is divided into nine main sections:

- **LETTER TO MINISTER OF ENERGY & MINES** communicates a high-level overview of BC Hydro, its successes to date and issues the company faces.
- **ACCOUNTABILITY STATEMENT** affirms management's accountability for managing and reporting on performance and endorses accuracy of content by BC Hydro's Chair and BC Hydro's President & CEO.
- **ORGANIZATIONAL OVERVIEW** provides a summary description of BC Hydro and its primary business activities.
- **STRATEGIC CONTEXT** explains BC Hydro's vision, mission, values, and its operating environment.
- **ALIGNMENT WITH GOVERNMENT STRATEGIC PLAN** indicates how this Service Plan aligns with the Provincial Government's goals and objectives.
- **GOALS, OBJECTIVES, KEY STRATEGIES, PERFORMANCE MEASURES AND TARGETS** outlines BC Hydro's strategic direction over the next three years, along with how this direction will be monitored and translated into action. It also provides an explanation of changes made from the previous year and, where available, benchmarks against other organizations.
- **OPERATING SEGMENTS SUMMARY** provides summary information about BC Hydro's Lines of Business (LoB), including mandate, strategic context, goals and objectives, key strategies, performance measures and targets.
- **SUMMARY FINANCIAL OUTLOOK** outlines the revenue expectations and expenditure plans for BC Hydro's 2004/05, 2005/06 and 2006/07 fiscal years, along with key forecasting assumptions, risks, and sensitivities.
- **MAJOR CAPITAL PROJECTS PLAN** outlines BC Hydro's intended commitments in excess of \$50 million towards the capital cost of projects during the 2004/05, 2005/06 and 2006/07 fiscal years.

The information contained in this report is current up to the end of January 2004. However, as BC Hydro returns to regulation by the BCUC, some of the performance measures may change over the three-year period covered by this plan. Additionally, BC Hydro's net income is highly dependent on snowpack conditions and resulting inflows into its reservoirs, and energy prices in western North American markets. The 2004/05 income numbers in this Service Plan are the January 1, 2004 snowpack levels. Reliable inflow data is not available until late winter, typically March 1. Therefore the 2004/05 income forecast is subject to change.

2. ORGANIZATIONAL OVERVIEW

(A description of the legislative statutes that enable BC Hydro's operations is provided in Appendix A.)

BC Hydro is responsible for ensuring that over the long term there is sufficient reliable, low-cost electricity to fuel economic growth in British Columbia. BC Hydro is one of the largest electric utilities in Canada serving more than 1.6 million customers in an area containing over 94 per cent of British Columbia's population. BC Hydro endeavours to provide energy solutions to its customers in an environmentally and socially responsible way by balancing British Columbians' energy needs with the concerns of the environment and communities in which it operate. Through the efficient and reliable supply of electricity, BC Hydro supports the development of British Columbia. It has constructed a world-class integrated hydroelectric and thermal generation system of close to 11,500 megawatts of generating capacity. The vast majority (about 90 per cent) of this generation is based on clean, renewable hydroelectricity. Due to this efficient, reliable system, BC Hydro is able to offer customers some of the lowest electricity rates in the world.

Today, BC Hydro's primary business activities are the generation and distribution of electricity. Between 43,000 and 54,000 gigawatt hours of electricity is generated annually from 31 hydroelectric facilities, two gas-fired thermal power plant and one combustion turbine station. Electricity is delivered safely and dependably to customers through an interconnected system of over 74,500 kilometres of publicly owned transmission and distribution lines. The transmission assets continue to be owned by BC Hydro; however the management and operation of the transmission system is now the responsibility of the new, publicly owned British Columbia Transmission Corporation (BCTC). BC Hydro is extensively involved in energy trade outside the province through its wholly owned power marketing subsidiary, Powerex. Powerex has grown to be a leading marketer of wholesale energy products and services in western Canada and the western United States.

Using the Energy Plan as a guide, BC Hydro is currently in the process of envisioning and articulating what type of Crown corporation it will become in the long term. It is approaching this process in accordance with its long-term principles and values. BC Hydro's principles are supplying reliable electricity at a low cost, serving its customers' needs, operating in a sustainable way, and achieving all this in a cost-effective manner. BC Hydro's values are accountability, integrity, service, and teamwork. Key elements of building such a company include:

- Engaging employees and creating a value-based workplace;
- Embedding safety in all activities;
- Building and maintaining community trust to ensure maximum flexibility to operate;
- Enriching the customer experience through a focus on service and reliability;
- Responsibly managing BC Hydro's public assets;
- Maintaining environmental quality in and around operations; and
- Creating value for the shareholder and customers over the long term.

GOVERNANCE STRUCTURE

BC Hydro is responsible to the Minister of Energy and Mines through a Board of Directors appointed by the Government. The current Board consists of 10 directors who have been appointed by the Lieutenant-Governor in Council. While directors are selected to reflect the industrial, economic, social, ethnic and regional diversity of our province, appointees will include persons with business, utility and energy industry experience, to ensure the appropriate balance of expertise necessary for overseeing a large commercial enterprise.

The directors' mandate is to be stewards of the corporation. They are responsible for overseeing the conduct of business, supervising management and ensuring that all major issues affecting the business affairs of the corporation are given proper consideration. The Board delegates responsibility for the day-to-day leadership and management of the corporation to the Chief Executive Officer. In November 2003, the position of Chair & CEO was separated and a new President & CEO, Mr. Robert Elton, was selected to replace Mr. Larry Bell, who will continue in his role as Chair of the Board of Directors.

The Board of Directors appoints Committees to deal with specific matters. Committees generally meet quarterly in conjunction with Board meetings. The Committee Chair reports at each Board meeting and when necessary takes forward recommendations for approval. Currently there are four standing Committees of the Board of Directors.

- The Executive Committee has a unique responsibility and only meets in special circumstances. It has the full powers of the Board to act in situations when, for timing reasons, a Board meeting cannot be scheduled.
- The Audit and Risk Management Committee assists the Board of Directors in fulfilling its obligations and oversight responsibilities relating to the audit process, financial reporting, the system of corporate controls, governance of BC Hydro's pension plans, and various facets of risk management. In the process of overseeing BC Hydro's audit procedures, the Committee has unrestricted access to BC Hydro's personnel and documents as required.
- The Corporate Governance Committee assists the Board of Directors by ensuring that BC Hydro develops and implements an effective approach to corporate governance that enables the business and affairs of BC Hydro to be carried out, directed and managed with the objective of enhancing shareholder value.
- The Human Resources Committee assists the Board of Directors in fulfilling their obligations relating to senior management human resource and compensation issues.

The Board of Directors also appoints Advisory Committees. The Peace River/Williston Reservoir Advisory Committee provides advice and facilitates two-way communication between the Peace/Williston community and BC Hydro. The Advisory Committee Chair is a Board member, and Committee membership is composed of local community leaders, providing equitable representation from geographical and special interest groups within the region.

As the need arises, the Board appoints ad hoc Task Groups to deal with specific issues. Once a Task Group has completed its work and makes its report or recommendation to the Board of Directors, it is disbanded.

In its desire to act, and be seen to act, as an ethical corporation, BC Hydro and its subsidiaries have adopted a Director and Employee Code of Conduct. The Code also includes a section describing the standards of conduct expected of the Corporation's suppliers, consultants, contractors and business associates.

INTERNAL BUSINESS MODEL

BC Hydro operates under a Lines of Business (LoB) model, consisting of the Generation and Distribution LoBs and the Engineering and Field Services LoBs, which provide services to Generation, Distribution and BCTC. Although BC Hydro is internally organized by an interdependent LoB structure to provide the management focus to deliver reliable, low-cost electricity to its customers, externally the company is still a consolidated, integrated Crown utility. BC Hydro also operates a number of subsidiaries, the largest of which is Powerex Corp. Detailed information about the LoBs and Powerex is contained in the Operating Segment Summary section starting on page 26.

Powertech is another subsidiary which, while not large enough to be considered a separately reportable segment, is significant in the value it brings to BC Hydro. Powertech, which is essentially BC Hydro's research and development arm, solves technical equipment and systems problems.

RELATIONSHIP DEVELOPMENT

BC Hydro must build and maintain strong and healthy relationships with several third parties in order to deliver energy to its customers. The most significant parties are:

TRANSMISSION CORPORATION

The British Columbia Transmission Corporation (BCTC) officially began operation on August 1, 2003, following the government's designation of a Transition Agreement and an Employee Transfer Agreement. For the period August 1, 2003 until BCTC has obtained a BCUC-approved transmission tariff and becomes financially independent, BCTC will operate BC Hydro's Wholesale Transmission Service tariff as an agent of BC Hydro. BCTC is a separate, publicly owned Crown corporation with its own Executive and Board of Directors. It is responsible for ensuring open and non-discriminatory access to the B.C. transmission system, and is intended to enable B.C. to facilitate meeting the transmission service requirements for participation in the Western North America electricity trade markets. BC Hydro continues to own the transmission assets. About 260 BC Hydro employees from the Transmission LoB were permanently transferred to BCTC, effective August 1, 2003.

ACCENTURE BUSINESS SERVICES OF B.C.

In early 2003 BC Hydro signed a 10-year, \$1.45 billion agreement and on April 1, 2003, Accenture Business Services of British Columbia (ABSBC) assumed responsibility for a number of BC Hydro's back-office functions for the purposes of maximizing flexibility, focus, and cost-effectiveness. Approximately 1600 employees were permanently transferred to ABSBC and they will provide support services, customer care, human resource services, building and office services, payroll and accounts

payable services, financial systems services, and purchasing services on a contractual basis. ABSBC will also provide support services and customer care for other customers in the utilities services market in North America. BC Hydro expects reductions in support service costs as a result of this outsourcing arrangement.

INDEPENDENT POWER PRODUCERS

In support of one of the cornerstones of the Provincial Government's Energy Plan, BC Hydro continues to work and build relationships with Independent Power Producers (IPPs) to increase opportunities for IPPs within the province. BC Hydro has issued a number of Calls For Tender to acquire additional energy at the least cost and meet the Energy Plan voluntary target of 50 per cent of new energy coming from clean resources, as well as ensuring long-term reliability.

CUSTOMERS

Being a commercially focused Crown corporation includes driving value to BC Hydro's customers through focusing on quality service. Achieving quality service begins with developing an understanding of customers' needs and expectations, then building and maintaining lasting, strong relationships with them. Service providers such as ABSBC and the BCTC now deliver some key elements of customer service on behalf of BC Hydro. BC Hydro is accountable for strategically managing and coordinating all customer interfaces in a way that creates service excellence while keeping rates low.

While BC Hydro has long enjoyed high satisfaction ratings with its customers, continuing to achieve high satisfaction under a new business structure requires new ways of focusing on quality service. BC Hydro is refreshing the corporation's vision for serving customers, clarifying customer needs and expectations, and identifying key priorities for refining programs and offerings to customers. Through Service Level Agreements with external service providers, BC Hydro is directing the services and levels of performance required to meet customers' needs and expectations, and is closely monitoring performance to ensure they are met. As well, BC Hydro maintains face-to-face relationships with its large industrial and commercial customers through its Key Account Managers, and offers all customers ways to maximize value from their electricity use through Power Smart programs. It is also forging strong business relationships with independent power producers to ensure the long-term, reliable supply of electricity for customers.

3. STRATEGIC CONTEXT

MANDATE

As directed by the *Hydro and Power Authority Act*, BC Hydro's mandate is to generate, manufacture, distribute and supply power, upgrade its power sites, and to purchase power from or sell power to a firm or person.

In December 2000 BC Hydro committed to becoming a sustainable energy company and adopted a "triple bottom line" approach to managing its business in support of economic, environmental and social responsibility. BC Hydro's vision, mission, and objectives reflect this commitment, and the company measures its performance in alignment with internationally recognized sustainability principles. BC Hydro recognizes that its commitment to sustainability means planning for the long term and that key sustainability activities performed now have long-term effects.

VISION

BC Hydro's vision is to be the leading sustainable energy company in North America.

MISSION

BC Hydro's mission is to provide energy solutions to its customers in an environmentally and socially responsible manner. (BC Hydro's mission will be revisited this year.)

VALUES

BC Hydro's values are:

- **Accountability** – we take responsibility for our actions
- **Integrity** – we are fair and honest, open and straightforward
- **Service** – we seek solutions and build relationships
- **Teamwork** – we work together to achieve results

PLANNING CONTEXT, STRATEGIC ISSUES, KEY RISKS

BC Hydro faces strategic issues and risks related to external events that are beyond its control. Additionally, aspects of its internal business environment must also be managed. The following is a discussion from an overall corporate perspective of the key strategic issues and key risks associated with BC Hydro's external and internal business environments. Further discussion of external and internal issues and risks is also included for BC Hydro's LoB later in this report.

EXTERNAL BUSINESS ENVIRONMENT

Events within British Columbia and across North America continue to change the business and social environment in which BC Hydro operates. The following discussion identifies some of the major issues that influence the company's operations.

Energy Market Development

B.C. Energy Plan

A major development in the B.C. energy sector was the release of the Energy Plan, *Energy for our Future: A Plan for B.C.*, in late November 2002. The four cornerstones of the Plan are:

- low electricity rates and public ownership of BC Hydro;
- secure, reliable supply;
- more private-sector opportunities; and
- environmental responsibility and no nuclear power sources.

The Plan directs BC Hydro's return to active BC Utilities Commission (BCUC) oversight through the first revenue requirement hearings in 10 years, the separation of the transmission management business to the British Columbia Transmission Corporation (BCTC), and the establishment of a Heritage Contract between the Generation and Distribution Lines of Business.

Resource Acquisition

BC Hydro has a responsibility to ensure sufficient energy is available over the long term to meet demand. To meet the growth in electricity demand, estimated to be 1.7 per cent per year, BC Hydro has developed a portfolio of energy acquisition initiatives. These choices will also allow BC Hydro to meet the obligation to serve at the least cost, and ensure that the Energy Plan voluntary target of 50 per cent of new supply from clean sources is met.

