



**British Columbia Transmission  
CORPORATION™**

## **Service Plan**

For Fiscal Years 2006/07 to 2008/09

*January 2006*

## Message from Board Chair to Minister of Energy, Mines and Petroleum Resources

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31 January 2006

On behalf of the Board of Directors, the management and employees of British Columbia Transmission Corporation (BCTC), I am pleased to present the Corporation's 2006/07 – 2008/09 Service Plan.

Under the *Transmission Corporation Act*, BCTC is responsible for planning, operating and managing British Columbia's high-voltage electric transmission grid. BCTC is a government-owned Crown Corporation, regulated by the BC Utilities Commission (BCUC) and the Minister of Energy, Mines and Petroleum Resources is the Minister Responsible for BCTC. BCTC began operations in August 2003 as part of the Government's *Energy for our Future: A Plan for BC*.

As an independent transmission company, BCTC directly supports the objectives of the Energy Plan, by:

- providing continued access to reliable, low-cost electricity;
- expanding the contribution of the electricity industry to BC's economy through the provision of open and non-discriminatory access to BC's electric transmission system for all users;
- encouraging private investment in generation; and
- securing access to the western North American wholesale electricity market.

BCTC is fully responsible for operating, maintaining and planning for the growth of our province's electric transmission system.

Since inception, BCTC has achieved significant milestones and advanced its mandate by maintaining reliable transmission services, establishing strong relationships with stakeholders and First Nations, and creating an organization with highly qualified and talented individuals. While work is on-going and more needs to be done, significant progress has been made. During Fiscal 2005/06 the Corporation set and achieved a series of important goals; our key accomplishments include:

- Enhanced the new Asset Management System, a world-class program that extends the life of transmission assets and reduces costs, while maintaining or improving current reliability;
- Received approval from the BCUC for an innovative new Open Access Transmission Tariff that facilitates opportunities for independent power producers and provides choices for large customers in British Columbia;
- Commenced implementation of critical technology systems and the consolidation of BCTC's control centres. The advanced applications proposed will give transmission customers faster market access and improved services;
- Received BCUC approval and recommendations for improvement on BCTC's Transmission System Capital Plans, which propose a \$2.7 billion investment in the grid over the next 10 years;

- Expanded and enhanced BCTC's open and transparent public involvement process that ensures British Columbians are informed and actively involved in discussions about major transmission initiatives proposed in our Capital Plan.
- Successfully negotiated a two-year labour agreement with BCTC's two unions, the International Brotherhood of Electrical Workers (IBEW) and the Canadian Office & Professional Employees Union (COPE).

We are both proud of our accomplishments and excited about the opportunities that BCTC creates for all of our customers, our shareholder, our economy and our employees. We look forward to making significant progress on our strategic initiatives in the coming year.

This 2006/07 - 2008/09 Service Plan for BCTC was prepared under my direction and in accordance with the *Budget Transparency and Accountability Act*. On behalf of the Board, I am accountable for the contents of the plan including the selection of performance measures and targets. The plan is consistent with the government's strategic priorities and overall Strategic Plan. All significant assumptions, policy decisions, and identified risks, as of 31 January 2006, have been considered in preparing the plan. On behalf of the Board, I am accountable for ensuring BCTC achieves its specific objectives identified in the plan and for measuring and reporting actual performance.

A handwritten signature in black ink, appearing to read 'R.T.F. Reid', with a stylized flourish at the end.

R.T.F (Bob) Reid  
Chair of the Board  
British Columbia Transmission Corporation

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## Organizational Overview

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British Columbia Transmission Corporation's ("BCTC" or the "Corporation") mandate is to provide independent, open and non-discriminatory access to BC's electric transmission system, to facilitate private generation investment in BC and to maintain access to the Western North American wholesale electricity market. BCTC is a Crown Corporation formed in 2003 and continues to operate under the *Business Corporations Act*, in response to the BC government's Energy Plan. BCTC has powers and functions specified in the *Transmission Corporation Act*, which came into force in July 2003, and Key Agreements with BC Hydro designated by Order-in-Council in November 2003. The Minister of Energy, Mines and Petroleum Resources is the Minister Responsible for BCTC and the Corporation is governed by a Board of Directors appointed by the Provincial shareholder. BCTC is responsible for transmission system operations, planning, asset management and maintenance, including system expansion and asset replacement. The transmission system assets continue to be owned and financed by BC Hydro. BCTC owns the control centre assets required for operating and controlling the transmission system.

A Shareholder's Letter of Expectations between the Minister of Energy, Mines and Petroleum Resources and BCTC's Board Chair sets out the corporate mandate, high level performance expectations, strategic priorities and the respective roles and responsibilities of the Shareholder and BCTC.

BCTC is regulated by the British Columbia Utilities Commission (BCUC), which approves the Corporation's revenue requirement, rates, tariffs and capital expenditures following open, public processes.

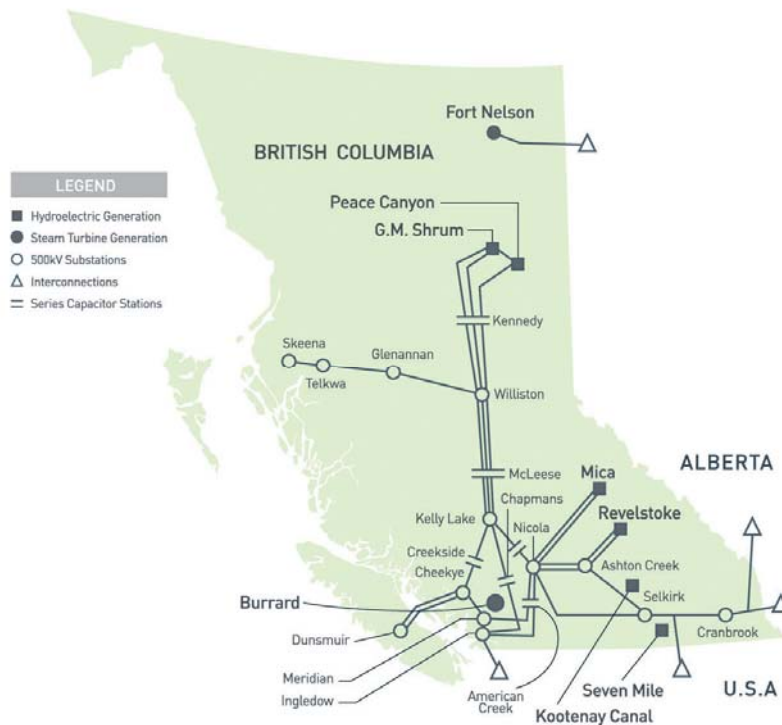
The transmission system receives power from approximately 100 generating stations and delivers it through roughly 18,300 kilometers of transmission lines to about 400 delivery points throughout the province. BCTC's primary roles, responsibilities and services include:

- Exclusive authority for electric transmission reliability in BC;
- Operation of the transmission system (owned by BC Hydro), including real-time operation of transmission, generation, distribution and telecommunications systems, and transaction scheduling;
- Provision of services under the Open Access Transmission Tariff (OATT), including all aspects of the regulatory process, tariff administration and customer relations. The OATT defines the rates and terms and conditions of transmission service and interconnection to the transmission system. The BCUC approved BCTC's first OATT application in June 2005;
- Planning of the transmission system in coordination with BC generation and distribution entities and neighbouring control areas and transmission organizations;
- Asset management and maintenance of transmission lines, substations and telecommunications systems owned by BC Hydro, as well as BCTC's control centres. The maintenance plan addresses over 25,000 work orders per year, with an annual expenditure of approximately \$82 million.
- Sustaining, replacing and expanding the transmission assets owned by BC Hydro and BCTC's control centre assets, to ensure reliable service for domestic customers and for electricity trade. As the transmission asset owner, BC Hydro is required to finance transmission capital expenditures as directed by BCTC, following BCUC approval. As owner of the control centre assets, BCTC funds capital expenditures on these assets, subject to BCUC approval. At 31 December 2005, the net book value of transmission

assets owned by BC Hydro was \$2,441 million and the net book value of BCTC's capital assets was \$56.8 million; and

- Actions necessary to maintain low electricity rates in British Columbia, including the cost-effective management of all BCTC functions.

BCTC conducts business operations from its head office in Vancouver, the System Control Centre in Burnaby, four Area Control Centres in Vancouver, Duncan, Prince George and Vernon, and the Telecommunications Control Centre in Burnaby. In addition to the 18,300 circuit kilometres of high voltage transmission lines from 60kV to 500kV, the Corporation operates and manages an extensive network of facilities including 290 stations and 250 microwave and repeater sites. The integrated transmission network covers the majority of British Columbia's land mass and interconnects with utilities in Alberta and the United States. Following is a map of the British Columbia transmission system:

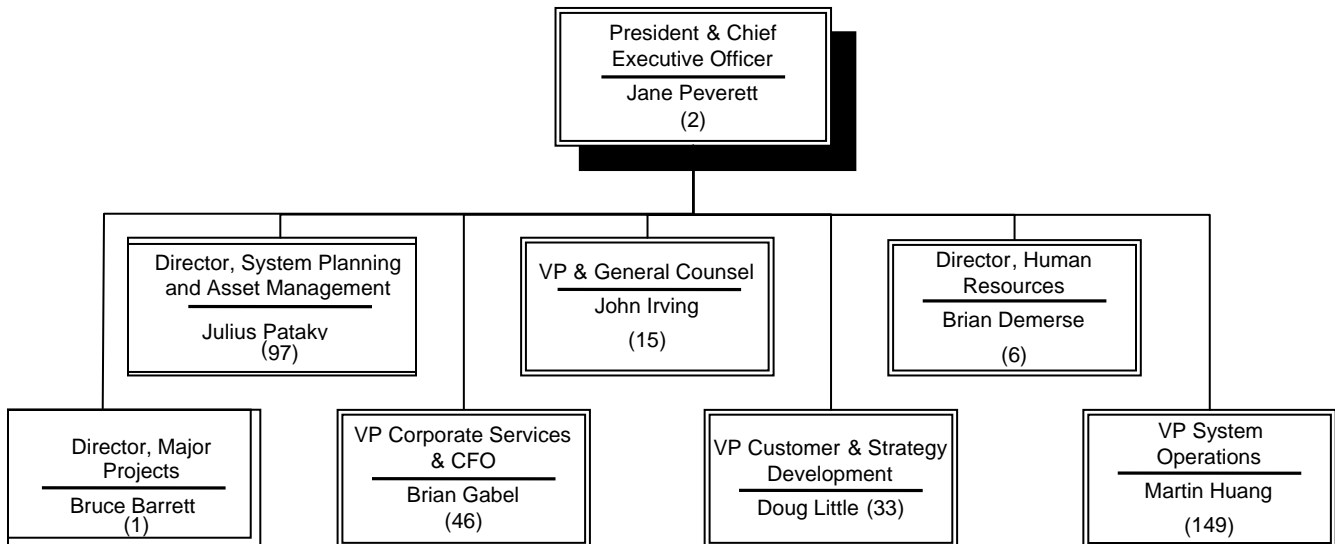


BCTC's largest transmission services customer is BC Hydro, who serves domestic electricity customers in British Columbia. Point-to-point wholesale transmission services are provided to BC Hydro, Powerex and a number of marketers for enabling electricity trade in Western North America. BCTC also provides services to BC Hydro to operate its distribution system and dispatch its generating units. Total revenues collected by BCTC from tariff services, non-tariff services and other cost recoveries exceed \$700 million per year, and recover BCTC's own operating and asset-related costs as well as approximately \$500 million for BC Hydro's asset ownership costs and allowed return.