Key initiatives in the resource acquisition strategy include:

- **Demand Side Management** – targeting total additional annual energy savings of 3,500 gigawatt hours per year by 2012/13.
- **Resource Smart Programs** – targeting total additional energy of 1,100 gigawatt hours per year by 2012/13.
- **Customer-Based Generation** – long-term contracts established in the past year provide for 500 gigawatt hours per year to be in service by September 2006.
- **Green Energy Projects** – to date, 40 projects with long-term contracts will provide approximately 2,800 gigawatt hours per year to be in service by September 2006. (These totals do not reflect green projects within Customer-Based Generation.)
- **Vancouver Island Call for Tenders** – targeting total energy acquisition of an additional 1,200 to 2,100 gigawatt hours per year by 2007.

To meet a shortfall of dependable capacity expected to arise from the planned retirement of the high voltage current (HVDC) system, BC Hydro had proposed to build a 265 megawatt natural gas-fired electricity generation plant at Duke Point in Nanaimo. BC Hydro made application for a Certificate of Public Convenience and Necessity (CPCN) to the British Columbia Utilities Commission (BCUC) and participated in hearings before the BCUC during the summer of 2003. The BCUC agreed that there was a need for new dependable capacity on Vancouver Island.

As offered by BC Hydro, and encouraged by the BCUC, a Call For Tenders (CFT) for capacity and associated energy on Vancouver Island has been initiated. This process is planned to determine and make recommendations on the most cost-effective, long-term capacity supply option for Vancouver Island. The outcome of the CFT will determine whether a private-sector development of the Vancouver Island Generation Project (VIGP) assets or other projects will be developed. At that time schedules and costs for the VIGP and Georgia Strait Crossing (a joint project sponsored by BC Hydro and Williams Gas to construct a natural gas pipeline from the Huntingdon/Sumas supply hub to Vancouver Island to support VIGP) projects may be reviewed.

Revenue Requirement Hearing

BC Hydro filed a revenue requirement application with the BCUC on December 15, 2003, requesting rate increases of 7.23 per cent the first year and 2.00 per cent the second year. On January 23, 2004, the BCUC approved the 2004/05 rate increase of 7.23 per cent on an interim basis, effective April 1, 2004. Public hearings on BC Hydro's application will begin on May 17, 2004 to allow registered intervenors and other interested parties to gain a more in-depth and comprehensive understanding of the revenue requirements application and engage in discussion and debate before a final decision is made. The BCUC will make a final decision on the application subsequent to the hearing. If the BCUC decides to not approve the full amount of the requested increase, the difference will be fully refunded with interest to BC Hydro customers. Rates have not increased over the past 10 years, but operating costs have continued to rise. There is a financial risk to manage if the full amount of the requested rate increase is not approved by the BCUC.

Environmental and Social Issues

Energy Infrastructure Site Location Issues

Multiple environmental and social issues and the ensuing increased regulatory requirements continue to challenge the site location of new and existing generating plants and wires. Site issues increase lead times for new supply, increase the risk that resources do not receive approvals, and increase costs. There are often conflicts between the need to develop reliable, affordable electricity infrastructure by locating power plants close to urban load centres versus concerns over the plants' impact on local air quality. As directed by the Energy Plan, a committee of Fraser Valley MLAs was formed to lead a technical review of the Burrard Generating Station. As well, green projects are also affected by regulatory challenges due to public concern about aesthetics (buildings and wires), local economic benefits, and recreational and environmental impacts. Site risks are an issue for Independent Power Producers (IPPs), and since BC Hydro is relying on IPPs for new sources of energy, the risk is shared by BC Hydro.

First Nations Issues

The need for BC Hydro's proactive approach to First Nations issues continues to grow with changes in aboriginal law, government policy and First Nations expectations. BC Hydro's ongoing commitment to building mutually beneficial relationships mitigates potential risks inherent to the extensive resource-based operations. The company's corporate *Statement of Principles for Relations with Aboriginal Peoples* guides employee interactions with First Nations to improve system reliability, resolve outstanding grievances, avoid lawsuits and direct action, and improve public perception and consent for BC Hydro to operate. Specific strategies include cross-cultural training, meaningful consultation,

interest-based negotiations, community support, business development and involvement in treaty negotiations. Examples of where these principles and strategies are applied include water use planning, rights-of-way management, project assessments, environmental protection and regulatory processes.

Environmental Regulatory Developments

In June 2003, the Species at Risk Act (SARA) was enacted, significantly expanding the federal scope of involvement in wildlife matters on public and private lands. The federal requirements protecting species at risk and critical habitat have the potential to affect how hydroelectric systems are operated and where they are built. Other environmental regulatory developments to note include water system operations and protection (the Drinking Water Protection Act), new contaminated site regulations, PCB release regulations, and pressures to apply the Heritage Conservation Act to reservoir shorelines.

Greenhouse Gas Management

Climate change continues to be a pivotal environmental issue for the energy sector due to its potential to increase costs and its negative impacts to the environment. Greenhouse gas (GHG) regulation could cause a moderate realignment of price signals within the sector over time, affecting both low and high emitting generation. Canada ratified the Kyoto Protocol on GHG emissions in 2002 and began designing regulations covering the electricity sector in 2003. GHG regulation would mean higher costs for thermal generation and increased revenue for emissions-free generation. Emitters would be required to hold permits equal to their emissions, while renewables and demand-side management will likely be awarded some level of “credit” in relation to the emissions they avoid.

Relatively speaking, BC Hydro would face only moderate costs from regulation, due to its significant hydroelectric base. BC Hydro is actively engaged in the debate about regulatory design. Issues for BC Hydro that arise from potential GHG regulation include ownership issues of GHG emissions and credits, the pass-through of additional regulatory costs, risk management around emission liabilities, R&D efforts, and, in cooperation with Powerex, emissions trading opportunities. To support its Environmental bottom line, BC Hydro has made voluntary commitments, which include offsetting 50 per cent of the Island Cogeneration Project’s GHG emissions, and will continue to report annually on emissions.

North American Electricity Markets

In trade market developments, recent events, such as the lack of success in reforming California’s electricity market, the collapse of Enron, and an overbuild of electricity supply in the Pacific Northwest, have caused investors to abandon trade market and merchant generation companies. As a result, there has been a return to traditional trading markets focused on balancing inter-regional supply and demand. There has also been an increase in credit risk due to the turmoil in the energy sector.

Eastern Blackout

Last summer’s blackout that affected Ontario and the Northeastern U.S. has brought increased scrutiny to integrated electricity grids. In B.C. most of the generation is hydroelectric and consequently can be brought on line fairly rapidly in the event of a shutdown (unlike coal, nuclear or gas generation).

BCTC is actively participating in investigations of the Northeast blackout. BCTC will evaluate all recommendations arising from the investigations and implement improvements as necessary to continue to secure the reliability of B.C.'s transmission systems. BC Hydro's role is to ensure that its generation and distribution assets are properly maintained so as to ensure continued reliability.

INTERNAL BUSINESS ENVIRONMENT

Although a regulated monopoly within British Columbia, BC Hydro is not insulated from the market and operating challenges experienced by other energy companies. The key cost drivers putting pressure on rates are:

- Increased costs of energy, including new energy supply;
- Increased costs to maintain reliability of the system, given aging assets;
- Increased costs related to the provision of transmission services via the British Columbia Transmission Corporation;
- Increased costs related to ensuring safety;
- Increased costs relating to management of environmental and First Nations issues;
- Increased pension costs and post-retirement benefits;
- Increased finance costs; and
- Increased demand-side management expenditures.

Some of the challenges over the next few years that will have measurable implications for BC Hydro, either directly or indirectly, are noted below.

Integrated Electricity Plan

BC Hydro is developing its 2004 Integrated Electricity Plan (IEP), which will detail how it will acquire new energy sources to reliably meet customers' electricity needs over the next 20 years. The IEP is expected to be completed by spring 2004. The action plan portion of the IEP has been filed as part of the 2003 revenue requirements application.

BC Hydro is developing the new IEP within the parameters of the Provincial Government's Energy Plan. One key aspect of the Plan is that most new supply will come from the private sector through calls for generation. This acquisition approach means that BC Hydro cannot by itself define one "preferred portfolio" or focus on a number of "shelf-ready" projects. However, through the call process, BC Hydro can define the type of product it requires, design the terms of acquisition and expect to access resources at prevailing market prices that reflect the underlying allocation of risk between the supplier and BC Hydro as buyer. In terms of total cost (economic, environmental and social) and reliability, the purpose of the IEP is to provide a directional road map that considers factors likely to influence the amount and timing of long-term demand and supply requirements.

Heritage Contract and Stepped Rates

A Heritage Contract has been established, and will be effective on April 1, 2004. The contract will lock in the benefits of historic investments in BC Hydro's flexible, low-cost generation resources for British Columbians. This low-cost power will be blended with new, higher-cost generation as it is added, ensuring rates remain as low as possible.

Stepped Rates refers to a structure under which large industrial customers are charged a lower rate for an initial quantity of the electricity they consume, and a second, higher rate for additional consumption. A stepped rate structure will encourage industrial customers to conserve electricity and allow them to access a portion of the power they need from suppliers other than BC Hydro.

Management of Service Contracts

A key aspect of BC Hydro's move to a LoB model and outsourcing of services represents a shift in business focus to managing commercially based service contracts. Such management requires a different skill set as the way BC Hydro performs work and delivers its services has changed. BC Hydro and Accenture launched Accenture Business Services of B.C. (ABSBC) in April 2003. Through Service Level Agreements, BC Hydro has outsourced its support services and customer care to ABSBC to reduce costs. BC Hydro is also managing contractual relationships with an increasing number of Independent Power Producers (IPPs) and significant contracts with the British Columbia Transmission Corporation (BCTC).

Asset Health and Reliability

BC Hydro's generation and wires assets have reached an age where maintenance and capital spending need to increase if the company is to sustain operational reliability and triple bottom line performance. The company's ability to meet these capital demands could be constrained by a number of factors, including reduced trade income, or unfavourable rate decisions arising from the upcoming revenue requirement hearings before the BCUC. A customer-based reliability strategy is being developed to better understand customers' needs and expectations. An overall asset maintenance strategy based on equipment health rating, reliability centred maintenance and performance testing is under development in Generation to ensure that the cost and performance of the Heritage assets remain first-quartile.

Workforce Planning

BC Hydro's people are critical to ensuring that it is able to continue to provide reliable electricity over the long term. Just as BC Hydro needs to plan long term with respect to supply and demand issues and asset health, BC Hydro also needs to plan relative to its workforce. Over the next five years, 35 per cent of all regular-status BC Hydro employees are eligible to retire with an unreduced pension. This group consists of 39 per cent of all trades, technologist, and technicians, 42 per cent of managers, and 32 per cent of engineers. The most immediate risks are concentrated in core operations in Generation, Distribution, Engineering, and Field Services. In 2002/03, 24 per cent of eligible employees chose retirement, up from the three-year average of 21 per cent. The transfer of employees to BCTC did not significantly affect this percentage.

Strategic Workforce Planning

To mitigate skills shortages, a strategic workforce planning (SWfP) initiative has been underway since 2000/01. Focusing on early replacement of key occupations, 59 of the 81 SWfP positions were filled, meeting the target for the third quarter of 2003/04. This brings the total SWfP portfolio to 284. The key focus is on attraction, retention, succession planning and leadership development.

Pre-Apprenticeship Courses

BC Hydro is participating in the development of a pre-apprenticeship program for Power Line Technicians in conjunction with the International Brotherhood of Electrical Workers (IBEW), the Electrical Industry Training Institute (EITI), the Line Contractors Association (LCA) and Kwantlen University College. The first class graduated in 2003 and a second class is planned for 2004.

Contracting Out

BC Hydro uses external contractors to supplement its workforce. Work is assigned using a competitive bidding process. The majority of resources are afforded to line and vegetation management work. Contractors help meet the inevitable ebbs and flows in workload driven by the provincial economy and BC Hydro's asset investment strategies.

Leadership Legacy Program

The Leadership Legacy program was designed in response to the company's need to have leadership bench strength for executive-level positions. Fifteen high-performing candidates with the interest and potential to take on the most senior roles in the company were identified. Those candidates then went through extensive assessments, which were used to support their ongoing development.

Safety and Health

To implement the Safety Policy, BC Hydro created and implemented a Safety Management System (SMS). The SMS is based on a continuous improvement management process and has been developed to incorporate the safety management expectations of the Workers' Compensation Act and Regulations. The project, completed in October 2003, also included the orderly transitioning of prescriptive safe work procedures (Occupational Safety & Health Standards) from a central corporate accountability to the LoBs.

Recently the Workers' Compensation Act and Regulation expectations were augmented by new federal legislation, Bill C-45. This Criminal Code amendment defines accountabilities and holds both organizations and individuals criminally accountable for not fulfilling their occupational safety duties. In 2004/05, special attention will be paid to ensure that all supervisory staff fully understand their accountabilities, both provincially and federally and how their application of the SMS requirements mitigates legal risk to both the company and themselves.

Within the overall framework of the SMS, line management is free to develop and implement a safety plan that is specific to the needs of its workforce. Beginning in 2004/05, the frequencies of corporate safety audits will transition from the "cyclical assurance" approach currently used (every BC Hydro location once every two years) to a more "risk-based" approach. This "risk-based" approach will

establish mandatory audit frequency for departments through a formula that considers many indicators of safety performance, including injury frequency, injury severity, previous audit results (include the time since the last audit) and any other special circumstances.

Information Technology Infrastructure

Information technology (IT) infrastructure contributes to the efficient management of BC Hydro. BC Hydro's enhanced commercial focus increases demands on IT systems to provide the necessary commercial and business information. Over the last 24 months, three major system implementations have been completed. Additional investment related to stabilization and value enhancement will be required over the next few years.

4. ALIGNMENT WITH GOVERNMENT STRATEGIC PLAN

BC Hydro's goals and objectives link with and support the Province's three goals and some of the 10 specific objectives described in the 2003/04 to 2005/06 British Columbia Government Strategic Plan.