BCTC's principal stakeholders are its transmission service customers, BC Hydro and other utilities, independent power producers (IPPs), industrial customers directly connected to the transmission system, municipalities, community and environmental groups, the BCUC and the Provincial shareholder. The Corporation has an active engagement process to ensure that stakeholder and First Nations views are considered in planning and execution of projects and regulatory applications.

Independent and open access transmission enables other generator, trader and market arrangements to be developed in BC that would not necessarily include BC Hydro. These arrangements or business models may not be apparent yet, but may involve IPPs, aggregators, exports, large industrial customers, etc. It is unlikely that such economic opportunities could be pursued or even considered under the vertically integrated model.

BCTC's corporate structure and planned F2007 FTE staff levels are shown below.



A large portion of BCTC's operating and capital activities are performed by third parties under contract to BCTC. Major contractors include BC Hydro Field Services (approximately \$100 million per annum), BC Hydro Engineering (approximately \$50 million per annum) and Accenture Business Services for Utilities (approximately \$7 million per annum).

BCTC's Board of Directors is responsible for the governance and stewardship of the Corporation. The Board's role is to set and maintain corporate direction, review and approve the Corporation's strategic plan, set corporate objectives, monitor performance against those objectives and ensure the Corporation has processes in place to identify, monitor and mitigate substantial business risks. The Board is responsible for full and timely disclosure of the Corporation's financial and business performance and material developments reasonably anticipated to have significant impact on the prospects and risks of BCTC's business. The Board balances commercial and public policy objectives to ensure that the Corporation is operated in a sound commercial manner while at the same time fulfilling the public policy responsibilities assigned to it by government and taking into consideration the interests of stakeholders and First Nations.

Currently, BCTC's Board has three Standing Committees: the Audit Committee (AC), Human Resources Committee (HRC) and Corporate Governance Committee (CGC).

Composition of the Board of Directors and its Standing Committees is as follows:

- Robert Reid, Board Chair \*
- Nicole Byres (CGC)
- Richard Campbell (HRC Chair)
- John Gill (AC)
- Norm Laythorpe (AC)
- Joanne McLeod (HRC)
- Margot Northey (CGC Chair)
- Bev Park (AC Chair)
- Gerald Wesley (HRC)
- Ralph Winter (AC)

\* *The Board Chair serves as an ex-officio member of all Standing Committees.*

The Board, its Standing Committees and the Board Chair each have written terms of reference outlining respective roles and responsibilities. Members of the Board also take part in an annual schedule of orientation and strategy sessions, and engage in annual evaluations of performance. Information about the Board is at [www.bctc.com/about\\_bctc/board\\_executive/board\\_of\\_directors/](http://www.bctc.com/about_bctc/board_executive/board_of_directors/)

The Board continues to build on the corporate governance framework implemented for BCTC, and has established guiding principles and a supporting policy framework for the Corporation. In 2005, the Board Resourcing & Development Office established *Governance and Disclosure Guidelines for Governing Boards of British Columbia Public Sector Organizations*. These Guidelines set out governance principles and disclosure practices for public sector organizations in BC. BCTC's Board has ensured the Corporation's governance framework complies with the principles set forth in the Guidelines.

## Planning Context and Key Strategic Issues

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This section describes BCTC's mission, vision, values, planning context and key strategic issues as articulated in the corporate strategy developed by executive management and the Board of Directors. The corporate strategy reflects a number of business drivers fundamental to the role of BCTC and identifies risks that could affect performance.

### Mission

BCTC's mission describes our business purpose: the business we are in and how we serve and provide value to customers and stakeholders.

*"We are BC's independent electric transmission company, ensuring fair and open access to the grid and creating value and new opportunities for our customers and stakeholders by providing safe, reliable and cost-effective transmission services."*

### Vision

Our vision describes the future to which we aspire.

*"As an independent electric transmission company, we are globally recognized for our innovative and sustainable approach to serving our customers."*

### Values

In pursuing its activities, BCTC's corporate and individual behaviors are guided by the values of honesty and integrity, innovation, openness and responsiveness, accountability, and sustainability.

***Honesty and Integrity.*** We say what we mean; we do what we say; we treat all parties fairly and with respect.



**Innovation:** We continuously seek ways to improve; we value creativity; we set high performance objectives; we understand and effectively manage risk.

**Openness and Responsiveness:** We share information proactively; we seek and respond to feedback; we invest in understanding the needs of our customers and stakeholders.

**Accountability:** We take responsibility for our actions; we encourage diverse opinions and support decisions once made; we set clear objectives and accept responsibility for their achievement; we pursue opportunities to increase our individual knowledge of our business.

**Sustainability:** We manage the business with both today and tomorrow in mind; we employ the best people, respecting their diverse skills, experience and background, and invest in their future with us; we respect the natural environment; we work safely; we encourage balance among home life, work and community involvement.

Employee demonstration of corporate values is an important aspect of the annual performance review process. An employee's overall performance assessment takes account of achievement of objectives and demonstration of corporate values.

## **Planning Context**

As part of its annual strategic planning process, BCTC develops a situation analysis that examines its external environment, including risks and opportunities, and BCTC's internal environment including strengths and weaknesses. The situation analysis is reviewed by executive management and the Board of Directors. It provides background and context for the corporate strategic plan.

BCTC has implemented an enterprise risk management framework to ensure the ongoing identification, assessment, monitoring and mitigation of the Corporation's risks. BCTC's enterprise risk management efforts are overseen by a Risk Management Committee reporting to executive management and the Audit Committee of the Board of Directors.

In November 2005, the Province announced its intention to update and expand the 2002 Energy Plan, with greater emphasis on conservation, efficiency and innovation. BCTC is represented on the planning team responsible for the review of the electricity components of Energy Plan, which is also addressing issues that will impact transmission planning.

## **Key Strategic Issues**

BCTC's situation analysis sets the stage for a review of strategic issues as described below. The resolution of strategic issues is accomplished through BCTC's establishment of corporate goals, objectives, initiatives, and performance measures and targets.

## **Reliability and Cost**

Reliability performance and prudence of reliability spending are critical issues in the electricity industry today. BCTC's regulatory filings have devoted a great deal of attention to this subject and the BCUC has provided specific direction for follow-up action. BCTC spends approximately \$82 million on operating expenses and \$100 million of capital expenditures annually to address reliability issues.

Maintaining reliability of the transmission system is a prime responsibility of BCTC, given the societal and economic impacts of poor reliability. BCTC currently provides reliable service to its delivery points approximately 99.977% of the time (about 999 hours, 46 minutes and 12 seconds of every 1,000 hours). In seeking improvement in this performance, BCTC considers the following:

- What is the relationship between reliability and expenditures aimed at sustaining or improving reliability? That is, what improvements in reliability are gained for the dollars spent?
- Are current and planned reliability expenditures effective and optimised – what is the best return, in terms of performance, from our expenditures?
- Is there a value to customers by spending those dollars to improve reliability? Are customers willing to pay for the improved reliability?

Answers to these questions are often imprecise and technically difficult to obtain. Nonetheless, by addressing these questions BCTC will be increasingly able to target our reliability expenditures effectively and to demonstrate the effectiveness and value of reliability expenditures to regulators and customers.

### **Utilization of Assets**

BCTC manages an extensive transmission system. We aim to ensure the existing system is used effectively and that capital is employed efficiently in system expansions. BCTC monitors transmission utilization as one input into the decisions to provide new or modified transmission services and establish rate designs that optimize utilization of existing assets. While these actions are within the direct control of BCTC, a number of important factors affecting utilization are outside of BCTC's control. These factors include local and regional weather conditions, rainfall patterns, energy markets and pricing in other jurisdictions, and the location and pace of growth of electricity demand and new sources of supply.

### **Increases in Capital Investments**

BCTC is responsible for the execution of a major capital program. After a number of years of relatively light investment in transmission infrastructure, the province faces significant increases in the scale of investment requirements. The increase in investment is needed as major transmission investments that occurred in the 1960s and '70s reach the end of their useful economic lives, and as provincial demand for electricity continues to grow at a healthy rate. Risks involved in managing the expanded number and size of spending include controlling spending, meeting required timelines, mitigating environmental impacts, gaining stakeholder acceptance of new investments and ensuring regulatory approval is gained.

The Corporation is addressing these risks by sharpening its project definition capabilities, increasing project management and community relations resources and expanding stakeholder consultations

### **Regional Co-operation**

The August 2003 eastern blackout reinforced the need for co-operation among electric transmission providers in North America, as well as the need for strict compliance with regional and international reliability standards. The U.S. Energy Policy Act of 2005 calls for mandatory reliability standards in the United States. BCTC has taken a leadership position among western Canadian electricity industry participants to ensure that the appropriate standards are established and are fair and consistent with Canadian regulatory and business practices. BCTC is also taking a lead role in increasing Canadian representation on the Board of Directors of the Western Electricity Coordinating Council.

Regional Transmission Organizations (RTOs) have offered the possibility of enhanced reliability, efficiency and trade opportunities in North America. The status of Grid West or an alternative(s) is an ongoing matter of great interest to BCTC and BC's electricity industry. BCTC is actively participating in regional market developments to advance the province's interests.

Notwithstanding the ongoing development of GridWest, BCTC is actively increasing its coordination with neighbouring transmission systems, initially focusing on Alberta. BCTC is

working on coordinating operation and planning of the transmission systems with the Alberta grid operator for mutual benefit.

### **Regulatory Approvals**

In F2006/07, BCTC will be pursuing regulatory filings on the Vancouver Island Reinforcement Project, revenue requirements and a new capital plan. Approval of these filings is necessary to ensure the reliability of the transmission system and BCTC's continuing financial viability. The Corporation's efforts will focus on providing complete and persuasive applications, consultations with affected stakeholders and First Nations, and responding to previous directives issues by the BCUC.

### **Relationships with Key Suppliers**

BCTC relies on a number of key suppliers (Accenture Business Services for Utilities, BC Hydro Engineering and BC Hydro Field Services) to assist in the attainment of operational and financial objectives. In addition to working closely with these suppliers, BCTC has established contract management processes and service level agreements that contain performance metrics and requirements for continuous improvement.

### **Organizational Capacity Issues**

BCTC is facing a shortage of specific skills due to a maturing work force and a highly competitive market for key skills. Replacement and recruitment of critical skills is constrained by very specialized educational and experience requirements, a limited resource pool from which to draw outside the Corporation, and constraints on compensation levels. Mitigation strategies currently in process include a performance management program that is integrated with employee performance reviews, the establishment of training and knowledge transfer programs and insourcing the recruitment function, which had been provided by an external party.

### **Performance Risks**

Failure to plan, operate, manage and maintain transmission assets for reliability, capacity, sustainment, safety, and environmental performance may result in hazardous situations, equipment failure and loss of reliability. Failure to manage financial transactions and financial reporting may impact the Corporation's ability to meet objectives and could impact BCTC's credibility and reputation. Mitigation strategies include: setting of performance targets; establishment and adherence to processes, standards and internal controls; deployment of qualified resources; effective financial, audit, procurement and project management processes; risk reduction programs for equipment failure, catastrophic events and threats; and insurance coverage.

The update of the Energy Plan presents a potential risk that this Service Plan is aligned with the 2002 Energy Plan and does not reflect developing policy. Mitigation strategies include working with the Shareholder during the development of the new Energy Plan to ensure transmission related implications are understood as the policy is developed. BCTC is positioned to quickly respond to any change of direction.

## Goals, Objectives, Strategies, Performance Measures, Targets and Benchmarks

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BCTC's corporate goals articulate the strategic direction that BCTC will take over the three-year planning horizon to move the Corporation toward its vision. BCTC has set its overall plan to support the goals of the government's energy plan "*Energy for Our Future: a Plan for BC*" available at [www.gov.bc.ca/em/popt/energyplan](http://www.gov.bc.ca/em/popt/energyplan). The corporate goals are supported by a set of objectives, initiatives, performance measures and targets. Definitions for each performance measure are provided at the end of the section, including the rationale for the measure and internal / external benchmarking initiatives that will allow comparison of performance over time. The measures will track the Corporation's progress in delivering on its key priorities and will be reported in its annual report.

In approving the initial performance measures for the Corporation in April 2004, BCTC's Board of Directors mandated a process to sharpen their definition, increase the use of external benchmarks in setting the targets, and improve the data used to measure corporate performance. This work resulted in revised performance measures and targets for F2005, which were explained and reported in BCTC's Annual Report for that year. Subsequently, further performance measure revisions for F2006 were approved by the Board in June 2005 and were included in the September 2005 updated Service Plan. Past plans and reports can be accessed on BCTC's website at [www.bctc.com](http://www.bctc.com). The targets for F2007 and F2008 have been projected from the approved F2006 targets to reflect annual improvements.

### Key Changes from Previous Service Plans

Material changes in BCTC's goals and performance measures in this Service Plan, compared to the September 2005 update of the F2005/06 – 2007/08 Service Plan (referred to as the September Update), are noted below.

### Corporate Goals

BCTC has added two corporate goals since the publication of the September Update. The additions reflect the growth and evolution of BCTC as an independent transmission entity; moving (a) from start-up to stand-alone status and (b) from reacting to requirements of customers, stakeholders and industry conditions to actively anticipating developing market circumstances and opportunities. Following is a summary of the changes and a description of the linkage between the current and previous goals. In describing goals, measures and targets, the word "previous" refers to the September Update and "current" refers to this Service Plan.

**Goal 1.** The current goal is "Achieve reliability improvements while lowering costs and delivering outstanding service," an expansion from the previous "Ensure reliability and security of the transmission system." The expansion of the previous goal recognizes that BCTC's primary value drivers are through its cost structure, its service to its customers and its ability to deliver reliable transmission service. Linking these drivers in a single goal recognizes the need to balance all three. The goal directly addresses two of the four goals of the 2002 Energy Plan – low electricity rates (through lower transmission costs) and secure reliable supply.

**Goal 2.** The current goal, "Ensure efficient use and development of the transmission system" is a refinement of the previous goal "Provide customers with non-discriminatory access to transmission services by removing impediments and offering services that enhance their ability to access markets or energy providers."

The current goal is intended to extend BCTC beyond simply providing open access in a sufficient and reactive manner. It sets a direction for BCTC to be more aware and anticipate customers' requirements in advance of their actual requests for service. This acknowledges the different timeframes for developing transmission compared to generation, and also implies the potential for

growth of transmission to realize electricity market opportunities, in addition to meeting reliability or load growth needs. This goal is in support of two of the Energy Plan goals – more private sector opportunities and low electricity rates.

**Goal 3.** This goal, “Continually improve our environmental and safety management performance” is new. The elevation of environment and safety issues to a separate corporate goal is a reflection of their importance in the view of management and the Board. The current goal was previously a component part of the “Create the model transmission company” goal. This goal supports the environmental responsibility goal in the Energy Plan and addresses the key safety imperative of the Corporation.

**Goal 4.** The current goal, “Build open and constructive relationships with stakeholders and First Nations” reaffirms and reinforces the stakeholders and First Nations components of the previous goal “Maintain BC sovereignty, while enhancing BC benefits from electricity trade - maintain BCTC as a crown owned company, regulated by the BCUC.”

This goal recognizes the importance of establishing BCTC’s credibility within BC and regionally. This goal is, in the long run, aimed at ensuring BCTC maintains its consent to operate and is able to successfully implement its plans to provide reliable service and timely access to markets for our customers. The goal is aligned with the Energy Plan goal of secure and reliable supply.

**Goal 5.** The current goal, “Build a high performance organization” continues the personnel and organizational development components of the previous goal “Create the model transmission company.” The intent of this goal is to take the company to a higher level in terms of performance – setting high goals, being driven to achieve them, taking accountability for actions and results.

The continual renewal and development of a technically expert workforce contributes directly to the Energy Plan goal of secure and reliable supply of electricity. A high performance organization will contribute to the achievement of all BCTC’s other goals, hence supportive to a number of goals under the Energy Plan.

**Goal 6.** This goal, “Deliver the allowed return to our shareholder annually” is new. BCTC’s financial goal is not to maximize revenues or net income – but rather is focused on the management of costs and risks and the delivery of the anticipated annual return to our shareholder. Even with the deferral accounts that enable BCTC to cover unexpected annual revenue and cost fluctuations beyond its control, BCTC must be disciplined in budgeting and managing actual expenditures to deliver to the shareholder the allowed (and anticipated) net income each year. This goal addresses one of BCTC’s responsibilities to its shareholder as a Crown Corporation.

## **Corporate Performance Measures**

All of the corporate performance measures presented in the September Update have been retained. Three new measures have been added:

### **Congestion**

At the heart of BCTC’s mandate is minimizing transmission congestion, ensuring the transmission grid is available to all customers. Managing congestion is complicated because it can be caused by factors beyond BCTC’s control; most notably, electricity market conditions that influence electricity trading. BCTC’s proposed F2006/07 congestion measure was chosen because it focuses on operational activities over which BCTC exercises control.

This measure addresses the transmission interties with Alberta and the United States because of their significance for trade and because the quality and quantity of data regarding usage are relatively solid and available.

The corporate measure is as follows: The percent of all hours in a month when congestion was caused by BCTC and when BCTC did not make all capacity available.

### **Lost Time Accidents to Contractors**

In measuring the number of incidents that result in lost time for contractors, BCTC will include BCTC direct contractors and BC Hydro Field Services personnel (including their subcontractors, starting in F2007/08) who conduct work on BCTC transmission projects. This will include all Level 1 and 2 incidents classified under both BC Hydro's and BCTC's current safety management system.

Lost time injuries are those injuries that result in an employee being absent from work beyond the date of the injury. This is consistent with the definition used by WorkSafe BC. An employee who is injured and receives medical attention on the day of injury but returns to work the next scheduled shift is not counted in this measure.

Given the lack of historical data for contractors, the F2006/07 target will exclude the lost time incidents incurred by BC Hydro's subcontractors. Actual incidents will be measured with the intention of setting a target that includes BC Hydro's subcontractors in F2007/08.

### **Net Income**

This is BCTC's net income after taking into account the impact of regulatory deferral accounts.

### **Ensuring the Accuracy and Reliability of Performance Measures**

BCTC is diligent in ensuring the accuracy and reliability of performance information. Before a measure is chosen, a review of historic data relating to the measure is made to confirm the availability, thoroughness and accuracy of source data. In late 2004, BCTC hired an outside firm, Grant Thornton, to review the data collection process and integrity of BCTC's key performance indicators.

Internal reporting of results, including data collection and review of monthly performance, is done by staff professionally trained in performance measurement. Monthly results are subject to executive management review.