<p style="text-align: center;">British Columbia Government Strategic Plan 2003/04 to 2005/06: Restoring Hope and Prosperity</p> <p>GOAL 1: A STRONG AND VIBRANT PROVINCIAL ECONOMY</p> <ul style="list-style-type: none">• A thriving private sector economy that creates high-paying job opportunities.• The fastest growing technology industry in Canada.• Greater equity and equality for British Columbia in Canada.• Responsible, accountable management of public resources and tax dollars. <p>GOAL 2: A SUPPORTIVE SOCIAL FABRIC</p> <ul style="list-style-type: none">• A top-notch education system for students of all ages.• High-quality public health care services that meet all patients' needs, where they live and when they need it.• Better services for children, families and First Nations.• The most open, accountable and democratic government in Canada. <p>GOAL 3: SAFE, HEALTHY COMMUNITIES AND A SUSTAINABLE ENVIRONMENT</p> <ul style="list-style-type: none">• Safer streets and schools in every community.• A leading edge forest industry that is globally recognized for its productivity and environmental stewardship.
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Goal 1: A strong and vibrant provincial economy

(supported by BC Hydro's Economic and Social bottom line objectives)

BC Hydro supports economic growth in the province by providing low-cost, reliable electricity in accordance with the provincial Energy Plan. This enhances the competitiveness of industries and promotes a strong and vibrant provincial economy. In keeping with the Government's objective to provide responsible, accountable management of public resources and tax dollars, BC Hydro's objective to improve financial performance targets first-quartile costs when compared with similar utilities and strives to deliver stable earnings at the allowed Return on Equity. BC Hydro also responsibly manages public resources by maximizing the value of surplus capability. By procuring energy from Independent Power Producers in the province and through support of customer-based generation, BC Hydro contributes to the development of private-sector investment in generation. BC Hydro's provision of high-quality, long-term, reliable electricity supports the Government's objective to have the fastest-growing technology industry in Canada.

Goal 2: A supportive social fabric

(supported by BC Hydro's Social bottom line objectives)

BC Hydro provides a dividend and other payments every year to the Government, which help enable the Government to provide the supportive social fabric in B.C. The company also offers funding to special projects that align with its corporate objectives as part of its Corporate and Regional Donations program, and scholarship programs for students entering post-secondary education.

Goal 3: Safe, healthy communities and a sustainable environment

(supported by BC Hydro's Social and Environmental bottom line objectives)

One of BC Hydro's objectives is good environmental and social performance by progressively managing priority environmental and social issues. Strategies that support this objective are to embed a sustainability perspective into strategic planning, decision-making and culture, and to continue to issue calls for green and sustainable resources in alignment with the Government's voluntary 50 per cent clean energy target for new electricity supply. By developing the skills and knowledge of BC Hydro's approximately 4,700 employees and contractors, and by providing a safe, healthful, harassment-free workplace, BC Hydro's objective of a skilled workforce and a safe workplace promotes safe communities in B.C.

5. GOALS, OBJECTIVES, AND KEY STRATEGIES, PERFORMANCE MEASURES AND TARGETS

BC Hydro will accomplish its vision of being North America's leading sustainable energy company by building on its solid base of clean, renewable hydropower assets, by employing a skilled and capable workforce, by delivering excellent financial and operational performance, and by attaining strong public support. The company's four key goals and its triple bottom line (economic, environmental, and social) approach to business reflect this ambition.

GOALS AND OBJECTIVES

Strong Financial Performance – optimizing financial performance to ensure stable earnings.

Quality Service – focusing on customer satisfaction and service reliability.

Good Environmental and Social Performance – by continuing to manage priority environmental and social issues.

Skilled Workforce, Safe Workplace – ensuring that the right people are in the right roles at the right time.

Key Strategies, Performance Measures and Targets

BC Hydro has developed a number of key strategies to help execute its current role of delivering long term, reliable, low-cost electricity to domestic customers while optimizing asset use to maximize electricity trade revenues for the benefit of all British Columbians. The focus of BC Hydro's Lines of Business (LoB) is to operationalize these strategies.

The Energy Plan will continue to shape BC Hydro's direction in the future. In the Operating Segments that follow, each LoB, as well as Powerex, addresses the challenges specific to its business and has set out goals and objectives, strategies and performance measures and targets through to 2006/07.

The Government and the people of British Columbia can track BC Hydro's triple bottom line performance in relation to the targets in the Service Plan through the company's Quarterly and Annual reports.

KEY STRATEGIES, PERFORMANCE MEASURES AND TARGETS – BC HYDRO OVERALL

(Appendix B contains definitions for all measures presented in this Service Plan. Also, unless otherwise stated, the 2003/04 figures are the planned numbers from last year’s Service Plan. Where a formal process to provide an updated forecast has been used, the numbers have been updated and “forecast” is indicated.)

GOAL and OBJECTIVE				
STRONG FINANCIAL PERFORMANCE – by optimizing financial performance to ensure stable earnings.				
STRATEGIES				
<ul style="list-style-type: none"> • Be efficient and effective by managing the business in a commercial and sustainable manner. • Ensure BC Hydro customers continue to benefit from electricity trade. • Attain BCUC approval for proposed revenue requirements. • Work with regulators and stakeholders to create regulatory framework and structure. • Develop a commercial relationship with the BCTC. • Implement the Heritage Contract. • Drive maximum benefit from service providers. • Continue restructuring implementation. • Optimize utilization of assets, including IT, plant performance and capital, to preserve the B.C. advantage. • Develop and improve risk management frameworks. 				
Performance Measure	2003/04	2004/05	2005/06	2006/07
Net Income (\$ millions)	211 [Forecast]	442	486	384
Target Rationale	<i>Targets are based on meeting allowed ROE as defined in the Heritage Special Directive No. HC2 issued by the Government and the BCUC. In order to meet this ROE, rate increases of 7.23% for 2004/05 and 2.00% for 2005/06 are assumed. The 2006/07 target does not include any additional rate increases. If required, BC Hydro will file for a 2006/07 rate increase at a later time.</i>			
Cost Efficiency Measures	Cost drivers are unique to each LoB and cost efficiency measures are more readily benchmarked at the LoB level. These measures are documented by LoBs in the next section of this Service Plan.			

KEY STRATEGIES, PERFORMANCE MEASURES AND TARGETS – BC HYDRO OVERALL *continued*

GOAL and OBJECTIVE				
QUALITY SERVICE – by focusing on customer satisfaction and service reliability.				
STRATEGIES				
<ul style="list-style-type: none"> • Keep electricity rates low. • Drive performance through service organizations. • Ensure the long-term health of the assets. • Acquire new long-term sources of supply to ensure secure, reliable power for expected load growth. • Develop a customer strategy to define the expected service levels (e.g., reliability). • Create a performance management culture consistent with customer service objectives. 				
Performance Measure	2003/04	2004/05	2005/06	2006/07
Customer Satisfaction (%)	84	84	84	84
Target Rationale	<p><i>Targets have been left constant to recognize that 84% is a high level of satisfaction and to reflect the challenge BC Hydro will have in maintaining this level with the changes such as the proposed rate increases to take place over the next two years. The targets correspond closely to first-quartile performance in the Ipsos-Reid National Omnibus survey that BC Hydro is using as its proxy benchmark.</i></p>			
Reliability ASAI (%)	99.970	99.970	99.970	99.970
CAIDI (Hours)	2.15	2.15	2.15	2.15
Target Rationale	<p><i>Both ASAI and CAIDI have industry benchmarks. Annually BC Hydro participates in a Transmission and Distribution benchmarking study conducted by PA Consulting. In the most recent survey (based on 2002 data), first-quartile performance for ASAI was 99.983% and above. First-quartile performance for CAIDI was 1.52 hours and below. Reliability has been targeted to move BC Hydro towards the second quartile, while recognizing BC Hydro's unique geographic challenges and acknowledging that customer satisfaction with reliability remains high.</i></p>			
Sustaining Capital Ratio (%)	1 – 2	1 – 2	1 – 2	1 – 2
Target Rationale	<p><i>Targets are based on a literature search of best practices.</i></p>			

KEY STRATEGIES, PERFORMANCE MEASURES AND TARGETS – BC HYDRO OVERALL *continued*

GOAL and OBJECTIVE				
GOOD ENVIRONMENTAL AND SOCIAL PERFORMANCE – by progressively managing priority environmental and social issues.				
STRATEGIES				
<ul style="list-style-type: none"> • Issue calls for green and sustainable resources. • Maintain growth of Power Smart programs. • Embed sustainability, transparency and accountability into strategic planning, decision-making and culture. • Develop relationships and manage issues through proactive and ongoing interaction with stakeholders and First Nations. 				
Performance Measure	2003/04	2004/05	2005/06	2006/07
Environmental Regulatory Compliance (incidents)	34 [Forecast]	28	27	27
Target Rationale	<i>Targets are based on historical improvement trends and the recognition that incremental reductions beyond 2004/05 will be difficult without significant cost increases. Targets for 2004/05 onward do not include Transmission, which will be managed and reported by BCTC.</i>			
Conservation GWh	810	1310	1769	2114
Target Rationale	<i>Targets have been set to align with the Government objective of 50% of new electricity supply from clean energy sources. They are also based on the findings from the Conservation Potential Review, which concluded that significant cost-effective efficiency improvements exist in every sector in BC Hydro’s service area; these potential improvements were then translated into current Power Smart programs and programs expected to come on stream. The targets include both residential and business demand-side management (DSM). If the targets are achieved, BC Hydro will rank in the top quartile both for energy savings as a percentage of domestic energy sales and for investment in DSM as a percentage of revenue (American Council for the Energy Efficient Economy). The 2005/06 target has changed from the previous Service Plan as the result of a recent update to the Conservation Potential Review, which formed the basis for the development of a revised 10-Year Plan for Power Smart.</i>			
New Electricity From Clean Energy (%)	50	50	50	50
Target Rationale	<i>Targets are based on the Government targets set out in its Energy Plan.</i>			

KEY STRATEGIES, PERFORMANCE MEASURES AND TARGETS – BC HYDRO OVERALL *continued*

GOAL and OBJECTIVE				
SKILLED WORKFORCE, SAFE WORKPLACE – by ensuring that the right people are in the right roles at the right time.				
STRATEGIES				
<ul style="list-style-type: none"> • Continue to implement Strategic Workforce Planning initiatives. • Build business acumen and associated skills and knowledge necessary to succeed as a commercially focused enterprise. • Build employee commitment through increased focus on communication and recognition. • Ensure and enhance safety compliance and build awareness of health-related drivers of business performance. 				
Performance Measure	2003/04	2004/05	2005/06	2006/07
All Injury Frequency	3.1	2.7	2.5	2.3
Target Rationale	<p><i>All Injury Frequency has an industry benchmark. The benchmark is a composite of Canadian Electricity Association (CEA) utilities organized on a regional/provincial basis. Comparative adjustments were made for organizational changes (e.g., moving employees from BC Hydro to ABSBC and BCTC). In the most recent CEA survey (2002, and comparing to BC Hydro’s 2002/03 data), first-quartile performance is 3.3 and below. The All Injury Frequency targets considered BC Hydro’s historic trend and most current performance. However, the primary strategy in the targets is to fully embed BC Hydro in the top quartile and then move systematically to “Best in Class” (below 2.0).</i></p>			
Approved Strategic Workforce Positions Filled (number)	81	71	70	69
Target Rationale	<p><i>Targets are based on modelling the current employee population by occupation to determine which ones are the most at risk for retirement attrition and coordinate the estimated retirements with the business plans for required future positions to determine Strategic Workforce Planning hires. Approved Strategic Workforce Positions Filled targets have been changed to reflect resource requirements determined by business needs and strategies by each LoB coordinated with anticipated attrition through retirement modelling. Changes also reflect the recent transfer of employees to BCTC and their removal from the SWfP portfolio.</i></p>			

6. OPERATING SEGMENT SUMMARY

Provided below are five business segments for BC Hydro's Lines of Business (LoB) – Generation, Distribution, Powerex, Engineering and Field Services. In addition to the measures presented in each summary, each segment tracks a number of measures that cascade from BC Hydro's overall measures. Whereas the strategies that pertain to these measures have been included in the summaries, the measures for the sake of conciseness have not been included. Each LoB will continue to refine its measures and, to the extent possible, will develop measures that are benchmarked.

The newly created, publicly owned Crown corporation, the British Columbia Transmission Corporation (formerly the Transmission LoB segment included in last year's Plan), is now responsible for preparing and submitting its own Service Plan.

GENERATION LINE OF BUSINESS



Vision: Generation for generations.

Mandate: BC Hydro's Generation LoB is responsible for the safe operation, maintenance, commercial and financial performance of 11,500 megawatts of generation assets; the short-term operation of BC Hydro's existing integrated electricity system; the safety of dams and structures; the optimization of water resources, including the short-term purchases of energy for domestic customers, and the optimization of financial, environmental and social impacts of operating the generation system.

GENERATION-SPECIFIC EXTERNAL PLANNING CONTEXT AND KEY STRATEGIC ISSUES

The provincial Energy Plan identifies all of BC Hydro's existing integrated generating facilities as Heritage Resources, and the Government's recent Heritage Special Direction preserves the value of these resources for BC Hydro customers. Generation is charged with managing and operating these Heritage Resources while maximizing their long-term health and value.

Factors that significantly impinge on Generation's ability to achieve the above include increased costs of maintaining assets as they age, the continuing evolution and influence of First Nations in federal and provincial governance and land use issues, the growing societal demand for multiple usage of water used by BC Hydro's generating facilities, and the impact of significant swings in water resources on the cost of energy.

GENERATION-SPECIFIC INTERNAL PLANNING CONTEXT AND KEY STRATEGIC ISSUES

Generation's immediate internal challenge is to ensure that its business model and business processes are aligned to:

- Operate the system;
- Purchase energy for domestic customers over the short term and optimize the use of water resources over the long term;
- Maintain dams, generating stations, buildings and equipment through capital investments and annual maintenance spending; and
- Maintain and build trust with key stakeholders.

To maximize the value of the generation system, Generation’s goal is to find the optimum balance within and among these processes. Generation’s ability to do this well results in low-cost electricity for BC Hydro’s customers.

The key factors affecting the costs incurred by Generation are:

- Cost of energy – the quantity of Heritage electricity required by Distribution and the actual cost to supply that amount are influenced by reservoir levels and the price of energy and gas purchases.
- Performance of the generating facilities – the reliability and availability of the generation facilities is impacted by the levels of investment in the facilities and amount of maintenance performed.
- Environmental and social requirements – the operations of Generation’s facilities are constrained to meet environmental and social requirements, and, in addition, costs are incurred to maintain and build trust with key stakeholders.

OBJECTIVES, STRATEGIES, PERFORMANCE MEASURES, AND TARGETS - GENERATION

GOAL and OBJECTIVE				
STRONG FINANCIAL PERFORMANCE – through targeting first-quartile results.				
STRATEGIES				
<ul style="list-style-type: none"> • Maximize the financial value of the Heritage assets. • Maximize trade revenue from the Heritage assets. • Minimize the cost of energy to BC Hydro Distribution. 				
Performance Measure	2003/04	2004/05	2005/06	2006/07
Net Income (\$ millions)	366 [Forecast]	196	198	205
Target Rationale	<i>Targets are based on meeting allowed ROE as defined in the Heritage Special Directive No. HC2 issued by the Government and the BCUC.</i>			
Cost per Megawatt Hour Including Electricity Purchases (\$)	22.33	21.86	20.94	20.43
Target Rationale	<i>Targets are based on the forecasted embedded costs of supplying Heritage electricity. Dividing the embedded costs by the forecast output provides an indication of Generation’s efficiency of production.</i>			

OBJECTIVES, STRATEGIES, PERFORMANCE MEASURES, AND TARGETS – GENERATION *continued*

GOAL and OBJECTIVE				
QUALITY OF SERVICE – through ensuring that Generation facilities are available to meet contractual obligations to Distribution and to maximize market opportunities.				
STRATEGIES				
<ul style="list-style-type: none"> • Maximize the value of market opportunities. • Protect assets for the long term by ensuring that adequate maintenance and capital dollars are invested in generating plants. • Implement Asset Management discipline across Generation. • Minimize lost opportunities due to generation forced outages. 				
Performance Measure	2003/04	2004/05	2005/06	2006/07
Commercial Performance (%)	99.5 [Forecast]	99.5	99.5	99.5
Target Rationale	<i>Targets have been set based on historical performance (including analysis of planned outages).</i>			
Average Number of Forced Outages (Large / Strategic / Available Energy/ Thermal)	2.4 / 3.8 / 4.8 / 3.0	2.2 / 3.6 / 4.8 / 3.0	2.1 / 3.5 / 4.8 / 3.0	2.1 / 3.5 / 4.8 / 3.0
Target Rationale	<i>Targets have been set based on historical performance by generation class.</i>			

Note: Average number of forced outages is a new measure. It was selected as it provides key information on the success of BC Hydro Generation’s asset management programs. In addition the measure enables comparison of reliability to other leading Canadian generation companies through the ‘CEA Generation Equipment Reliability Information System’ and the ‘CEA Generation Equipment Reliability Annual Report’.

OBJECTIVES, STRATEGIES, PERFORMANCE MEASURES, AND TARGETS – GENERATION *continued*

GOAL and OBJECTIVE				
GOOD ENVIRONMENTAL AND SOCIAL PERFORMANCE – by progressively managing priority environmental and social issues.				
STRATEGIES				
<ul style="list-style-type: none"> • Embed Water Use Plan commitments into operations. • Continue to manage public safety in and around facilities. • Implement First Nations Protocol Agreement. • Make the most efficient use of existing resources. • Minimize impact of operations on the environment. 				
Performance Measure	2003/04	2004/05	2005/06	2006/07
Resource Smart Energy Gains Put Into Service (GWh)	417	104	31	49
Target Rationale	<p><i>Targets are based on the identification, study and implementation of projects that provide economic energy gains at existing BC Hydro facilities, and that typically have little incremental environmental impact. These targets support the Government objective of 50% of new electricity supply from clean energy sources. Targets have been revised downward to reflect changing priorities related to operational circumstances and project work schedules. There is a finite number of energy gain projects available within the system. The projects that had the largest positive impact were developed first. Energy gains from future projects will not be as significant.</i></p>			

GOAL and OBJECTIVE				
SKILLED WORKFORCE, SAFE WORKPLACE – by ensuring that the right people are in the right roles at the right time.				
STRATEGIES				
<ul style="list-style-type: none"> • Continuously improve Generation’s safety performance. • Enhance team capability. • Continue to implement Strategic Workforce Planning initiatives. 				
Performance Measure	2003/04	2004/05	2005/06	2006/07
Generation performance measures relevant to this goal have been cascaded from BC Hydro’s overall measures (All Injury Frequency and Approved Strategic Workforce Positions Filled).				

DISTRIBUTION LINE OF BUSINESS



Vision: Service excellence valued by our customers drives our commercial decisions.

Mandate: To deliver safe, reliable energy and other sustainable energy solutions to BC Hydro customers. Distribution is also responsible for forecasting customer demand and acquiring cost-effective energy supplies and demand side management programs.

DISTRIBUTION-SPECIFIC EXTERNAL PLANNING CONTEXT AND KEY STRATEGIC ISSUES

Distribution is responsible for implementing the customer services strategy by working with other BC Hydro LoBs to ensure safe, high quality service to BC Hydro's customers. Nonetheless, the external and internal environments in which it operates influence Distribution's goals and objectives. Over the planning horizon, BC Hydro faces key external challenges due to regional load and system growth. Internally, the key challenges arise due to the aging infrastructure. BC Hydro, and particularly Distribution, faces new challenges of managing internal and external service and business arrangements. Customer growth affects the delivery system and the need to plan for additional energy resources. Regional customer growth in the Lower Mainland and Vancouver Island will lead to new customer connections as well as the need for system improvements to ensure the stability of the system.

To meet long-term energy demand resulting from customer growth, BC Hydro will continue to source the lowest-cost alternative according to the Integrated Electricity Plan (IEP). This process will be managed by Distribution. New relationships with independent power producers will present credit, siting, and regulatory approval risks, as well as technical implementation challenges (e.g., inter-connections and the need to find alternate sources of capacity). The new sources of supply, combined with the appropriate use of Power Smart, will assist BC Hydro in mitigating these risks and address stakeholder concerns about the social, environmental and economic issues of energy supply options. Moreover, it will ensure a low-cost and reliable energy portfolio.

DISTRIBUTION-SPECIFIC INTERNAL PLANNING CONTEXT AND KEY STRATEGIC ISSUES

As with BC Hydro, a key internal challenge facing Distribution is the age and state of its assets. While the overall health of the wires assets remains generally good, an increasing proportion of assets (as much as 35 per cent) will reach the end of their useful life within the next 10 years which will require ongoing review and evaluation, and increasing re-investment. Age is a major factor influencing asset health, and asset health is a direct driver of operating, maintenance and capital requirements.

A final challenge comes from the need to manage new business relationships. Distribution will manage a significant percentage of its overall cost structure through key commercially based service contracts. The Heritage Contract is the most significant portion of Distribution's energy costs and will be managed through Generation. Distribution works with Field and Engineering Services to deliver Operations and Asset Management. In addition, Distribution has partnered with Accenture Business Services to deliver customer care management (the customer experience) and with BCTC. This new business structure of managing relationships will change the skills required of employees and the approach required for managing and controlling costs.

OBJECTIVES, STRATEGIES, PERFORMANCE MEASURES AND TARGETS - DISTRIBUTION

GOAL and OBJECTIVE				
STRONG FINANCIAL PERFORMANCE – by optimizing financial performance to ensure stable earnings.				
STRATEGIES				
<ul style="list-style-type: none"> • Implement risk management policies to manage energy costs and all other expenditures. • Support regulatory processes, including BC Hydro’s revenue requirement application. • Establish Heritage Contract with Generation to allow customers entitlement to low embedded-cost energy. • Optimize strategic partnership benefits to derive maximum benefit from service providers (i.e. ABSBC, Field Services and Engineering). 				
Performance Measure	2003/04	2004/05	2005/06	2006/07
Net Income (\$s in millions)	(359) [Forecast]	39	110	60
Target Rationale	<p><i>Net income targets for 2004/05 forward reflect the requested rate increases and the Heritage Contract (effective in 2004/05). Distribution receives charges related to transmission and the generation heritage obligation and absorbs the majority of the earnings volatility. The forecasted loss for 2003/04 represents the extent to which current domestic rates are not covering the costs of the system put in place to reliably meet domestic needs as well as the impact of a below normal water year.</i></p>			
COMA per Customer (\$)	269.3 [Forecast]	267.6	265.8	263.6
Target Rationale	<p><i>Targets are based on expectations around customer growth and increases to reliability-related maintenance funding.</i></p>			

OBJECTIVES, STRATEGIES, PERFORMANCE MEASURES AND TARGETS - DISTRIBUTION *continued*

GOAL and OBJECTIVE				
QUALITY SERVICE – by focusing on customer satisfaction and service reliability.				
STRATEGIES				
<ul style="list-style-type: none"> • Implement active management of energy supply portfolio and mitigation of risks. • Employ market-focused procurement strategy that acquires resources in a commercial, competitive manner. • Manage the customer experience and relationship with business and residential customers by understanding and meeting customer needs for choice and consultation. • Motivate customers to get the best long-term value from their use of electricity and to create a future where efficient usage is a way of life and a way of doing business. • Make commercially sound, customer-focused business investments with customers in demand-side management and load displacement. • Effectively develop and maintain the integrity of the distribution system to deliver long-term, reliable service to customers at the lowest possible cost. 				
Performance Measure	2003/04	2004/05	2005/06	2006/07
ASAI, CAIDI, Customer Satisfaction	The targets for these measures are set out in Section five under BC Hydro overall measures and targets. However, Distribution has the primary responsibility for these measures.			
Asset Health Risk Index (%)	20	20	20	20
Target Rationale	<i>Targets have been set based on historical performance that has led to high customer satisfaction with reliability.</i>			

OBJECTIVES, STRATEGIES, PERFORMANCE MEASURES AND TARGETS - DISTRIBUTION *continued*

GOAL and OBJECTIVE				
GOOD ENVIRONMENTAL AND SOCIAL PERFORMANCE – by progressively managing priority environmental and social issues.				
STRATEGIES				
<ul style="list-style-type: none"> • Issue calls for green and sustainable resources. • Maintain growth of Power Smart programs. • Ensure 50% of new energy acquisitions are clean. 				
Performance Measure	2003/04	2004/05	2005/06	2006/07
Customer-Based Generation (GWh)	160	275	290	800
Target Rationale	<i>Targets have been set to align with the Government objective of 50% of new electricity supply from clean energy sources.</i>			
Green (GWh)	270	580	650	1500
Target Rationale	<i>Targets have been set to align with the Government objective of 50% of new electricity supply from clean energy sources.</i>			

GOAL and OBJECTIVE				
SKILLED WORKFORCE, SAFE WORKPLACE – by ensuring that the right people are in the right roles at the right time.				
STRATEGIES				
<ul style="list-style-type: none"> • Build business acumen and associated skills and knowledge necessary to succeed as a commercially focused enterprise. • Continue to implement Strategic Workforce Planning. • Continue to develop Distribution’s Safety Management System (includes leadership accountability, safety plans, contractor safety program, and record keeping and recognition programs). 				
Performance Measure	2003/04	2004/05	2005/06	2006/07
Distribution performance measures relevant to this goal have been cascaded from BC Hydro’s overall measures (All Injury Frequency and Approved Strategic Workforce Positions Filled).				

POWEREX



Vision: Creating economic value for its shareholder.

Mandate: Powerex Corp. is the wholly owned energy marketing subsidiary of BC Hydro. It uses surplus capacity and storage for trade after domestic requirements have been met, including purchasing energy for trade and resale using the hydroelectric system. It is also responsible for trading power and natural gas in the Western Electricity Coordination Council (WECC) and other select regions in North America including Ontario and the eastern U.S., within prescribed risk parameters; and for optimizing the purchase and sale of electricity and natural gas in relation to BC Hydro capabilities and domestic requirements.

POWEREX-SPECIFIC EXTERNAL PLANNING CONTEXT AND KEY STRATEGIC ISSUES

Powerex intends to build upon its existing strategy of focusing its resources as a physically based marketer primarily trading in western North America. Powerex will continue to build upon its core products and markets in order to grow the business. It anticipates growth in trade volumes and stable earnings. Powerex earns income by selling in peak periods to power pools in California and Alberta, by moving power from the Northwest market to higher value California and Southwest markets, by trading in spot and forward energy markets and by optimizing BC Hydro's generation system after domestic requirements have been met. Powerex also earns income by trading small volumes of power in Ontario and the eastern United States on a short-term basis within very strict parameters. Trade earnings will be influenced by a number of factors including uncertainty in the structure and changing regulatory environment of the California market, ability to import and export power due to transmission constraints, creditworthiness of counterparties within the energy industry, market prices in the Northwest, Alberta and California, and the U.S./Canadian dollar exchange rates.

Powerex was included in various lawsuits, investigations and regulatory proceedings as a result of its participation in the U.S. energy markets in 2000 during a period of high prices and high volatility. Considerable time and investment has been made by Powerex to defend itself. On October 31, 2003, Powerex and Federal Energy Regulatory Commission (FERC) Trial staff reached a settlement with respect to the allegations that Powerex engaged in "inappropriate market behaviour" during the California energy crisis. The FERC Trial staff concluded that Powerex played a positive role in helping California keep the lights on during the crisis. Powerex still faces possible additional costs as several investigations continue with respect to the high wholesale power prices in 2000 and 2001. Powerex expects that in the coming year it will continue to achieve resolution around the remaining legal cases and investigations.

As a result of the FERC's efforts to introduce greater competition in wholesale electricity markets, there is potential for changes in the way the transmission grid in the Pacific Northwest and other regions of the western North American system is operated, such as the formation of the Western Regional Transmission Organization. These changes may pose both opportunities and threats to Powerex's trade activities. BC Hydro and Powerex will continue to participate in market design developments, both directly and through a stakeholder committee chaired by the government.

As has been the case for the last two years, the credit ratings for several merchant energy companies and their parent companies continue to decline. Reasons include highly leveraged balance sheets and overall erosion in financial profiles, constrained access to capital markets, and lingering federal investigations. Powerex proactively manages its credit exposure with all counterparties and ensures that it reacts immediately to any credit downgrades. In this way, Powerex has successfully managed to continue sales in a deteriorating credit environment. On a positive note, some companies with significant merchant energy activity have been successful in proactively addressing the financial pressures they have been under.