Wherever possible, BCTC seeks independent validation of performance results. Sources of independent validation include the Human Resources Committee of the Board of Directors, which reviews performance results quarterly. Benchmarking is used wherever feasible. However, benchmarking is not always possible, given BCTC's unique business model. As a result, BCTC is working with industry trade groups and consulting firms to identify appropriate benchmarks and gather data.

## Specific Goals, Objectives, Performance Measures and Targets

### Goal 1: Achieve reliability improvements while lowering costs and delivering outstanding service

**Specifics:** Pursue incremental improvements in overall reliability performance trends. Manage overall operating cost levels to offset annual inflationary increases. Define and measure service levels to customers.

#### Objectives

- 1a. Pursue specific cost-reduction initiatives with targets, for both operating and capital expenditures.
- 1b. Actively manage costs and services received from service providers and suppliers, while building sustainable relationships with them.
- 1c. Increase focus on emergency preparedness and security.
- 1d. Increase BCTC's knowledge of the relationship between reliability improvement expenditures and outcomes.
- 1e. Implement reliability improvement programs.
- 1f. Increase BCTC's understanding of customers' reliability expectations.
- 1g. Strengthen BCTC's customer relationships and service focus through an account management approach, and greater understanding of customer needs and expectations. Develop key performance measures reflecting customer service needs.

- Initiatives:**
- Implement Service Level Agreements
  - Establish and implement of strategic procurement model
  - Implement OMA (operating cost) reduction program
  - Improve outage planning
  - Establish Customer Service Plans
  - Implement greenfields substation program
  - Complete reliability–cost relationship analysis
  - Continue progress on Vancouver Island Transmission Reinforcement Project
  - Pursue 5L83 (interior to lower mainland) project start-up – pre-definition and definition phase
  - Continue System Control Centre Modernization Project planning and implementation
  - Establish Right of Way management program

#### Performance Measures (descriptions of performance measures follow this section)

Targets:	Actual			Target			
	F03	F04	F05	F06	F07	F08	F09
BCTC SAIDI (hours)	1.84	2.28	1.94	1.95	1.93	1.91	1.90
OMA/GWh-km (cents)	17.9	20.5	18.9	20.0	19.8	19.8*	19.0*

\* Fiscal 08 and 09 OMA/GWh km targets do not include labour cost increases, pursuant to Treasury Board planning assumptions. BCTC anticipates that there will be continued future pressure on labour costs and that future years' targets will be adjusted.

**Goal 2: Ensure efficient use and development of the transmission system**

**Specifics:** *Proactively seek ways to enhance electricity industry activity on BC's transmission system - resulting in increased services used and new transmission service customers. Make the system available to allow expanded access to market opportunities, limiting congestion and curtailment on the system.*

**Objectives**

- 2a. Review and revise the design of the Open Access Transmission Tariff and services offered to customers to ensure that they encourage efficient use of the system.
- 2b. Ensure tariff business practices, including the interconnection process, are workable and efficient for customers.
- 2c. Investigate incentives for locating generation to reflect benefits to the transmission system
- 2d. Participate in BC Hydro planning processes to ensure that the BCUC has information about both generation and transmission options so that least cost solutions for the overall system can be pursued
- 2e. Proactively seek opportunities for new customers to use the transmission system and to supply ancillary services to BCTC, as appropriate.
- 2f. Develop and implement an investment policy framework that enables the expansion of the transmission system in advance of demand (under Special Direction 9.4).
- 2g. Explore inter-regional transmission development plans and develop proposals that benefit BC.
- 2h. Pursue greater regional coordination and cooperation, with Alberta and the Bonneville Power Administration in particular.
- 2i. Continue to evaluate our active involvement in the development of Gridwest.

**Initiatives:**

- Continue IPP outreach initiatives
- Implement investment policy - transmission in advance of demand
- Review Tariff design
- Continue regional transmission development activities
- Pursue Grid West options and alternatives
- Improve IPP interconnection process
- Implement the Open Access Transmission Tariff
- Implement tariff business practice improvements
- Pursue regional relationship development – Alberta and Bonneville

**Measures**

Targets:	Actual			Target			
	F03	F04	F05	F06	F07	F08	F09
Congestion	N/A	N/A	N/A	1.04%*	1.02%	1.00%	0.98%

\* Actual results for 13 months ending 31 October 2005



**Goal 3: Continually improve our environmental and safety management performance**

**Specifics:** *Focus on enhancing performance -while maintaining BCTC's excellent safety results and working with contractors on safety management, minimizing the number of environmental incidents, and recognizing the risks inherent in BCTC's operations.*

**Objectives**

- 3a. Ensure the Safety and Environment Management Systems are continuously reviewed for improvement opportunities.
- 3b. Manage all contractors to ensure they meet BCTC's environmental standards.
- 3c. Seek ongoing improvements in contracting practices for the oversight and review of contractors' safety management.
- 3d. Continue efforts to communicate and implement efforts to make the transmission safe for workers.

**Initiatives**

- Implement oil containment program – minimization of transformer oil spillages
- Continue SF6 (sulfur hexafluoride) tracking and leak minimization program
- Implement error management program for control centre operators
- Rollout Multiple Employer Workplace Agreement
- Improve Control Centre/Field staff communications

**Measures**

Targets:	Actual			Target			
	F03	F04	F05	F06	F07	F08	F09
Lost time safety accidents (BCTC)	n/a	0	0	0	0	0	0
Lost time accidents (Contractors)	n/a	n/a	n/a	n/a	25	24	23
Reportable environmental incidents	7	3	10	<7	<7	<7	<7

**Goal 4: Build open and constructive relationships with stakeholders and First Nations**

**Specifics:** *Continue to develop relationships with stakeholders and First Nations so that consultations on BCTC's plans and proposals are productive and maintain the current high level of positive or neutral responses from stakeholders.*

**Objectives**

- 4a. Build in First Nations and stakeholder considerations early in BCTC's planning, and engage First Nations and stakeholders early as part of BCTC's consultation activities.
- 4b. Expand First Nations working involvement in BCTC projects and programs.
- 4c. Ensure the provincial government is fully apprised of BCTC's business objectives and operations.
- 4d. Participate actively in municipal government forums to develop positive relationships with these community representatives and to understand their needs.
- 4e. Ensure BCTC's outreach program focuses on those communities where existing and future transmission system impacts are greatest.
- 4f. Sustain a positive, open and cooperative relationship with the BCUC and intervenor groups.

**Initiatives**

- Implement First Nations contractors program
- Continue Community relations program
- Continue public planning process - capital plan, Grid West or alternatives, potential projects consistent with Special Direction No. 9
- Implement issues management plan

**Measures**

Targets:	Actual			Target			
	F03	F04	F05	F06	F07	F08	F09
Stakeholder Response – neutral, positive, very positive	n/a	88%	87%	87%	87%	87%	87%

**Goal 5: Build an engaged and highly skilled workforce**

**Specifics:** *Develop an organization with employees who understand the business objectives, know how they are counted on to contribute, and who have the motivation and capabilities to achieve the results.*

**Objectives**

- 5a. Secure the right skills for BCTC to achieve its objectives and implement its plans, through effective recruitment, retention, development and succession planning.
- 5b. Ensure BCTC employees are highly engaged in their jobs and BCTC's business – motivated, aligned, and with access to the appropriate resources to develop their capabilities.
- 5c. Continue to enhance the performance management system so that rewards are clearly linked to results.
- 5d. Review BCTC's employment offering, (both financial and non-financial rewards for working at BCTC), in terms of the total cost and effectiveness of attracting and retaining high performing employees.
- 5e. Identify and fill critical capacity gaps within the organization.

- Initiatives:**
- Continue BCTC Academy implementation
  - Implement succession plans and establish the development planning process
  - Implement resourcing plan – recruit of new resources
  - Continue improvement of performance management process
  - Re-establish an employee recruitment function within BCTC

**Measures**

Targets:	Actual			Target			
	F03	F04	F05	F06	F07	F08	F09
Employee Engagement Index	n/a	3.36	3.37	3.45	3.50	3.55	3.60

Note: The Work Canada Engagement Index average result from 3,000 respondents was 3.43 in 2004/05.

**Goal 6: Deliver the allowed return to our shareholder annually**

**Specifics:** *Ensure that actual net income results (after deferral accounts) are as planned each year.*

**Objectives**

- 6a. Promote a strong internal focus on cost management - for both OMA and capital expenditures - and ensure scrutiny on largest expenditure and risk areas
- 6b. Ensure accurate budgeting and forecasting.
- 6c. Gain regulatory approval of appropriate deferral accounts, in order to manage revenue and cost variability beyond our control.
- 6d. Ensure annual risk management plans are effective in managing variability of costs.
- 6e. Gain regulatory approvals of transmission revenue requirements.

- Initiatives:**
- Improve capital planning process
  - Develop of financial modeling tools
  - File F2007 Revenue Requirement application
  - File F2007 Risk Assessment

**Measures**

Targets:	Actual			Target			
	F03	F04	F05	F06	F07	F08	F09
Net Income (BCTC) \$M	n/a	0.9	3.4	10.2*	3.9	6.2	7.2

\* \$10.2 million is the current forecast. The original BCTC plan for FY 2005/06 was \$3.6 million

## **Performance Measure Descriptions, Rationale and Benchmark Information**

A description of each performance measure is provided in this section, including the rationale for the measure. BCTC is developing its benchmarking approach with industry peers and will report benchmark comparisons when available. In the interim, comparisons will be made to historical BCTC performance.

### **Goal 1: Achieve reliability improvements while lowering costs and delivering outstanding service**

***BCTC SAIDI (System Average Interruption Duration Index)*** – This measure is the average number of hours across all transmission delivery points that service is interrupted in a year. It includes both planned and unplanned outages, but excludes interruptions due to source outages attributable to generators. The measure assesses BCTC’s effectiveness in providing high service reliability from the point of receipt for transmission service to the point of delivery.

Reliability statistics for independent transmission companies have a limited history given the fairly recent disaggregation of vertically integrated utilities. Additionally, definitions among companies are inconsistent, leading to a very limited universe of comparable data points. BCTC will continue to participate in Canadian Electricity Association benchmarking studies, however, SAIDI measures will need to be adjusted to fit new benchmark definitions. At this time, BCTC’s results will be compared to historical performance.