Powerex is exposed to the change in future market prices of power and natural gas. While power is increasingly influenced by natural gas prices, both commodities are shaped by short- and long-run underlying fundamental drivers. These include crude oil prices, economic activity, weather-related impacts on demand, precipitation levels affecting hydroelectric generation, natural gas storage levels, and the impact of additional electricity supplies due to new merchant power plants coming into service in an already overbuilt market. Powerex monitors all these activities to ensure it appropriately manages market risk.

POWEREX-SPECIFIC INTERNAL PLANNING CONTEXT AND KEY STRATEGIC ISSUES

Powerex contributes trade income to BC Hydro's consolidated income statement. The concept of trade income is solidified in the Heritage Contract that is now finalized by the Government. As part of trade income, Powerex has executed a transfer pricing agreement with BC Hydro, which makes a clear distinction between purchase and sale transactions required for domestic purposes and those made to support trading activities.

Powerex realizes that healthy financial capital is key to the success of a trading business. Powerex is reviewing its financial capital requirements necessary to match the risk profile of its business and is evolving methods of performance metrics to include return on capital.

Trade income forecasts do not include a US\$100 million amount owing from Alcan Inc. to Powerex. The US\$100 million obligation arose as a result of a terminated power contract with Enron Power Marketing Inc. (EPMI) resulting from EPMI's bankruptcy filing. This payment remains outstanding while Powerex has commenced enforcement proceedings and Alcan applied to have the award set aside. Accordingly, no recovery in respect to the arbitration award will be recorded until collection is assured. Please refer to pages 49 and 50 under the Financial Summary section for further details.

OBJECTIVES, STRATEGIES, PERFORMANCE MEASURES AND TARGETS – POWEREX

GOAL and OBJECTIVE				
STRONG FINANCIAL PERFORMANCE AND INCREASING RETURNS FOR OUR SHAREHOLDER				
STRATEGIES				
<ul style="list-style-type: none"> • Energy trading to optimize the value of the surplus BC Hydro capability. • Increase trading within the WECC and in other select areas of North America. • Increase cross commodity transactions between power and natural gas in western markets. • Improve operational effectiveness and reduce operational risk through strong business processes and IT infrastructure. • Transact business with a strong code of ethics and a high degree of integrity. • Support teamwork to promote corporate over individual achievement. 				
Performance Measure	2003/04	2004/05	2005/06	2006/07
Net Income (\$ million)	92 [Forecast]	89	91	99
Target Rationale	<i>Targets are based on net income from Powerex activities reflecting the transfer price agreement with BC Hydro. Net income targets for 2004/05 have been reduced as a result of including Point to Point (PTP) transmission in Powerex’s income statement. PTP transmission is charged by BCTC for B.C. transmission used for trading purposes.</i>			
Transactions per Employee	650	660	675	685
Target Rationale	<i>Periodically Powerex reviews select operational measures of other energy trading companies. The targets for this measure of operating efficiency are based on meeting the peer group. The size of the sample group is limited due to the proprietary nature of the business.</i>			

Note: Powerex has eliminated the “sales volume” target that appeared in last year’s Service Plan and replaced it with the “Transactions per Employee” target as it is a more effective measure of the efficiency of the company. “Sales volumes” are incorporated into the net income forecast.

ENGINEERING LINE OF BUSINESS



Vision: To be the preferred supplier of engineering services to BC Hydro LoBs and BCTC and to maintain state-of-the-art technical expertise.

Mandate: To provide engineering, technical and project management services to the BC Hydro LoBs and to BCTC. Engineering provides complete, full-cycle project services for all aspects BC Hydro's electric system. These include project management, design, contract and construction management, as well as maintenance and emergency response services. Engineering performs limited work for selected external customers.

ENGINEERING-SPECIFIC EXTERNAL PLANNING CONTEXT AND KEY STRATEGIC ISSUES

While similar services to those provided by Engineering are available in the private sector, there are no local consultants with the equivalent breadth, depth, track record and reputation. However, Engineering uses local consultants in order to supplement its resources to accommodate fluctuations in workload and to perform non-core work. Consultants are utilized primarily to complete discrete work packages, or as individual staff resources on Engineering project teams. Consultants currently carry out approximately 13 per cent of Engineering's total workload. Engineering is committed to the ongoing development of relationships with external consultants to obtain the best value for Engineering's clients in terms of risk management and service provision.

Engineering's specialized technical skills are in demand both within North America and abroad, and this presents opportunities for external work. These external work opportunities are considered only when they provide opportunities for personal development of staff and benefit Engineering's internal clients by broadening the experience base of the staff involved.

ENGINEERING SPECIFIC INTERNAL PLANNING CONTEXT AND KEY STRATEGIC ISSUES

The creation of the Engineering LoB, the restructuring of BC Hydro's other LoBs, and the creation of BCTC has created a new, commercially focused relationship between Engineering and its customers. This relationship must be carefully managed to ensure the best value for BC Hydro, and for this reason, Engineering has adopted a strategy of customer intimacy to build and maintain client relationships. Engineering must clearly understand its clients' business needs in order to provide high-value, focused technical solutions and service. The new commercial relationships with its clients have increased the emphasis on accountability and commercially competitive service provisions. As a result, Engineering has adopted a strategy to focus on core, high-value work for its clients and is developing streamlined processes to outsource non-core work where appropriate.

Engineering is also committed to providing BC Hydro and BCTC with the skill and technical services that they require to achieve best-in-class goals. However, Engineering faces significant risk due to retirements of key technical staff in the next two to five years. Approximately 25 per cent of engineers are eligible to retire with the next two years, and 40 per cent within the next five years. Throughout North America, there is a shortage of skilled resources and this will pose a significant challenge to attract and retain competent, technical staff in the future.

OBJECTIVES, STRATEGIES, PERFORMANCE MEASURES, AND TARGETS - ENGINEERING

GOAL and OBJECTIVE				
STRONG FINANCIAL PERFORMANCE – by developing commercial business practices work delivery processes and culture that support our clients’ expectations for service delivery.				
STRATEGIES				
<ul style="list-style-type: none"> • Deliver top quartile performance in selected financial and other targets. • Organize resources and management structure to maximize focus on clients. • Align business processes for client focus and business sustainability. • Track service delivery. • Manage business performance. • Develop pricing strategies consistent with market practices. 				
Performance Measure	2003/04	2004/05	2005/06	2006/07
Utilization Rate (%)	82	83	83	83
Target Rationale	<i>Targets have been set based on moving towards first-quartile when compared with other engineering firms.</i>			
Hourly Charge-Out Rate (\$)	97	97	97	97
Target Rationale	<i>Targets have been set based on offsetting inflation and wage increases with efficiency improvements.</i>			

GOAL and OBJECTIVE				
QUALITY SERVICE – by supporting clients’ business needs through a clear understanding of their goals and objectives.				
STRATEGIES				
<ul style="list-style-type: none"> • Provide engineering services to support the operation and maintenance of BC Hydro’s heritage assets. • Develop a commercial, engineering service provider relationship with BCTC. • Know clients and their needs. • Improve customer integration/partnering and be the provider of choice. • Exceed clients’ expectations. • Know the industry and best practices. • Pursue and maintain strong relationships with past, current and potential clients. 				
Performance Measure	2003/04	2004/05	2005/06	2006/07
Client Feedback / Satisfaction (out of a possible total of 7)	5 – 6	6+	6+	6+
Target Rationale	<i>Targets have been set based on Engineering keeping near the upper end of the range. Targets have been modified based on the past year’s trends.</i>			

OBJECTIVES, STRATEGIES, PERFORMANCE MEASURES, AND TARGETS – ENGINEERING *continued*

GOAL and OBJECTIVE
GOOD ENVIRONMENTAL AND SOCIAL PERFORMANCE – by supporting client objectives for managing priority environmental and social issues.
STRATEGIES
<ul style="list-style-type: none"> • Focus on continuous improvement of the Engineering Environmental Management System. • Provide technical services to support appropriate environmental and social performance on projects performed for clients.

Note: Engineering performance is reflected in clients’ performance measures for environmental and social performance.

GOAL and OBJECTIVE				
SKILLED WORKFORCE, SAFE WORKPLACE – by maintaining our existing technical excellence and developing a high-performance, safety-focused work culture.				
STRATEGIES				
<ul style="list-style-type: none"> • Measure and communicate performance targets for individuals, teams and Engineering as a whole. • Maximize employee commitment through clear communication of expectations; focus on accountability and encouragement of innovation. • Build and maintain technical and system knowledge by investing in the training and development of employees. • Seek external work opportunities when not infringing on the ability to meet the commitment to internal clients. • Continue to emphasize safe work practices across the organization. 				
Performance Measure	2003/04	2004/05	2005/06	2006/07
Approved EIT & GTT Positions Filled (%)	100	100	100	100
Target Rationale	<i>Targets have been set based on an internal needs assessment against expected organizational capacity.</i>			

FIELD SERVICES LINE OF BUSINESS



Vision: To become a commercially focused service provider by 2005/06.

Mandate: BC Hydro's Field Services is responsible for providing a wide range of services (including emergency response and restoration, maintenance, construction, telecommunications maintenance, contract management and public safety) primarily to, but not limited to, BC Hydro's Generation and Distribution Lines of Business and the British Columbia Transmission Corporation.

FIELD SERVICES SPECIFIC EXTERNAL PLANNING CONTEXT AND KEY STRATEGIC ISSUES

Establishing a commercial relationship with the newly formed British Columbia Transmission Corporation through effective Service Level Agreements will be a significant activity for Field Services during the plan years.

Historically, there has been a trend for regulatory agencies to develop more rigid and complex workplace regulations for both safety and the environment. Achieving such compliance has required additional resources to conduct the necessary training and to perform the work to changing standards. Field Services will maintain this level of investment in resources and training to ensure it meets its obligations.

External service providers are currently used by Field Services to supplement existing resources in performing work for the Lines of Business (roughly 25 per cent or 700 contractors/consultants). Availability, qualifications, quality and cost of external providers could potentially impact Field Services.

FIELD SERVICES-SPECIFIC INTERNAL PLANNING CONTEXT AND KEY STRATEGIC ISSUES

Total work volumes for Distribution and Generation are projected to increase over the next 10-years. These increases reflect a rise in the forecast amount of customer-driven work and steadily increasing activity in maintenance and capital investment/sustainment programs to address the aging infrastructure. While volumes in Transmission capital investment programs are forecast to increase as a result of aging infrastructure, substation maintenance program volumes will decrease as a result of achieved efficiency gains. It is anticipated that this overall increase in work volumes, particularly for Distribution, will result in an increase of up to 25 per cent in the utilization of external contractors.

Field Services acts to minimize the overall cost of performing work by effectively matching three labour pools (regular, temporary and contractor forces) to changing work programs, as defined by its clients. By doing so, Field Services ensures timely emergency response and continued cost efficiencies under a variety of work volume scenarios.

OBJECTIVES, STRATEGIES, PERFORMANCE MEASURES AND TARGETS – FIELD SERVICES

GOAL and OBJECTIVE				
STRONG FINANCIAL PERFORMANCE – by improving cost performance while maintaining and improving service.				
STRATEGIES				
<ul style="list-style-type: none"> • Emphasize the Continuous Improvement strategy across the organization. • Improve labour utilization through improved work processes used to schedule work. • Provide IT support systems to effectively bundle, manage and schedule work. • Target first-quartile costs when compared WITH similar service organizations. • Enhance product definitions, value and pricing. • Streamline administrative processes. • Seek improvements to the collective agreement that enables strategies. 				
Performance Measure	2003/04	2004/05	2005/06	2006/07
Hourly charge-out rates (\$)	95	95	96	98
Target Rationale	<i>Targets reflect anticipated labour cost inflation that are partially offset by ongoing cost efficiencies. The increase in the 2004/05 and 2005/06 targets from the previous Service Plan is solely due to fully loaded costs that were not reflected at that time. Targets for 2003/04 have been restated to also reflect the fully loaded costs.</i>			
Labour utilization (%)	69.5	75.5	76.5	77.0
Target Rationale	<i>Targets reflect actual hours charged to work by the IBEW and other field technical staff, divided by total available hours of all staff. Support staff and management do not generally charge to work since these costs are recovered through labour loadings. This is a blended Field Services/Construction Business Unit rate. Changes to targets reflect improved productivity.</i>			

OBJECTIVES, STRATEGIES, PERFORMANCE MEASURES, AND TARGETS – FIELD SERVICES *continued*

GOAL and OBJECTIVE				
QUALITY SERVICE – by focusing on customer satisfaction and service reliability.				
STRATEGIES				
<ul style="list-style-type: none"> • Emphasize the Service Provider plus strategy through ongoing service quality and product differentiation. • Operationalize Service Level Agreements via best practices review, performance reporting and establishment of an effective governance structure. • Develop a commercially focused relationship with the British Columbia Transmission Corporation. 				
Performance Measure	2003/04	2004/05	2005/06	2006/07
Total Planned Work Completed (%)	98	98	98	98
Target Rationale	<i>Targets have been set based on work assigned to Field Services and client expectations (BC Hydro LoBs and BCTC).</i>			
CAIDI	The targets for CAIDI have been set out in Section 5 under BC Hydro overall measures and targets. However, Field Services has a significant impact on CAIDI performance since it is responsible for responding to power interruption calls through its emergency response and restoration services.			

OBJECTIVES, STRATEGIES, PERFORMANCE MEASURES, AND TARGETS – FIELD SERVICES *continued*

GOAL and OBJECTIVE				
SKILLED WORKFORCE, SAFE WORKPLACE – by providing employees a safe, healthful and harassment-free workplace through continuous improvement.				
STRATEGIES				
<ul style="list-style-type: none"> • Emphasize the Safety First strategy across the organization. • Improve safety performance by continued emphasis on training, audits and safety inspections. • Reinforce both manager and employee accountability for safety. • Develop a commercially focused mindset through focused training, communication and performance management. • Continue to develop a contingent workforce capability. • Retain and develop the skills and knowledge of both employees and contractors. • Renew the workforce through continued investment in apprenticeships and other trainee programs. 				
Performance Measure	2003/04	2004/05	2005/06	2006/07
All Injury Frequency	6.7	4.7	4.7	4.7
Target Rationale	<i>Targets are set to maintain first-quartile safety performance. Targets have been re-established for 2004/05 through 2006/07 to reflect improvements in safety behaviour and fewer incidents.</i>			
Trainee Positions Filled (number)	122	132	141	141
Target Rationale	<i>The targets have been set based on an internal needs assessment against expected organizational capacity through the Strategic Workforce Planning initiative. Targets have been re-established for 2004/05 through 2006/07 to reflect the four-year program to train staff and the current trainee base.</i>			

Note: It continues to be a challenge for Field Services to benchmark its costs and performance against other field operations, since its business model is unique to BC Hydro and is not easy to compare with similar organizations within the North American electric utility industry. However, in 2003/04 Field Services will conduct an external benchmarking project around the three key strategic areas of safety, workforce efficiency and client satisfaction. The goal of the work is to identify best practices and then develop an action plan to move towards best in class.

7. SUMMARY FINANCIAL OUTLOOK

BC Hydro's forecasts are subject to a number of risks and uncertainties that may cause actual results to differ materially from those contemplated in the forward-looking statements. Factors such as the level of water inflows into reservoirs, market prices for electricity and natural gas, interest rates and foreign exchange rates can have a significant impact on BC Hydro's earnings. The combined effect of these drivers, which are largely beyond BC Hydro's control, can impact net income by approximately plus or minus \$300 million in a given year. The use of deferral accounts, as required under Special Direction No. HC2 issued by the Province to the British Columbia Utilities Commission (BCUC), will aid in reducing this volatility between actual and plan net income (see pages 46 and 47 for a discussion of deferral accounts).

The net income figures in this Service Plan include proposed rate increases in 2004/05 and 2005/06. In December 2003 BC Hydro filed a revenue requirement application to the British Columbia Utilities Commission (BCUC) requesting rate increases of 7.23 per cent in 2004/05 and 2.00 per cent in 2005/06. The BCUC is required to ensure that electricity rates are sufficient to allow BC Hydro to achieve an annual rate of return on equity equal to the return allowed, on a pre-income tax basis, by the most comparable investor-owned energy utility under the *Utilities Commission Act*. On January 23, 2004, the BCUC approved the 2004/05 rate increase of 7.23 per cent on an interim basis, effective April 1, 2004. Public hearings on BC Hydro's application will begin on May 17, 2004. The BCUC will make a final decision on the application subsequent to the hearing. If the BCUC does not approve the full amount of the requested increase, the difference will be fully refunded with interest to BC Hydro customers. Figures for 2006/07 included in this Service Plan do not include additional rate increases beyond those currently required.

The consolidated statement of operations in this Service Plan has been updated from that filed with the BCUC in December 2003 for the requested rate increases. Income before transfer to deferral accounts has reduced by \$39 million in 2004/05 and increased by \$6 million in 2005/06. This is principally due to increased energy costs arising from lower water inflows, partially offset by reduced finance charges in each year due to updated forecasts of interest and exchange rates.

Rate increases are required because BC Hydro can no longer keep pace with increasing cost pressures arising from the costs of new energy supply, aging infrastructure, and increased stakeholder expectations. For the last 10 years, BC Hydro has not had a change in its rates. Cost pressures over the last 10 years were somewhat offset by net trade revenues and reduced financing costs. Although trade activities will continue to provide value into the future, changing market conditions have reduced expected net trade revenues from the extraordinary levels previously experienced. The most significant cost pressures over the next several years include:

- An increase in cost of energy as the capacity of low-cost Heritage Resources has been reached and new sources of energy to meet demand growth are more costly. To mitigate this increase, BC Hydro has adopted competitive procurement through tendering to capture the benefits of a competitive marketplace on behalf of its customers. BC Hydro's resource procurement strategy puts emphasis on

ensuring that customers have reliable, long-term supply with limited exposure to the volatility of the market.

- An increase in maintenance and capital expenditures to ensure long term health of BC Hydro's assets as they age. BC Hydro has an aging system and needs to maintain, reinforce and replace assets to maintain its long-term reliability and service levels, and to ensure low rates over the long term.
- An increase in demand-side management program spending to increase the efficient use of electricity in order to reduce BC Hydro's exposure to new energy costs.
- An increase in the cost of meeting environmental regulations, conducting negotiations and building mutually beneficial relationships with First Nations and communities.
- An increase in pension costs due to new accounting rules that required all forms of post-retirement benefits to be accounted for on an accrual rather than cash basis. Additionally, a decline in the value of pension fund assets and employees retiring earlier and living longer has also increased costs.
- Incremental costs associated with the establishment of corporate functions at BCTC.

BC Hydro's finance charges are also expected to begin to increase in 2005/06 after declining for a number of years, due to an increasing interest rate environment and increased financing for capital assets. BC Hydro has actively managed its debt portfolio to take advantage of the low interest rate environment over the past few years. Interest rates are expected to increase in the coming years from their current historic low levels.

NET INCOME PLAN AND KEY ASSUMPTIONS

BC Hydro's forecast \$190 million 2003/04 Net Income before Rate Stabilization Account (RSA) transfers has increased by approximately \$260 million from the February 2003 Service Plan. This increase is due primarily to lower finance charges. Finance charges are projected to be approximately \$110 million lower than anticipated in the February 2003 Service Plan, due to the impact of a stronger Canadian dollar and lower interest rates. An increase in domestic revenues due to weather impacts and a decrease in energy costs due to improved water inflows also contributed to the increase in net income before RSA transfers. Water inflows for the 2003 water year (October 2002 to September 2003) were 93 per cent of normal, compared with 87 per cent of normal anticipated in the February 2003 Service Plan, due to improved snowpack levels in the spring. An increase in maintenance expenditures, largely relating to the impact of this summer's forest fires, partly offset the favourable variance.

The current forecasts for 2004/05 and 2005/06 reflect the requested rate increases of 7.23 per cent and 2.00 per cent respectively. Without the proposed rate increases, revenues would be lower by \$177 million and \$231 million respectively. The current forecast does not include any additional rate increases in 2006/07. If required, BC Hydro will file for a 2006/07 rate increase at a later time.

- BC Hydro's domestic gross margin, excluding the impact of the proposed rate increases, increases slightly from 2003/04 to 2004/05 due largely to lower market prices for energy purchases. While market prices have declined, they continue to be higher than the cost of the Heritage Resources. Gross margins from 2004/05 to 2005/06 increase largely due to the assumed return to normal water inflows in 2005/06 from 94 per cent of normal currently forecast for 2004/05 based on the January 1, 2004 snowpack levels. The increase in water inflows allows for additional low-cost hydro generation.

- Maintenance expenditures will continue to put pressure on BC Hydro's costs, given the age of BC Hydro's assets and the need to maintain long-term reliability and service levels.
- Depreciation charges are increasing as more assets come into service to meet customer growth and aging assets are replaced. Sustaining capital expenditures to maintain long-term reliability will continue to be made as existing assets reach the end of their life.
- Finance charges are forecast to increase year over year due primarily to expected increases in interest rates over the coming years. Canadian short-term interest rates are forecast to decline slightly in 2004/05 to 2.81 per cent from an average of 3.00 per cent in 2003/04, but then rise to approximately 5.00 per cent in 2006/07. The Canadian dollar is forecast to climb to close to U.S. 80 cents/Canadian dollar in 2004/05 and stabilize for the future years. The interest rate and foreign exchange rate assumptions are provided by the Ministry of Finance for use by government and Crown corporations in preparing their budgets. While interest rates are uncontrollable, BC Hydro uses several tools and strategies to offset some of the increased costs caused by higher interest rates, i.e., interest rate swaps and changes in the mix of floating and fixed rate debt. Increases in the volume of debt to fund additional capital assets in service also contribute to the projected increase in finance charges.

Net income for 2004/05 and 2005/06 is expected to be higher than that forecast in the February 2003 Service Plan. The primary reason for the increase is the inclusion of the proposed rate increases of 7.23 per cent for 2004/05 and 2.00 per cent for 2005/06 in this current forecast. Lower finance charges due to the lower interest rate assumptions also contribute to the increase in forecast income from the 2003 Service Plan.

BC Hydro's forecasts are subject to significant volatility due largely to non-controllable factors. BC Hydro's range of net income due to changes in its key revenue and cost drivers is outlined in the Sensitivity Analysis section on page 53.

To mitigate some of the net income volatility and the rate volatility to customers that could result, BC Hydro has applied to the BCUC in its Rate Application to use the following deferral accounts:

- Heritage Payment Obligation Deferral Account;
- Trade Income Deferral Account; and
- BCTC Transition Deferral Account.

The first two deferral accounts are directed under Heritage Special Direction No.2 to record differences between the forecasts, which are used to establish rates, and the actual Heritage Payment Obligation and Trade Income. The forecast that was included in the revenue requirement application filed with the BCUC in December 2003 is the base-line forecast used to establish rates.

The Heritage Payment Obligation is BC Hydro's Generation's cost of supplying electricity from BC Hydro's Heritage Resources to BC Hydro Distribution. The Heritage Payment Obligation Deferral Account will include cost or revenue items related to the Heritage Resources that are largely out of BC Hydro's control. Energy costs, which are driven by water inflows into our reservoirs, are the most volatile costs. The Heritage Payment Obligation Deferral Account will include any surplus energy sales arising as a result of water inflows being higher than domestic need.

The Trade Income Deferral Account will record all differences between the forecasts that are used to establish rates and the actual Trade Income. Trade Income below \$0 or above \$200 million will not flow through the deferral account. The Shareholder bears the risk if Trade Income falls below \$0 and gets the full benefit of Trade Income over \$200 million. It is considered highly unlikely that Trade Income will fall outside of the \$0 to \$200 million range.

BC Hydro's proposal is to allow the Heritage Payment Obligation and Trade Income deferral accounts to build up as necessary with no cap and to clear the accounts through an adjustment to revenue requirements upon application. BC Hydro will file an annual statement on changes to these deferral accounts.

The BCTC Transition Deferral Account is requested to record any variances between BC Hydro's Wholesale Transmission Service forecast costs in 2005/06 and actual costs due to the result of BCTC's revenue requirement application to be filed in the fall of 2004.

Based on the current forecast, used for this Service Plan, \$63 million will be transferred to the Heritage Contract Deferral Account in 2004/05 and a further \$40 million in 2005/06. This balance will be shown as an asset on the balance sheet. The transfer to the Heritage Deferral Account is forecast largely due to an increase in energy costs from the forecast filed as part of the revenue requirement application (i.e. the base-line forecast). The increase in energy costs is primarily due to the impact of the expected lower water inflow levels anticipated in 2004/05 based on the January 1, 2004 snowpack levels. The forecast filed as part of the revenue requirement application assumed normal water inflows based on information available at that time. The lower water inflow levels are anticipated to impact both 2004/05 and 2005/06 as water management is undertaken on a multi-year basis.

The current forecast also assumes \$9 million will be transferred to the Trade Income Deferral Account in 2004/05 and a further \$2 million in 2005/06. This balance will be shown as a liability on the balance sheet. The transfer to the Trade Income Deferral Account is due to the higher forecast trade income than originally anticipated in the forecast used in the revenue requirement application. The increase in Trade Income is largely due to a reduction in transmission charges.

<u>Consolidated Statement of Operations</u> (\$ millions)	2002/03 Actual	2003/04 Forecast	2004/05 Forecast	2005/06 Forecast	2006/07 Forecast
Total Domestic Revenue	2,481	2,633	2,826	2,884	2,857
Domestic	2,475	2,552	2,701	2,768	2,793
Intersegment Revenues	6	81	125	116	64
Total Expenses	1,773	2,096	2,097	2,065	2,052
Domestic Energy Costs	708	968	905	862	824
Maintenance & Operations & Admin.	506	558	577	408	413
BCTC wholesale transmission service	0	0	0	61	52
BCTC service fee	0	0	0	117	117
Taxes	145	142	145	147	151
Depreciation	414	428	470	470	495
Operating Income	708	537	729	819	805
Finance Charges	457	444	430	462	520
Income before Restructuring Costs, Transfer from Rate Stabilization Account, Trade Income and Transfers to Deferral Accounts	251	93	299	357	285
Restructuring Costs	37	11	0	0	0
Income before Transfer from Rate Stabilization Account, Trade Income and Transfers to Deferral Accounts	214	82	299	357	285
Transfer from Rate Stabilization Account	66	21	0	0	0
Income before Trade Income and Transfers to Deferral Accounts	280	103	299	357	285
Trade Income	138	108	89	91	99
Income before Transfers to Deferral Accounts	418	211	388	448	384
Transfer to Heritage Contract Deferral Account	0	0	63	40	0
Transfer to Trade Income Deferral Account	0	0	(9)	(2)	0
Net Income	418	211	442	486	384

Note: Forecast 2004/05 and Forecast 2005/06 include rate increases of 7.23 per cent and 2.00 per cent, respectively. Possible rate increases have not been taken into account in Forecast 2006/07 figures.

This Service Plan assumes that the British Columbia Transmission Corporation (BCTC) will gain financial independence in 2005/06, when the BCUC will determine the rates for activities for which BCTC is directly responsible. Prior to BCTC having financial independence, BCTC will be consolidated with BC Hydro. As a result, there are some changes in the line items on the income statement in 2005/06. Costs that are categorized as maintenance and operations and administration expenses, depreciation and finance charges relating to BCTC operations for 2003/04 and 2004/05 are shown as part of the service fee from BCTC and part of the wheeling tariff charged by BCTC.

Below is a summary table showing the forecast net income by Line of Business. Further details on the Lines of Business can be found in the Operating Segment Summary section of this Service Plan (see pages 26 to 43).