***Operating Efficiency*** – OMA (cents) / GWh-km is a measure of cost efficiency in operating and managing the transmission assets based on system throughput (volume of energy delivered to domestic customers) and the length of the transmission system. OMA costs include annual costs of system operations, asset management and maintenance, BCTC’s own general and administration costs, and the BC Hydro corporate costs allocated to the transmission assets. The measure will allow benchmarking with other utilities; however, OMA costs must be adjusted to match those defined in the benchmark, likely including only transmission service-related costs.

### **Goal 2: Ensure efficient use and development of the transmission system**

***Congestion*** BCTC’s consultants advise that BCTC’s measurement of transmission congestion at the interties with other systems is unique and is not known to be in use elsewhere. Benchmarking is unlikely to be possible, at least in the short term, for this measure.

### **Goal 3: Continually improve our environmental and safety management performance**

***Number of BCTC Lost-Time Accidents*** – This measures all lost-time accidents, whether preventable or not, affecting BCTC staff only. The measure supports the fundamental BCTC objective of employee safety. Comparable transmission industry statistics are not available, therefore results will be compared to historical BCTC performance.

***Number of Contractor Lost-Time Accidents*** – This measures lost time accidents for BCTC direct contractors and BC Hydro Field Services personnel who conduct work on BCTC transmission projects. The measure also supports the fundamental BCTC objective of employee safety. Comparable transmission industry statistics are not immediately available and historic information is limited regarding lost-time accidents of BC Hydro subcontractors.

***Number of Reportable Environmental Incidents*** – Reportable environmental incidents are defined by the various agencies that set standards and regulations for environmental management practices to which BCTC must comply. The measure focuses the organization on minimizing environmental incidents and supports BCTC’s Environmental Responsibility Principles. Comparable industry statistics are not available, therefore results will be compared to historical BCTC performance.

#### **Goal 4: Build open and constructive relationships with stakeholders and First Nations**

**Stakeholder Survey Results** – This measure is derived from an annual customer and stakeholder survey which includes customers who buy wholesale transmission services or interconnection services (for example, BC Hydro, energy marketers, IPPs), industrial electricity users, municipal governments and provincial government agencies. The survey assesses awareness, impressions and satisfaction with BCTC. The measure is based on the percentage of stakeholders who have a very positive, somewhat positive or neutral impression of BCTC. Results assist BCTC in refining corporate goals and future actions in light of the needs of customers and stakeholders. The results will be compared to historical BCTC performance

#### **Goal 5: Build an engaged and highly skilled workforce**

**Employee Engagement Index** – This measure is the average of the scores from the four pillars of an annual employee survey, covering motivation, resource availability, capability and alignment. It is a leading indicator of how BCTC is developing a highly productive and engaged workforce. The measure will be compared to BCTC's historical performance and benchmarked against the Watson Wyatt "Work Canada" national survey.

#### **Goal 6: Deliver the allowed return to our shareholder annually**

**Net Income** This is BCTC's net income after taking into account the impact of deferral accounts. It is a measure of the Company's ability to control expenses and to plan, manage and operate the grid in a prudent manner. The measure will be compared to BCTC's allowed net income as determined by the BCUC annually

### **Alignment with Government's Goals**

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BCTC's Service Plan is consistent with the provincial government's Energy Plan and directly supports two of the "Five Great Goals For A Golden Decade" outlined in the Speech from the Throne on 8 February 2005 and detailed in the government's September 2005 Strategic Plan update.

#### **Energy Plan**

BCTC plays a major role in facilitating a robust electricity industry, which is integral to economic development in BC, and in maintaining a competitive advantage in the production of goods and services. BCTC goals are strongly aligned with the province's Energy Plan released in 2002. The creation of BCTC advances an important Energy Plan commitment to improve transmission access and planning, and to provide a more focused approach to the operation and management of British Columbia's publicly owned electric transmission assets.

A key commitment of the Energy Plan is to encourage increased private sector participation in meeting British Columbia's growing electricity needs. BCTC has a key role in facilitating the interconnection of new generation facilities being developed by the private sector and is conducting 92 interconnections studies from Independent Power Producers that intend to bid into BC Hydro's call for tenders. BCTC's proposals for new rate designs, "open season" and "clustering" processes and new approaches to interconnections, approved by the BCUC as part of the Open Access Transmission Tariff, will enhance the ability of the independent power sector to contribute to the Province's electricity needs in a cost-effective way.

In November 2005, the government announced plans to expand the Province's energy vision. An updated Energy Plan is expected by the government to place greater emphasis on conservation, energy and innovation. BCTC is a participant in shaping the new energy plan and anticipates an active role in its implementation.

## Government's Strategic Plan Goals

- To make BC the best educated, most literate jurisdiction on the continent.
- To lead the way in North America in healthy living and physical fitness.
- To build the best system of support in Canada for persons with disabilities, special needs, children at risk and seniors. .
- To lead the world in sustainable environmental management, with the best air and water quality, and the best fisheries management, bar none.
- To create more jobs per capita than anywhere else in Canada

BCTC's operations can have a significant impact on BC's land base and resources. For this reason, transmission system operations and asset management functions are conducted with the highest respect for the environment, and long-term sustainability of BC's natural resources and communities. BCTC's Environmental Management System provides a comprehensive framework for identifying, managing and mitigating environmental risks. Current initiatives include risk management of contaminated sites, reduction of sulphur hexafluoride (a greenhouse gas used in power switching equipment) and management of plant and animal species at risk that are affected by BCTC operations.

BCTC's operation, maintenance and management of the transmission system are focused on delivering reliable service in a cost effective, safe and sustainable manner. In this way, BCTC contributes to a secure, reliable and low cost supply of electricity in the province which, in turn, provides a strong foundation for economic development in the province, attracting investment and creating jobs. Revenues collected from electricity trade, which is facilitated and enhanced by open access provided by BCTC as an independent transmission entity, are allocated BC Hydro ratepayers for the first \$200 million of trade revenue per year, with any excess above that amount allocate to general revenue to the province.

## Summary Financial Outlook for the Service Plan Period

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BCTC commenced business operations on August 1, 2003. The *Transmission Corporation Act* specified a transitional period before BCTC could assume full responsibility for providing transmission services as a regulated entity. During the period from August 1, 2003 to March 31, 2005 (Phase 1), BCTC administered BC Hydro's existing Wholesale Transmission Service (WTS) tariff on BC Hydro's behalf. During this phase, BCTC provided transmission system operation and asset management services to BC Hydro's Transmission Line of Business for a service fee sufficient to recover BCTC's costs and to earn a return on equity. As a result, BCTC's F2003/04 and F2004/05 financial plans and budgets were consolidated with BC Hydro's accounts during this period.

On April 1, 2005 (Phase 2), BCTC began operating as a fully regulated independent utility offering wholesale transmission services under a "roll-over" tariff following the existing Wholesale Transmission Services Terms and Conditions previously offered by BC Hydro. This "roll-over" tariff was approved by the BCUC as an interim measure until BCTC could implement its own tariff. The BCUC approved BCTC's own Open Access Transmission Tariff (OATT) in June 2005.

This financial summary reflects the revenues and expenses attributable to BCTC's own operations. Revenues and expenses attributable to BC Hydro for transmission asset ownership are included in the BC Hydro's Service Plan.

<b>BCTC Financial Summary</b>					
(\$ millions)	Phase 1	Phase 2			
	F2004/05 Actual	F2005/06 Forecast	F2006/07 Budget	F2007/08 Forecast	F2008/09 Forecast
<b>Revenues</b>	<b>94.8</b>	<b>201.3</b>	<b>193.0</b>	<b>195.1</b>	<b>197.1</b>
<b>Expenses</b>					
Operating costs	(72.3)	(166.0)	(171.8)	(173.8)	(167.0)
Asset related Costs	(19.1)	(20.9)	(17.3)	(15.1)	(22.9)
<b>Total Expenses</b>	<b>(91.4)</b>	<b>(186.9)</b>	<b>(189.1)</b>	<b>(188.9)</b>	<b>(189.9)</b>
<b>Net Income before Deferral Accounts</b>	<b>3.4</b>	<b>14.4</b>	<b>3.9</b>	<b>6.2</b>	<b>7.2</b>
<b>Deferral Accounts</b>	-	(4.2)	-	-	-
<b>Net Income</b>	<b>3.4</b>	<b>10.2</b>	<b>3.9</b>	<b>6.2</b>	<b>7.2</b>
<b>Retained Earnings</b>	<b>4.3</b>	<b>14.5</b>	<b>18.4</b>	<b>24.6</b>	<b>31.8</b>
<b>BCTC Capital Budget (Note 1)</b>	13.8	25.6	64.8	66.4	27.3
<b>Debt</b>					
Short Term	-	-	-	4.4	10.0
Capital Lease	7.1	7.0	6.9	6.8	6.7
Long Term	30.0	30.0	70.0	100.0	100.0
<b>Total</b>	<b>37.1</b>	<b>37.0</b>	<b>76.9</b>	<b>111.2</b>	<b>116.7</b>
<b>Total FTE's</b>	328	348	349	349	349

Note 1: The capital budget for transmission assets owned by BC Hydro is shown in the Capital Plan section.

The changes in BCTC revenues and expenses between F2004/05 and F2005/06 are associated with the transition of BCTC as a service provider in Phase 1, to a regulated utility in F2005/06. The changes include:

- Differences in revenue composition. Commencing in F2005/06, BCTC earns network as well as point-to-point transmission services revenue directly from its customers under its own tariff.
- With the establishment of commercial Service Level Agreements with BC Hydro service providers, BCTC's cost structure includes all asset management and system operation charges from BC Hydro Engineering and Field Services. This enables BCTC to more effectively manage the costs associated with the management, operation and maintenance of the transmission system.
- Under Special Direction No.9, the BCUC must ensure that BCTC's tariff rates allow the collection of sufficient revenue to generate an annual rate of return on deemed equity. For F2005/06, the tariff was designed to collect a return of 13.51% as approved by the BCUC. From F2006/07 to F2008/09, the tariff was designed to collect a 12.41% return on equity based on the most recent return earned by Terasen. This amount has not been approved by the BCUC.