Segmented Net Income Before RSA (\$ millions)	Generation	Distribution	Transmission	Powerex	Corporate, Service Orgs, Subsidiaries	Consolidation Eliminations/ Adjustments ¹	Consolidated
2003/04	366	(359) ²	150	92	23	(82)	190
2004/05	196	39	153	89	1	(36)	442
2005/06	198	110	134	91	1	(48)	486
2006/07	205	60	117	99	2	(99)	384

¹These adjustments relate mainly to the difference between BC Hydro's Management Reporting, used for risk management and performance measurement purposes, and GAAP (Generally Accepted Accounting Principles). For management reporting purposes, energy purchases bought for future resale are expensed when the energy is sold. The energy purchased for future resale is also marked to market. For GAAP reporting purposes, energy purchases bought for future resale are expensed in the period of purchase. The other significant adjustment relates to the elimination, on consolidation, of the Powerex dividend to BC Hydro.

²The forecasted loss represents the extent to which current domestic rates are not covering the costs of the system put in place to reliably meet domestic needs as well as the impact of a below normal water year.

KEY ASSUMPTIONS	2003/04	2004/05	2005/06	2006/07
Water inflows into reservoirs	93% of Normal	94% of Normal	Normal	Normal
Electricity trade sales volumes (gigawatt hours)	33,299	39,152	42,004	46,854
Domestic sales volumes (gigawatt hours)	49,875	49,286	49,607	49,930
Domestic load growth (%) ¹	2.46	-1.18	0.65	0.65
Residential customer load growth (%) ¹	5.70	-0.28	1.43	1.49
Light Industrial and Commercial customer load growth (%) ¹	2.21	-0.72	1.17	1.61
Large Industrial customer load growth (%) ¹	-0.51	-2.44	-0.88	-1.31
B.C. Real Gross Domestic Product (%)	1.5	2.6	3.0	2.9
Exchange rate (\$US per \$Cdn) ²	0.7454	0.7941	0.8006	0.8000
Canadian short-term interest rates (%) ²	3.00	2.81	4.03	5.06

¹ Includes impact of Power Smart (conservation) programs.

² Economic assumptions from Ministry of Finance dated January 22, 2004.

On January 17, 2003, an arbitrator ruled in favour of Powerex in its contractual dispute with Alcan Inc. This dispute related to a long-term purchase agreement, signed in 1990, whereby Alcan would deliver power to BC Hydro for 20 years beginning in January 1995. In a November 1997 agreement referred to as the Consent Agreement, BC Hydro consented to having a portion of Alcan's electricity delivery obligations transferred to Enron Power Marketing, Inc. (EPMI), a subsidiary of Enron Corp. At the same time, BC Hydro assigned its purchase rights to Powerex. Under the Consent Agreement, Alcan agreed to remain liable to Powerex for all of EPMI's payment obligations up to US \$100 million. With the bankruptcy of EPMI, the power supply agreement terminated, giving rise to a termination payment due

by EPMI, which it did not pay. Accordingly, Powerex sought payment from Alcan pursuant to Alcan's obligation under the Consent Agreement. Alcan failed to pay, requiring Powerex to bring the matter to arbitration. An arbitration award was issued, which required Alcan to pay Powerex US \$100 million within 30 days, with interest accruing thereafter. This payment currently remains outstanding and Powerex has commenced enforcement proceedings in British Columbia. Subsequent to the arbitration award, Alcan successfully applied to have this proceeding adjourned pending the outcome of an application it made in the U.S. courts to have the arbitration award set aside. That application was heard in August 2003 before a U.S. magistrate, who denied the application in a "Findings and Recommendation" on September 18, 2003. On December 11, 2003 a Judge of the US District Court accepted this recommendation and issued a decision of the Court to that effect. On January 9, 2004 Alcan appealed this decision to the Ninth Circuit Court of Appeal. While this may result in further delay, Powerex has been advised that this risk is low and that the BC enforcement action should proceed without awaiting the outcome of the appeal. Accordingly, Powerex has now renewed its enforcement proceedings in British Columbia, which is expected to be heard sometime in the spring of 2004. At this time, the outcome of this claim is still not determinable. Accordingly, no recovery in respect of the arbitration award has been reflected in these forecasts.

In a settlement announced on October 31, 2003, the U.S. Federal Energy Regulatory Commission (FERC) Trial Staff cleared Powerex of allegations of inappropriate market behaviour, and concluded that Powerex played a positive role in helping California keep the lights on during the California energy crisis of 2000 and 2001. In the agreement the Trial Staff of FERC rejected California's claims that it was owed more than U.S.\$1 billion by Powerex. The agreement is subject to approval by the full Commission and calls for further litigation to be suspended pending this approval. As was disclosed in the notes to BC Hydro's 2003 Audited Financial Statements, Powerex still faces possible additional costs, as several investigations and regulatory proceedings at the state and federal levels are also looking into causes of the high wholesale electricity prices in the western United States during 2000 and 2001. These investigations are to determine if suppliers should be required to refund some of the revenue earned during this period. BC Hydro has recorded provisions for uncollectible amounts and legal costs associated with the ongoing legal and regulatory impacts of the California energy crisis. These provisions, based on management's best estimates, are intended to provide for any remaining exposure.

RISK ANALYSIS

BC Hydro is subject to various financial and other risks that can cause significant volatility in its earnings. While these risks cannot be eliminated, as they are largely non-controllable, some may be mitigated to a certain degree. BC Hydro manages its financial risks within a range of risk tolerance established through Board-approved policies and risk limits, as well as management oversight, risk reporting, and internal controls. The key risks and uncertainties BC Hydro faces include:

WATER INFLOWS INTO RESERVOIRS AND IMPACT ON HYDRO GENERATION

BC Hydro's net income is significantly influenced by the level of water inflows into its reservoirs. High levels of water inflows into BC Hydro's reservoirs allow for a greater proportion of energy demand to be met using low-cost hydro generation in place of higher-priced energy purchases or gas-fired generation, thereby reducing the cost of energy and increasing net income. The unit cost of energy purchases is

currently on average more than 10 times greater than variable cost of hydro generation. High inflows can also create surplus energy not required to meet domestic demand. This energy can be sold at favourable profit margins on the electricity trade market. Conversely, low water conditions will lead to a greater use of energy purchases or gas-fired generation to meet energy demand. This will increase the cost of energy and tend to decrease net income. As the amount of inflows can fluctuate significantly from year to year, BC Hydro faces challenges in operating its system to try to minimize the impact of low water years on net income. BC Hydro continues to seek to optimize energy management through the appropriate mix of self-generation and energy imports, depending on water inflows and the fluctuating economic and market conditions. The proposed deferral account for the Heritage Payment Obligation will aid in reducing the volatility of net income due to water inflow risk by deferring cost or revenue items that are largely out of BC Hydro's control. Energy costs, which are driven by water inflows into our reservoirs, are the most volatile costs. The Heritage Payment Obligation deferral account will also include any surplus energy sales when water inflows are higher than domestic need.

ENERGY MARKET PRICES AND EXPORT MARGINS

Export revenues are directly affected by market prices, as are short-term energy purchases related to both domestic and electricity trade. Market prices also affect a number of decisions, including whether it is more economical to generate hydro or thermal electricity, whether to purchase energy during specific time periods; and when to sell energy in the export market. Market prices that are 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. Factors such as the level of water inflows, gas prices, unit outages and weather conditions in the Pacific Northwest and California all influence the market price. Any change in market prices could have a significant impact on BC Hydro's electricity trade revenues, cost of energy and, ultimately, net income. Energy continues to be among the most volatile traded commodities as market prices can vary significantly from period to period. BC Hydro tries to take advantage of this volatility by consistently monitoring its market strategies and using its storage and generation capabilities. BC Hydro also has risk management practices to manage market, credit and administrative risk related to these activities.

MANAGING BC HYDRO'S EXPOSURE TO MARKET PRICES AND HYDRO INFLOWS

For the purpose of planning its electricity portfolio, BC Hydro has limited its reliance on short-term market electricity purchases to 2,500 gigawatt hours. This assumption is being reviewed and updated as part of BC Hydro's Integrated Electricity Plan, to be complete in spring 2004. The revised limit will be a key input into BC Hydro's procurement strategy, driving the volume of long-term power supply to be acquired from Independent Power Producers and other sources.

Natural gas has become an important part of BC Hydro's base-load supply portfolio with the acquisition of gas-fired resources at Elk Falls on Vancouver Island and at Fort Nelson. BC Hydro is reviewing its hedging strategy to manage natural gas pricing risk.

BC Hydro has traditionally relied on three means to mitigate the risk of low hydro inflows: drafting reservoirs, generating thermal power at Burrard Generating Station using natural gas, and importing electricity from external markets. With the implementation of the Heritage Contract for 2004/05, BC Hydro will be able to use a regulatory deferral account to offset higher costs of energy in low water

years against higher revenues in above-normal water years, smoothing the impact on rates. BC Hydro is developing a purchasing and sales strategy for both electricity and gas to manage its exposure to energy purchase prices in years when inflows are low and imports are expected to be high.

BC Hydro also continues to develop its risk measurement and reporting tools to better represent its exposure to gas and power prices and hydro inflows. These reports are reviewed at BC Hydro's executive-level Risk Management Committee on a monthly basis.

INTEREST RATES AND FOREIGN EXCHANGE RATES

As with most utilities, BC Hydro is a highly debt-leveraged, capital-intensive company. Changes in interest and foreign exchange rates can therefore have a significant impact on finance charges. BC Hydro uses several debt-management strategies to minimize the impact of interest rate and foreign exchange rate fluctuations. However, these fluctuations can still exert a significant influence on finance charges and trade activities carried out in U.S. dollars. Some of the debt-management strategies employed by BC Hydro include the use of foreign currency agreements to minimize foreign exchange risk and the management of fixed- and floating-rate debt within acceptable risk levels in order to minimize interest rate risk. Regulatory accounting that allows for the deferral and amortization of foreign exchange gains and losses on monetary items such as debt also helps in reducing income risk. Without the deferral of foreign exchange gains and losses, BC Hydro would be subject to income fluctuations due to the volatility in foreign exchange rates.

WEATHER

Weather has a significant impact on residential revenues, particularly in the months of December to February. It is estimated that if temperatures are 10 per cent warmer or colder than normal, residential revenues will decline or increase by five per cent and seven per cent respectively. BC Hydro minimizes the impact of lost domestic sales resulting from warmer-than-normal weather by increasing reservoir levels, if practical, or by selling the energy in the export market.

PENSION COSTS

The return on pension fund assets can have the largest impact on pension costs (employee future benefit costs). Lower-than-expected returns can increase pension costs significantly. BC Hydro's pension fund assets are managed through professional investment managers. BC Hydro, along with other companies that have defined benefit pension plans, is also required to have an actuarial valuation on its pension plan obligations at a minimum of every three years. Changes in BC Hydro's employee demographics, mortality rates, and other variable factors could significantly influence the pension liability and corresponding pension costs. BC Hydro's last actuarial valuation was completed in 2002 (2002/03) and the results of this valuation have been included in BC Hydro's forecast of net income.

SENSITIVITY ANALYSIS

The following table illustrates the impact that key drivers can have on BC Hydro's earnings over the three-year planning period covered by this Service Plan. The combined effect of these drivers, which are largely beyond BC Hydro's control, is a net income range of as much as \$565 million in each year. The volatility between BC Hydro's plan (base-line forecast used to establish rates) and actual results will partly be mitigated through the use of deferral accounts as has been proposed in its revenue requirement application to the BCUC (see pages 46 and 47 for further details on the deferral accounts).

(\$ millions)	2004/05		2005/06		2006/07	
	Low	High	Low	High	Low	High
Estimated Earnings before Transfers to Deferral Accounts	388	388	448	448	384	384
Inflows / Gas Prices ¹	(245)	265	(200)	100	(275)	180
Weather ²	(5)	5	(5)	5	(5)	5
Pension Costs ³	(5)	10	(10)	15	(15)	25
Foreign Exchange ⁴	(5)	5	(5)	5	(5)	5
Interest Rates ⁵	(10)	10	(15)	15	(20)	20
Combined Sensitivity	118	683	213	588	64	619

¹ High and low range based on being within an 80 per cent probability band. One of the reasons the range of outcomes declines after 2004/05 is that 2004/05 is forecast to have below normal inflows based on the January 01, 2004 snowpack levels whereas 2005/06 is assumed to have normal inflow levels. As a result there is less operational flexibility in the system for 2004/05.

² Assumes weather will be five per cent warmer or colder than normal and will fall within this range approximately 80 per cent of the time.

³ Probable forecast assumes return on pension plan assets is seven per cent, low forecast assumes return of five per cent high forecast assumes rate of 10 per cent.

⁴ High and low are based on being within the 80 per cent probability band (translates to +/- 3 cents from expected). The impact of a change in the dollar includes the impact on Powerex net cash flows, interest payments on U.S. dollar denominated debt, U.S. dollar sinking fund income and the BCUC-approved deferral and amortization method of accounting for foreign-exchange gains and losses on foreign denominated monetary items such as debt.

⁵ A change of one percentage point in short-term interest rates changes finance charges by approximately \$30 million. High and low are based on being within the 80 per cent probability band (translates to +/- 50 basis points from expected).

8. MAJOR CAPITAL PROJECTS PLAN

There are several drivers that guide capital project spending at BC Hydro:

- **Reliability** – projects that will prevent a loss of existing capability or protect existing equipment, systems and system capability.
- **Consent to Operate** – projects that will protect BC Hydro’s consent to operate today and in the long term (primarily environmental and social).
- **Regulatory** – projects that will ensure regulatory compliance.
- **Risk Management** – projects that will identify and manage a variety of anticipated risks as good business practice.
- **Cost Efficiency** – projects that will reduce costs or protect existing revenues.
- **Employee Safety** – projects that will identify and manage a variety of workplace risks/hazards to protect employees.
- **Externally Driven Growth** – projects that will ensure that we respond effectively to external requirements to meet load.
- **Profitable Growth** – projects, not driven by load or customer growth that will increase net income.

The following projects have capital costs expected to exceed \$50 million.

VANCOUVER ISLAND GENERATION PROJECT

The natural gas-fired Vancouver Island Generation Project (VIGP) located at Duke Point in Nanaimo was designed to meet load growth on Vancouver Island and to replace the aging submarine HVDC transmission cables currently providing electricity to the Island. These cables are approaching the end of their lifespan. The in-service date for this project was targeted for spring/summer 2006 at a project forecast cost not to exceed \$370 million.