During Phase 1, BCTC expenses included BCTC labour, services contracted from outside organizations, Accenture Business Services costs and work performed by BC Hydro service providers on BCTC assets only. Work performed by BC Hydro service providers on transmission assets owned by BC Hydro was accounted for in BC Hydro's Service Plan during Phase 1.

## Key Forecast Assumptions

### Revenues

(\$ millions)	Phase 1	Phase 2			
	F2004/05 Actual	F2005/06 Forecast	F2006/07 Budget	F2007/08 Forecast	F2008/09 Forecast
Transmission Tariff Services	-	165.7	158.9	161.1	161.5
Non-Tariff Services	94.8	35.6	34.1	34.0	35.6
<b>Total Revenues</b>	<b>94.8</b>	<b>201.3</b>	<b>193.0</b>	<b>195.1</b>	<b>197.1</b>

Revenue comprises transmission tariff revenues, non-tariff revenues and cost recoveries. In F2004/05, BCTC earned a service fee from BC Hydro for the provision of operations and asset management services. Transmission tariff revenues remained with BC Hydro during Phase 1. Commencing in F2005/06 (Phase 2), BCTC earns transmission revenues under its own tariff.

BCTC's tariff revenue represents the amount collected for network services and point-to-point revenues. The tariff is adjusted each year to recover the allowed net income and expenses less revenue for non-tariff services. The tariff is reviewed and approved by the BCUC annually.

Non-tariff revenue comprises amounts earned in respect of Service Level Agreements (Substation Distribution Assets, Distribution Operations, and Generation Control), BCUC approved revenue assignment (Generation Related Transmission Asset Maintenance) and other revenues to enable BCTC to recover its own operating costs, asset related costs and allowed net income.

### Operating Costs

(\$ millions)	Phase 1	Phase 2			
	F2004/05 Actual	F2005/06 Forecast	F2006/07 Budget	F2007/08 Forecast	F2008/09 Forecast
Operations, Maintenance & Administration	71.6	161.3	167.2	169.2	162.4
Cost of Market	0.7	4.7	4.6	4.6	4.6
<b>Total Operating Costs</b>	<b>72.3</b>	<b>166.0</b>	<b>171.8</b>	<b>173.8</b>	<b>167.0</b>

Operations, maintenance and administration (OMA) expenses consist primarily of labour, BC Hydro, Accenture Business Services for Utilities and other outside services. For F2004/05, all costs were included in the service fee charges and fully recovered from BC Hydro. Furthermore, the cost of maintenance work on the transmission system performed by BC Hydro service providers was charged directly to BC Hydro, the transmission asset owner. With the beginning of Phase 2 operations in F2005/06, all maintenance costs for work performed by BC Hydro service providers are charged to BCTC.

For the purposes of the financial forecast submitted to our shareholders, only approved salary and wage increases are included. For F2006/07, OMA budget includes approved Collective Agreement increases and other Board approved allowances for salary and wage increases. The Collective Agreements also include commitments to our union employees for any across-the-board increase that may be awarded to public sector employees in F2006/07. No additional labour cost increases are included in F2007/08 and F2008/09. Given the tight labour market in the power industry and BCTC's aging workforce, BCTC anticipates that there will be continued

upward pressure on salaries and wages. This represents a risk to the financial forecast. The sensitivity of a 1% increase in salaries and wages is about \$400,000.

F2006/07 OMA budget is \$5.9 million higher than the F2005/06 forecast due to higher headcount, approved labour cost increases, higher regulatory and Grid West related expenses due to under spending in F2005/06 and increased project funding for the System Control Modernization Project (SCMP), partially offset by maintenance savings. The \$2.0 million increase from F2006/07 to F2007/08 reflects additional funding for the SCMP and funding for the tri-annual Asset Baseline Study, partially offset by maintenance cost savings. The decrease of \$6.8 million from F2007/08 to F2008/09 reflects the completion of the SCMP and Asset Baseline Study and maintenance cost savings. A 2% increase for inflation on non-labour expenses is off-set by a 2% reduction for productivity improvements.

Cost of Market includes costs for congestion management and ancillary services. Congestion management expense includes costs of operating reserves, transmission locational credits, unscheduled flow mitigation and operating agreements between control areas. It also includes the cost of all generation-based ancillary services that BCTC, in turn, sells to customers on a cost flow-through basis. During F2004/05, ancillary service costs were not incurred by BCTC but were treated as a flow through between BC Hydro's Transmission and Generation lines of business. As of April 1, 2005 with the establishment of the "roll-over" wholesale transmission tariff, BCTC directly offers ancillary services to its customers and as such incurs costs associated with the provision of these services.

### **Asset Related Costs**

(\$ millions)	Phase 1	Phase 2			
	F2004/05 Actual	F2005/06 Forecast	F2006/07 Budget	F2007/08 Forecast	F2008/09 Forecast
Depreciation and Amortization	17.3	19.1	16.4	14.3	19.9
Taxes and Grants	0.3	0.3	0.3	0.3	0.7
Finance Charges	1.5	1.5	0.6	0.5	2.3
<b>Total Asset Related Costs</b>	<b>19.1</b>	<b>20.9</b>	<b>17.3</b>	<b>15.1</b>	<b>22.9</b>

BCTC's asset related costs include depreciation, school taxes, grants in lieu of taxes, and finance charges associated with the assets owned by BCTC.

#### *Depreciation and Amortization*

Depreciation and amortization in F2005/06 is forecast to decrease \$1.2 million from F2004/05. A depreciation reduction of \$2.0 million is due to a smaller depreciation base as more assets are fully depreciated and is partially offset by an increase of \$0.8 million from new assets placed in service. The BCTC depreciation base is decreasing as expenditures on control center assets have been curtailed in anticipation of the SCMP project, expected to be in service in F2008/09.

F2006/07 depreciation and amortization expense is forecast to be \$2.7 million lower due the continued reduction in the depreciation base, primarily due to computer hardware and software, and partially offset by an increase of \$3.3 million from new assets placed in service.

Depreciation and amortization in F2007/08 is forecast to decrease by \$2.1 million from F2006/07. A reduction of \$3.2 million is due to the smaller depreciation base and is partially offset by an increase of \$1.1 million for new assets placed in service.

Depreciation and amortization in F2008/09 is forecast to increase by \$5.6 million from F2007/08. An increase of \$7.6 million is due to new assets placed in service (primarily SCMP) and a further increase of \$1.7 million is for dismantling costs, also related to SCMP. These increases are partially offset by a \$3.7 million reduction in depreciation due to the shrinking depreciation base of existing assets.

### *Grants and Taxes*

Grants-in-lieu of property taxes and school taxes are forecast to remain stable at \$0.3 million until F2008/09, at which time grants and taxes increase \$0.4 million due to the higher property valuation resulting from the new control centres.

### *Finance Charges*

BCTC borrows through facilities established with the Ministry of Finance. BCTC's short-term borrowings are commercial paper, which are limited to a \$25 million outstanding balance. BCTC has one outstanding long-term issue for \$30 million face value, with a coupon rate of 4.3%, and an effective interest rate of 4.1%, which matures in 2008. The proceeds from the debt issue were used to purchase the control system assets from BC Hydro in 2003.

Future BCTC capital projects will be funded from operating income, supplemented by short-term commercial paper borrowings. When the \$25 million limit on short-term borrowings is reached, the short-term debt will be refinanced with long-term debt.

### *Long-term Debt forecast*

<i>Series</i>	<i>Rate</i>	<i>Maturity</i>	<i>F2005/06</i>	<i>F2006/07</i>	<i>F2007/08</i>	<i>F2008/09</i>
BCTR-CD-6(1)	4.30%	December 2008	30.0	30.0	30.0	-
#2	6.00%	May 2017	-	40.0	40.0	30.0
#3	6.65%	May 2018	-	-	30.0	30.0
#4	6.65%	December 2018	-	-	-	40.0
Total			30.0	70.0	100.0	100.0

Finance charges are based on borrowings required to finance the forecast capital expenditure profile less capitalized interest during construction. The interest rate forecast is provided by the Treasury Board.

### *Deferral Accounts*

BCTC requested deferral accounts from the BCUC to mitigate the financial risks associated with revenue and cost variances from forecast. A deferral account is a mechanism used by rate-regulated entities to accumulate the difference between the BCUC approved amounts and the actual revenues and costs for recovery or refund through future rates. Deferral accounts are commonly applied to costs or revenues that are either uncertain or volatile in nature, and generally beyond the control of the entity. The use of deferral accounts may provide rate stability for customers and may reduce the risk for the rate regulated entity, shareholders and/or its customers. BCUC has approved BCTC's deferral accounts and their use was contemplated in the Master Agreement between BCTC and BC Hydro, dated November 12, 2003. There are six deferral accounts:

*Revenue Deferral Account* – captures the annual variances between forecast and actual OATT revenues.

*Emergency Maintenance Deferral Account* – captures non-capital emergency maintenance expenditures incurred as a result of unanticipated major equipment failures, extreme weather, wildfires or similar events.

*Cost of Market Deferral Account* – captures the annual variances between forecast and actual Cost of Market expenditures.

*Regulatory Expense Deferral Account* – captures the variances between forecast and actual regulatory cost. These costs include BCTC's counsel, experts and staff, hearing costs associated with the applications and intervenor costs as approved by the BCUC.

*Grid West Expense Deferral Account* – captures the variances between forecast and actual expenditures. These costs include BCTC's counsel, consultants, BCTC travel and other out-of-pocket expenses.

*System Control Modernization Study Deferral Account* – captures the project definition cost of the System Control Modernization Project.

For F2005/06, BCTC is forecasting that there will be balances for four of the six deferral accounts at 31 March 2006 as follows:

- Revenue Deferral Account is forecast to be a \$2.8 million credit due to higher point-to-point revenues.
- Cost of Market Deferral Account is forecast to be a \$0.4 million debit due to higher than plan costs relating to higher revenues.
- Regulatory Expense Deferral Account is forecast to be a \$1.8 million credit due to capitalization of legal and consulting expenses for the Vancouver Island Transmission Reinforcement project.
- System Control Modernization Study Deferral Account is forecast to be a \$2.0 million debit and is included in BCTC capital assets.

### **Net Income**

The forecast net income for F2006/07 – F2008/09 is based on earning an allowed rate of return on the equity balance at the end of the year. The equity balance is composed of retained earnings and a \$20 million equity injection from the Province of British Columbia. The net income forecast is based on BCTC's deemed equity structure, as defined in Special Direction No. 9. BCTC may collect its interest expense on its deemed debt and an allowed rate of return on its deemed equity structure in the rates it charges its customers. Actual interest expense is reflected in the annual operating accounts of the company to arrive at BCTC's actual net income. The forecast reflects the recently amended Special Direction No. 9 to establish BCTC's deemed equity component at 40.7% of its total capitalization. The allowed rate of return is forecast at 12.41% which is the most recent estimate of the return for the period.

In order to build its equity level to an amount required to assume the risks inherent in its business model, the shareholder has approved BCTC retaining all earnings until F2008/09. Retained earnings are forecast to be \$31.8 million at the end of fiscal F2008/09 and will result in a debt to total capitalization ratio of 69%.

### **Full Time Equivalents**

Full Time Equivalents (FTEs) are defined as the number of approved headcounts. During F2005/06, the Company undertook an assessment of current resources and business requirements in view of resource gaps identified in capital planning and execution, anticipated retirements and resource continuity planning for the system control centre project.

While BCTC is able to manage some of the additional business requirements with existing employees, additional resources are required due to capital expansion and improvements to the transmission system to meet load growth in the Province and to manage the regulatory approvals and stakeholder consultation that these projects entail.

After allowing for reassignment of some staff, BCTC is forecasting that head count will increase to 348 for F2005/06 (approved head count is 329) and to increase by a further 1 FTE to 349 for F2006/07.

## Key Forecast Assumptions, Sensitivities and Risk Factors Relating to the Financial Forecast

Key financial risks and the related assumptions and sensitivities for the F2006/07 budget and forecast to F2009/10 are as follows:

Financial Assumptions	Sensitivities
<p>1. Regulatory Risk:</p> <p>BCTC earns 12.41% allowed return on equity through the period F2006/07 to F2008/09.</p>	<p>A 1% change in the allowed return on equity will change the reported net income of future years by \$0.3 million in F2006/07, \$0.6 million in F2007/08 and \$0.6 million in F2008/09.</p>
<p>2. Market Risk:</p> <p>Revenue is driven by the volume of transmission system use and market determined prices for point-to-point service. During F2006/07, the average rates and total volumes are assumed to be \$4.18/MWh and 10,876,858 MWh.</p>	<p>Each \$0.10 /MWh change in price will change short-term point-to-point revenue by approximately \$1.0 million per year.</p>
<p>3. Cost Risks:</p> <ul style="list-style-type: none"> <li>• For F2006/07, the budget includes approved Collective Agreement increases and other Board approved allowances for salary and wage increases. No additional labour cost increases are included in F2007/08 and F2008/09.</li> <li>• 2% annual inflation on non-labour expenses during the forecast period is offset by productivity improvements.</li> <li>• The SCMP facility is in-service F2008/09.</li> </ul> <p>4. Interest Rate Risk:</p> <p>Short-term and long-term debt interest rates reflect rates published by the Treasury Board for the forecast period.</p> <p>5. Cash Flow Risk:</p> <p>Cash flows assume that all deferral accounts are cleared in the following year, no changes are made to the capital structure of the company and dividends are not paid during the forecast period.</p>	<ul style="list-style-type: none"> <li>• A 1% change in labour costs will change the reported net income of future years by \$0.4 million.</li> <li>• A 1% change in inflation on non-labour expenses will change the reported net income of future years by \$0.5 million.</li> <li>• Beginning F2008/09, an in-service delay of one month will decrease depreciation by \$0.5 million and increase interest capitalization \$0.6 million.</li> </ul> <p>Each 1% change in interest rate will change the gross finance charge of new debt by \$0.4 million in F2006/07, \$0.7 million in F2007/08 and \$1.0 million in F2008/09.</p> <p>An increase of \$10 million in long-term debt requirements will increase finance charges between \$0.6-0.7 million per year.</p>

## 6. Capital Risks:

Overall the bulk transmission system is in good condition with some points of congestion occurring at peak times. Load growth is straining existing substation capacity in several areas. The following assumptions and sensitivities have been made with respect to projects included in the F2005/06-F2008/09 forecast:

- IPPs and customer load projects:
  - a. Included only if there is a signed contract with BCTC.
  - b. A contingency item has been added to the Plan for unapproved IPP and customer projects.
- BC Hydro's load forecasts are accepted without modification. The August 2005 total integrated system peak before Power Smart is forecast to increase 1.2% over the next five years.
- The Northwest Transmission project is not included in the Plan. The project is under consideration by the Provincial Government and may require ex-Plan Board and BCUC approval during the planning horizon.
- Capital expenditures for IPPs and customer load projects would be affected causing a variance of plus or minus \$5 million. Depreciation expense could be reduced or increased by \$0.1 million per year
- Deviations from forecast could affect the timing of system reinforcements and the in-service date of the reinforcements.
- If the project proceeds, actual expenditures could exceed plan and affect resourcing.

### Other Financial Risk Factors for the forecast period:

Risk Factors	Mitigation Action
The existing market structure exposes BCTC to market price variability for some services, resulting in a potential for unrecovered costs.	Seek recovery of additional costs from rate-payers through the regulatory process and deferral account mechanism.
Growth expenditures for F2007/08 to F2008/09 represent a formidable increase over previous levels,	There will be significant focus on internal processes and external resources to achieve the Plan. BCTC will require an early start on executing the F2006/07 Plan. Discussion with service providers indicates that resources will be available to carry out the Plan.
Variability in IPP and customer-driven projects may create Plan variances.	<p>IPPs and customer load projects will only be included if there is a signed BCTC contract.</p> <p>A contingency item has been added to the Plan for unapproved IPP and customer projects.</p>
There is a risk of regulatory disapproval or delays for new F2005/06 and F2006/07 projects that were not identified in the March 2005 BCUC Application. The projects will not begin until BCUC approval is received, therefore delays or cancellations could affect cash flows.	BCTC filed an update to the capital plan with the BCUC in December 2005 to obtain approval for F2005/06 and F2006/07 capital projects not previously approved.

## Capital Plan

BCTC is accountable for managing and directing investments in the transmission system assets that continue to be owned and financed by BC Hydro. BCTC owns and finances capital assets that are required to operate the transmission system and to carry out its mandate. Investments in both the BC Hydro-owned assets and the BCTC-owned assets are presented in the Transmission System Capital Plan which is subject to review and approval by the BCUC. BCTC's capital plan filings and BCUC Decisions are available on the BCTC website. Where individual capital projects exceed \$50 million, BCTC prepares major capital project plans for public disclosure pursuant to the *Budget Transparency and Accountability Act*. A summary of all Transmission capital expenditures is presented below:

<b>Transmission Capital Expenditure Forecasts</b>					
<b>\$ millions</b>	<b>F2004/05 Actual</b>	<b>F2005/06 Forecast</b>	<b>F2006/07 Budget</b>	<b>F2007/08 Forecast</b>	<b>F2008/09 Forecast</b>
<b>Transmission Assets Owned by BC Hydro</b>					
Sustaining Capital	96.4	91.9	83.2	83.9	83.3
Growth Capital	34.5	42.6	122.3	172.5	199.3
Contributions In Aid of Construction	(8.5)	(10.2)	(3.0)	(3.0)	(3.0)
<b>Total – Transmission Assets Owned by BC Hydro</b>	<b>122.4</b>	<b>124.3</b>	<b>202.5</b>	<b>253.4</b>	<b>279.6</b>
<b>Assets Owned by BCTC</b>	<b>13.8</b>	<b>25.6</b>	<b>64.8</b>	<b>66.4</b>	<b>27.3</b>
<b>Total Transmission System Capital Expenditures</b>	<b>136.2</b>	<b>149.9</b>	<b>267.3</b>	<b>319.8</b>	<b>306.9</b>

### Capital Expenditures – Transmission Assets Owned by BC Hydro

There are two main drivers for capital investment in the transmission assets owned by BC Hydro: sustaining performance capability; and growth to meet load increases and customer interconnection requests.

### Sustaining Capital

Sustaining capital includes capital refurbishments, betterments and replacements to existing transmission assets owned by BC Hydro. These expenditures extend the useful life of an asset or replace an asset prior to it reaching the end of its useful life. Performance deterioration, end of life replacements, equipment failures and risk reduction programs will drive investments over the next 10 to 15 years. This year's Service Plan assumes incremental improvements in overall system reliability, consistent with the F2006/07 – F2008/09 BCTC Strategic Plan. The key business drivers of the Sustain Capital Plan are:

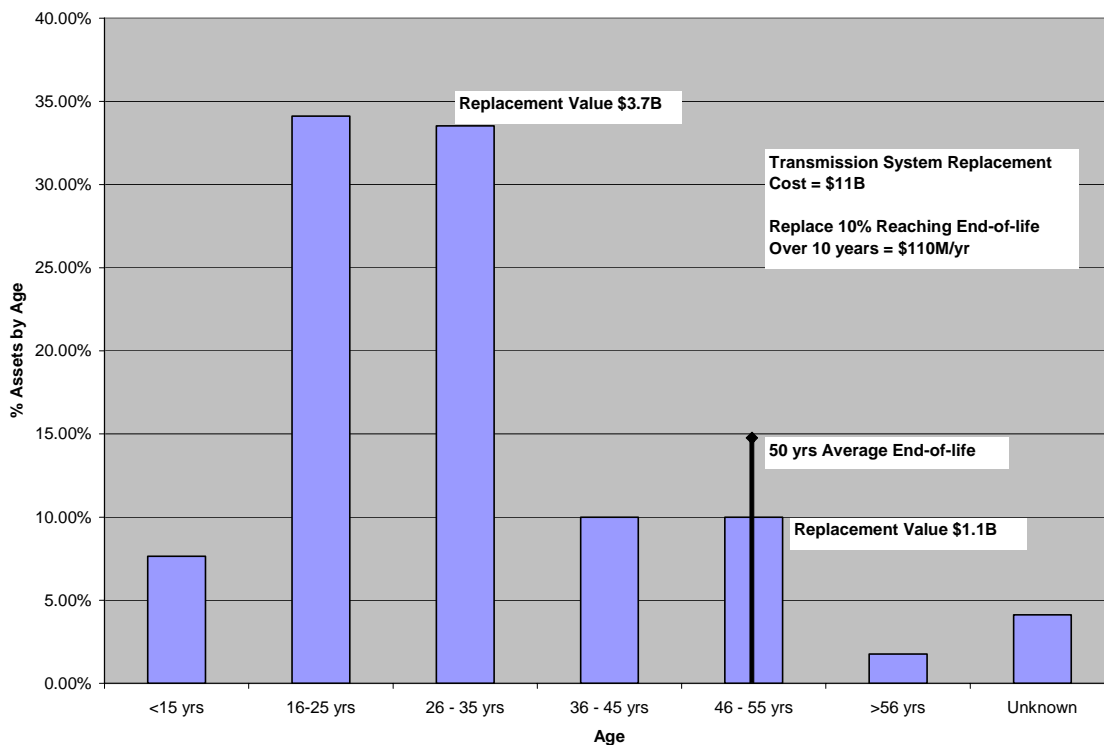
- 1) Operational performance of transmission assets;
- 2) Economic performance:
  - a) Balance capital and maintenance OMA to minimize lifecycle costs
  - b) Efficiency improvement (reduced equipment power losses, lower maintenance costs)
  - c) Increase/maintain availability for transmission customers;

- 3) Risk Management (reduce asset exposure to hazards and risks such as fire, seismic events and ice storms;
- 4) Legal / Regulatory compliance (including safety and environment).

BCTC's planning process includes a formal sustaining capital replacement strategy to address the large number of transmission assets approaching the end of their useful lives and to address performance deterioration of some asset groups. The process identifies asset replacement priorities over a period of several years and manages them by their value contribution to system performance and reliability. There are no sustaining capital projects with expenditures greater than \$50 million.

The BCUC Decision on the Capital Plan required a reduction in non-Substation Distribution Asset capital of \$9 million (10%) in F2006/07, \$15 million (15%) in F2007/08 and 15% for succeeding years. The BCUC specified that the reductions be made in the various sustaining capital portfolios. The reductions were accommodated by cancelling and deferring projects based on a value and risk analysis. The cancellation and deferral of the selected projects is considered to have minimal short term impact on operations. Longer term risks include decreased reliability, increased maintenance OMA and increased risk from natural events such as seismic events and ice storms.

### Transmission Asset Age Profile & Replacement Costs



### Growth Capital

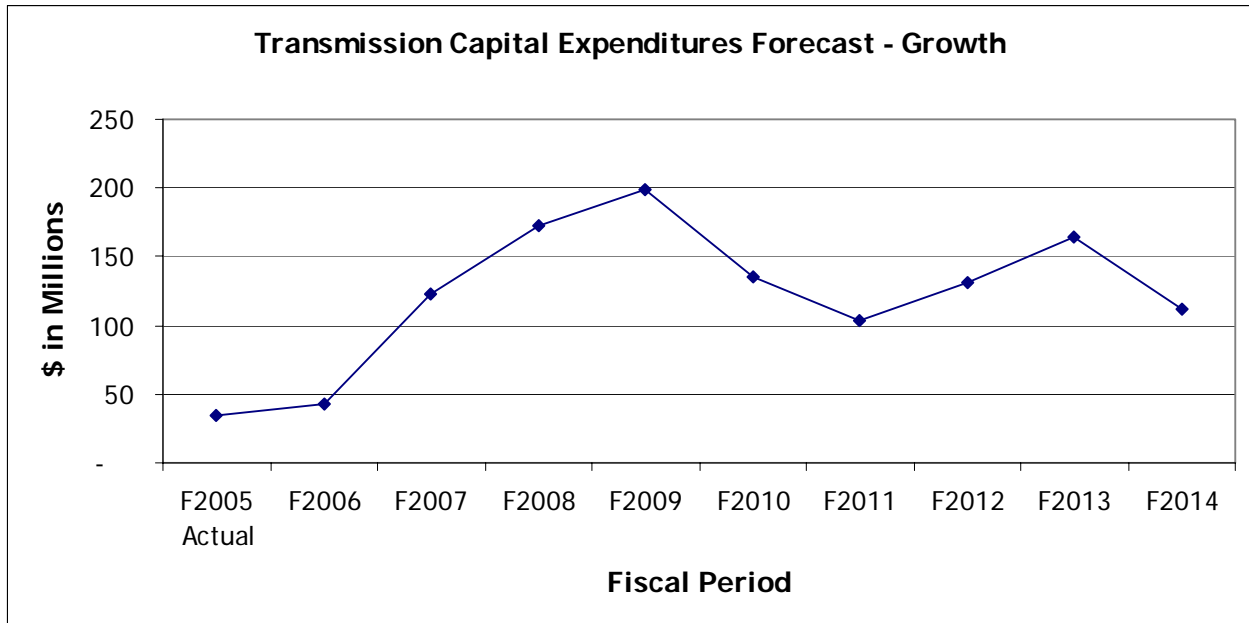
Growth capital additions and reinforcements are categorized as either transmission service customer requests to connect to the transmission system or as general load growth projects. The key business drivers of Growth capital are:

- Open Access Tariff (OATT) service requests for new generation and domestic load growth pursuant to the Network Integration Transmission Service (NITS) Agreement between BC Hydro and BCTC.
- OATT Point-to-Point Transmission Service requests from BC Hydro and other customers.
- Transmission interconnections requested by Independent Power Producers and other customers.



Growth capital is forecast to increase to meet load growth of approximately 600 megawatt hours over the next 4 years. This growth is a result of customer load growth, IPP interconnections and BC Hydro resource additions. Where these investments are made pursuant to transmission tariff requests for service, the process for determining investments and the sharing of costs is described by the OATT tariff.

Following is a table depicting current and planned growth capital expenditures:



There are two growth capital projects in progress with expenditures greater than \$50 million:

**Vancouver Island Reinforcement Project - \$245 million (F2005/06 – F2008/09)**

The high voltage direct current (HVDC) system interconnection between the Arnott substation on the Lower Mainland and Vancouver Island Terminal (VIT) near Duncan on Vancouver Island, including submarine cables and terminal converter station equipment, is reaching the end of its useful life. The reliability of this facility has degraded due to deterioration in the dependable power transfer capacity. The transfer capacity has been reduced to 240 MW and is expected to drop to zero in 2007. With the de-rating of the HVDC system and load growth on the Island, the existing firm supply capacity will be unable to meet the peak demand on the Island by the end of 2007. This project will install new 230kV cable circuits with an earliest in-service date of October 2008.

The project is in the later stages of the Definition Phase. Detailed cost estimates have been completed, project scope has been defined and a preferred route has been selected. The Terms of Reference for the Environmental Assessment is complete and field studies are in progress. A Certificate of Public Convenience and Necessity application was filed with the BCUC in July 2005. BCUC hearings will commence in February 2006 and an Environmental Assessment Certificate is expected by late summer 2006. Major construction is projected to begin in 2007.

**5L83 - Nicola to Meridian Transmission Line - \$307 million (F2005/06 to F2014/15)**

A new series compensated 500 kV transmission line between the Nicola and Meridian Substations (5L83) will provide additional power transfer capability from the Interior to loads in the Lower Mainland and Vancouver Island. The existing Interior to Lower Mainland bulk transmission system is limiting generation development in the South Interior as well as electricity trade. The 5L83 transmission project will transfer 2100 MW of additional power and reduce transmission

losses. Preliminary studies are underway to meet an in-service date of fall 2013. Approval will be requested from the BCUC prior to commencing construction.

The project is currently in the early stages of the Definition Phase which is expected to be completed by August 2008. Detailed cost estimates will be prepared and project scope defined once public consultation is complete and the preferred route selected. Detailed analysis of the project's community and stakeholder consultation requirements is complete and communication planning underway. Information presentations to the communities in the South Interior through to the Lower Mainland are expected to commence in 2006. A Certificate of Public Convenience and Necessity application is expected to be filed with the BCUC in fall 2006 or spring 2007 and the project presented to the Board for approval late 2008.

Projects disallowed by the BCUC were removed from the F2006/07 and F2007/08 forecasts. All other Growth projects were reviewed to ensure sufficient justification exists. The disallowed projects reduce the March 2005 Plan by \$2.5 million in F2006/07 and \$15.2 million in F2007/08. Risks of project removals are considered acceptable. Interim measures such as generation shedding may be used until the BCUC approves the disallowed projects.

### **Capital Expenditures – Assets Owned by BCTC**

Capital expenditures for assets owned by BCTC comprise control centre technologies, business support systems, information technology and facilities management. These expenditures are used to plan, operate and maintain the transmission system and include the system control centre buildings, computer hardware and software for business applications and the Energy Management System, communications equipment, and office equipment.

BCTC has one capital project greater than \$50 million - the System Control Modernization Project, totaling \$132.5 million (\$4.6 million of OMA is not included in this total), with an in-service date of 2008. This project will provide information, communication systems and automated operation systems to operate the integrated transmission system and to facilitate electricity market access to Alberta and the United States. The current Energy Management System and Supervisory Control and Data Acquisition Systems are based on 1960's operating models and are at the end of their useful lives. The existing systems are antiquated and do not have the features and functionality required in an open access and evolving regulatory and business environment. In February 2005, BCTC received a BCUC Certificate of Public Convenience and Necessity to proceed with the project.

The project is currently in the definition phase. Land has been purchased for the main control center location and a long-term lease secured for the back-up location. A contract for the Energy Management System will be awarded in early 2006. The building architect has been selected and building design is underway. The project cost estimate and schedule will be reviewed in spring 2006 after the Energy Management System contract has been awarded and completion of detailed facility designs.

BCTC projects were re-prioritized to meet BCUC's directive to reduce aggregate. Spending for F2006/07 and F2007/08 was reduced \$2.4 million in total, excluding the System Control Modernization Project.

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