BC Hydro made application for a Certificate of Public Convenience and Necessity (CPCN) before the British Columbia Utilities Commission (BCUC) and participated in hearings before the BCUC during the summer of 2003. The BCUC agreed that there was a need for new dependable capacity on Vancouver Island.

As offered by BC Hydro, and encouraged by the BCUC, a Call For Tenders (CFT) for capacity and associated energy on Vancouver Island has been initiated. This process is planned to determine and make recommendations on the most cost-effective, long-term capacity supply option for Vancouver Island. BC Hydro needed this process to acquire new, dependable capacity by spring/summer 2006 because of the risk presented by the aging submarine cables. The outcome of the CFT will determine whether a private-sector development of the VIGP assets or a suite of other projects will be developed. At that time schedules and costs for the VIGP and Georgia Strait Crossing projects may be reviewed.

GEORGIA STRAIT PIPELINE CROSSING

The Georgia Strait Pipeline Crossing (GSX) is a joint project sponsored by BC Hydro and Williams Gas to construct a natural gas pipeline from the Huntingdon/Sumas supply hub to Vancouver Island. GSX was designed as a large-capacity pipeline with capability to provide gas transportation service to the Island Cogeneration Plant (ICP), the planned Vancouver Island Cogeneration Project (VIGP), a third gas-fired generation plant on Vancouver Island and other large industrial gas consumers along its route through the United States.

BC Hydro's investment in the project is forecast to be \$209 million. GSX received its Certificate of Public Convenience and Necessity from the National Energy Board in December 2003 and U.S. Federal Energy Regulatory Commission approval was received in September 2002. Additional Provincial, Federal and U.S. approvals are required, but these are expected to have a lower risk profile. The in-service date for GSX is expected to be October 2006.

The project however is also contingent upon development of VIGP or a similar large gas-fired generation plant on Vancouver Island with a demand of approximately 45Tj/day. GSX is not required if VIGP or a similar large gas-fired generation project is not successful in the Vancouver Island Call for Tender (VI CFT). Terasen Gas can provide all of the necessary firm gas transportation service to ICP and other small gas-fired generation with upgrades to its existing gas pipeline system.

An alternative to GSX for gas transportation service has been proposed by a third party if VIGP is successful in the VI CFT. This alternative would also meet the gas transportation requirements for ICP. BC Hydro is comparing the costs of the GSX and this alternative and assessing the legal, regulatory and development risks associated with both alternatives. BC Hydro has also requested that the third party provide the basis for its cost estimates to supply gas transportation from the terminus of GSX to VIGP and ICP. Similar discussions in this regard have also taken place between BC Hydro and the BCUC.

At this time it remains prudent for BC Hydro to continue to support the GSX opportunity.

SEVEN MILE DAM SAFETY IMPROVEMENTS

The Seven Mile Dam and Power Plant came into service in 1979. While the facility was designed and constructed to the dam safety standards and criteria in effect at that time, the standards and criteria have evolved since then, particularly with respect to earthquakes. As a result, a Dam Safety Deficiency Investigation project, undertaken as part of the Dam Safety Program, identified a number of deficiencies, and the Seven Mile Dam Safety Improvements project was initiated in February 2002 to address these deficiencies. The work includes:

- **Spillway Gate improvements** – that will allow the spillway gates to be operated with a high degree of reliability after an earthquake.
- **Dam Upgrade work** – to anchor the dam with post-tensioned anchors drilled through the concrete into the underlying bedrock.
- **Site Systems upgrades** – to improve the reliability of the power supply to the facility, common drainage pumps and improved communications and control.

The Seven Mile Dam spillway, anchoring and site systems upgrades are expected to be completed in 2005 at a total cost of \$73.4 million. The improvements will protect the overall investment in the Seven Mile Generating Station. The improvements are also required to ensure that current dam safety practice requirements are met, and the risks to life, environmental damage and financial loss are mitigated.

FINANCE BUSINESS TRANSFORMATION PROJECT

The Finance Business Transformation project (FBT) involved transforming the BC Hydro finance function by implementing streamlined processes and financial and management systems (including PeopleSoft technology), to replace aging legacy applications, increase information analysis capabilities and responsiveness of BC Hydro to its business environment. FBT is part of the larger Integrated Packaged Program initiatives implemented across BC Hydro. By May 2003 the final phase of the financial processes and applications was implemented as scheduled. Stabilization, change management and commissioning tasks are continuing through the remainder of the fiscal year as planned. The FBT project is expected to: improve the quality and accessibility of business information to support decision making; transform the finance function from primarily a transaction based processing organization to a value added business partner of operational management; and support a range of future business models. Total project cost will be approximately \$56.5 million, which is \$5 million under original plan of \$61.5 million.

CUSTOMER INFORMATION SYSTEM PROJECT

The Customer Information System (CIS) replacement project (also known as the NorthStar Project) involves the acquisition, installation and implementation of the SAP Customer Care Services (CCS) system, in partnership with SAP (the vendor) and Accenture (the selected system integrator). The current system, implemented in 1972, constrains BC Hydro's capability to maintain and improve customer satisfaction.

The new CIS system was launched on December 29, 2003 and is expected to deliver benefits to BC Hydro through cost avoidance, process efficiencies and strategic benefits related to the provision of flexible customer-centric metering, billing, payment and service capabilities. Core training has been provided for primary users and extra support for operational and technical staff will continue until the end of June 2004. Total project cost is projected to be approximately \$63 million, which is right on approved plan.

The new CIS system is owned by BC Hydro, but will be utilized by Accenture. BC Hydro will receive founding partner benefits relating to the growth of Accenture Utility outsourcing.

APPENDIX A: ORGANIZATIONAL OVERVIEW – ENABLING LEGISLATION

Two key provincial legislative statutes enable BC Hydro's operations. BC Hydro's mandate is provided for under the *Hydro and Power Authority Act*. This Act creates BC Hydro and establishes its general powers and governance. Among other prerogatives, the Act provides BC Hydro with the authority to generate, manufacture, distribute and supply power, to develop power sites, power projects and power plants, and to purchase power from or sell power to a firm or person.

The other piece of legislation is the *Utilities Commission Act*. This Act creates the British Columbia Utilities Commission (BCUC) and establishes the framework for regulation of public utilities. The BCUC is an independent regulatory agency of the Provincial Government operating under and administering the Utilities Commission Act. The BCUC's primary responsibility is the regulation of the energy utilities under its jurisdiction to ensure that the rates charged for energy are fair, just and reasonable, and that utility operations provide safe, adequate and secure service to its customers.

The BCUC also reviews certain utility and energy projects under the *Utilities Commission Act*. The BCUC's review and evaluation process often involves public hearings followed by a decision or a report and recommendations to the Lieutenant Governor in Council. The BCUC's function is quasi-judicial and its Decisions and Orders may be appealed to the Court of Appeal on questions of law or jurisdiction. BC Hydro is subject to most, but not all, of the regulatory powers of the Utilities Commission. Both BC Hydro and the Commission are subject to certain kinds of directions or directives issued by order of the Province.

LEGISLATIVE CHANGES IN 2003

The Provincial Energy Plan directed changes to the electricity sector in B.C. that requires new legislative changes and additions. In November 2003, the Provincial Government issued two Special Directions to the British Columbia Utilities Commission:

- **Heritage Special Direction Number HC1 to BC Hydro** (which repeals Special Directive Number 4, dated March 30, 2000) was made under section 35 of the *Hydro and Power Authority Act* and sets out BC Hydro's payment to the government for deposit into the consolidated revenue fund. Under the new direction, BC Hydro is responsible for contributing 85 per cent of its distributable surplus for the previous fiscal year. If this payment results in a debt/equity ratio for BC Hydro that is greater than 80/20, an adjustment is to be made to the payment to maintain the 80/20 ratio.
- **Heritage Special Direction Number HC2 to the British Columbia Utilities Commission** was made under sections 3 and 4 of the *BC Hydro Public Power Legacy and Heritage Contract Act*. It requires the BCUC to treat the Heritage Contract between BC Hydro Generation and Distribution as legally binding for ratemaking purposes. It also requires the Commission to include in its forecasts of BC Hydro's net income a forecast of Trade Income that may not exceed \$200 million, nor be less than zero, thus ensuring that customers continue to enjoy the full benefit of trade income in all but the most exceptional circumstances, and are protected from trading losses. The Commission is directed to allow the establishment of one or more deferral accounts related to the Heritage Contract, the effect of which will be to smooth rates.
- **The new *Transmission Corporation Act*** came into effect on July 24, 2003, at which time the British Columbia Transmission Corporation (BCTC) was established as an organization separate from BC Hydro and all other electricity market participants.

APPENDIX B: MEASURES DEFINITIONS

BC HYDRO OVERALL

Net Income is defined as total revenue less total expenses after transfers from deferral accounts. In recent years BC Hydro has experienced significant changes in net income due to extreme volatility in the electricity trade market. While such volatility has abated, its return would significantly impact the targets.

Customer Satisfaction is a composite indicator. Thirty per cent of the measure comes from a survey using all customers as the population from which to draw a random sample. The other 70 per cent comes from transactional surveys using only customers who have had a service interaction with BC Hydro as the population from which to draw a sample. Satisfied customers are those who indicate they are either “satisfied” or “very satisfied”.

Reliability is defined as a combination of Average System Availability Index (ASAI) and Customer Average Interruption Duration Index (CAIDI). ASAI is percentage of time the power is available. CAIDI is the average number of hours per interruption. These indices are electric utility industry standards.

Sustaining Capital Ratio is defined as sustaining capital expenditures as percentage of the replacement value of capital assets.

Environmental Regulatory Compliance is defined as the number of externally reportable, preventable environmental incidents. After the education and awareness is complete, as well as improved relations and understanding with regulators, BC Hydro anticipates the numbers to start dropping. The reductions should result from continuously improving management practices.

Conservation Gigawatt Hours is defined as cumulative gigawatt hours saved as a result of economic demand-side management. The targets are based on net savings from current Power Smart programs and programs expected to come on stream.

New electricity from Clean Energy (%) is defined as percentage of new electricity supply that is produced from clean energy sources, as directed by the Provincial Government’s Energy Plan.

All Injury Frequency is defined as the total number of employee injury incidents (Medical Aids and Disabling Injuries) occurring in the 12 months prior to the report date relative to the number of worked hours in the same period. For this measurement, Medical Aid injuries are defined as those where a medical practitioner has rendered services beyond the level defined as “first aid” in relation to the injury incident, and the employee was not absent from work beyond time lost on the day of the injury. Disabling injuries are defined as those that involve the employee being absent from work beyond the day of injury.

Approved Strategic Workforce Positions Filled is defined as the number of positions filled under BC Hydro's Strategic Workforce Planning (SWfP) initiative. SWfP is the management process for anticipating, scoping and planning the alignment of needed critical workforce capabilities to meet BC Hydro's strategic business goals.

GENERATION LINE OF BUSINESS

Net Income has same definition as BC Hydro Overall (above).

Cost per Megawatt Hour Including Electricity Purchases is defined as all Generation costs divided by the volume of energy generated under average water conditions. Currently, all major hydroelectric generating units place in the first and second quartiles for cost efficiency (Hadden Jackson).

Commercial Performance is defined as revenue from energy produced relative to the revenue from energy that could have been produced had all generation needed to meet domestic load and trade opportunities been available.

Average Number of Forced Outages for a facility is defined as the total number of forced outages at the facility during the year divided by the number of units at the facility. A forced outage is the occurrence of a component failure or other condition which requires that a generating unit be removed from service and includes starting failures but excludes outages external to the generating station (e.g., outages caused by the transmission system).

Resource Smart Energy Gains Put Into Service is defined as the projected long-term average incremental energy gains for existing Generation facilities, that are put into service during the year.

DISTRIBUTION LINE OF BUSINESS

Net Income has same definition as BC Hydro Overall (above).

COMA Per Customer is defined as gross recurring Capital expenditures (net of Telus recoveries), and Operating, Maintenance, and Administration expenses divided by the total number of customers. Distribution is currently organized in a manner such that it contains a number of functions that are not included in industry benchmarks. The PA Consulting and Canadian Electricity Association benchmarks are based only on the expenditures associated with the distribution of electricity.

Asset Health Risk Index is defined as the percentage of assets rated in fair or poor condition through an annual assessment of asset health.

Customer-Based Generation Gigawatt Hours is defined as gigawatt hours delivered from customer-based generation sources that meet purchase price limits.

Green Gigawatt Hours is defined as cumulative gigawatt hours contracted from green sources that meet purchase price limits.

POWEREX

Net Income has same definition as BC Hydro Overall (above).

Transactions per Employee is defined as the number of transactions conducted by Powerex, divided by the number of Powerex employees.

ENGINEERING LINE OF BUSINESS

Utilization Rate is defined as billable hours divided by total hours worked.

Hourly Charge-Out Rate is defined as the weighted average hourly rate charged by Engineering Services.

Client Feedback/ Satisfaction is defined as client ratings of Engineering's performance on: understanding of clients' business, delivering on time, delivering on budget, communication, quality of products and services, and overall satisfaction. A face-to-face meeting is conducted once a week with different clients within BC Hydro and scored on a scale of 1 to 7 (1: Extremely Poor to 7: Excellent).

Approved Engineer-in-Training (EIT) and Graduate Technologist-in-Training (GTT) Positions Filled is defined as the percentage of EIT and GTT targeted positions that are filled.

FIELD SERVICES LINE OF BUSINESS

Hourly Charge-Out Rate is defined as the average hourly billing rate designed to cover all costs of providing the service.

Labour Utilization is defined as actual hours charged to work by the IBEW and other field technical staff divided by total available hours of all staff. Support staff and management does not generally charge to work since these costs are recovered through labour loadings.

Total Planned Work Completed is defined as the total planned customer work assigned to Field Services divided by total planned customer work completed. This measure is a proxy measure of customer satisfaction. High levels of completed work have historically correlated to high levels of customer satisfaction.

All Injury Frequency has same definition as BC Hydro Overall (above).

Trainee Positions Filled is defined as the number of apprentices/trainees in Field Services who are being trained to fill positions as a result of retirement, attrition or other core workforce requirements.

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