



REVISED BC HYDRO SERVICE PLAN  
2013/14–2015/16

**BC hydro** 

FOR GENERATIONS

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# LETTER FROM THE CHAIR TO THE MINISTER

## TO: THE HONOURABLE BILL BENNETT, MINISTER OF ENERGY AND MINES

On behalf of the Board of Directors, the Executive Team and employees, I am pleased to submit BC Hydro's Revised Service Plan for fiscal years 2013/14–2015/16. This Service Plan was prepared under the direction of the Board and management in accordance with the *Budget Transparency and Accountability Act* and the B.C. Reporting Principles. It has been developed to be consistent with the Government's strategic priorities and fiscal plan.

The Board and management are accountable for the contents of the plan, including the selection of performance measures and targets. The performance measures presented are consistent with BC Hydro's mandate and strategic objectives, and focus on aspects critical to the organization's performance. The targets in this plan have been determined based on an assessment of BC Hydro's operating environment, forecast conditions, risk assessment and past performance.

To the best of our knowledge the significant assumptions, policy decisions, events and identified risks are current and have been considered in preparing this plan.

The Service Plan financial information has been updated to reflect preliminary actual F2013 financial results. As a result of the flow through impacts, the allowed net income and dividend to the Province for the forecast years have been adjusted from the February 2013 Service Plan. Where applicable, the Board of Directors information in the Corporate Governance section has also been revised.

## RELIABLY POWERING OUR PROVINCE

BC Hydro has been powering the province with clean, reliable electricity for generations, and our efforts today are focused on ensuring that British Columbians can continue to rely on that power for many decades to come. That's why we are making investments in our generation, transmission and distribution infrastructure right across the province.

A large proportion of BC Hydro's existing infrastructure was built between 1950 and 1980, and some facilities—such as Buntzen Dam, approximately 6 km North of Port Moody—were completed in the early 1900s. From seismic upgrades to capacity additions, when we revitalize these assets we ensure that British Columbians can continue to rely on them now and well into the future.

We are also adding capacity to meet the growing demands on the system. Demand for power will grow in every sector—residential, commercial, and industrial. For example, there is growing industrial activity in B.C.'s North that we are meeting with new and expanded infrastructure and we are planning for the potential need to supply the emerging liquefied natural gas sector. The population and the economy of the Lower Mainland continue to grow and the Vancouver City Central Transmission project will help ensure we have enough power to meet the needs of our customers in Vancouver.



Stephen Bellringer  
Chair, BC Hydro

We are installing new generating units at the Mica Dam to provide the whole province with additional capacity. And we are planning for the long-term: the Site C Clean Energy Project is currently in a cooperative environmental assessment process by federal and provincial regulatory agencies, which will include a joint-review panel. Subject to approvals, Site C would be a new source of clean, reliable and cost-effective electricity for BC Hydro customers.

These major projects are only one part of our long-term plan. In addition to building more, we are also seeking to conserve more through our industry-leading Power Smart programs and potentially buy more energy. Our 20-year plan—the Integrated Resource Plan—will detail our long-term power acquisition plan and 30 years of transmission requirements.

## SAFETY MUST REMAIN TOP-OF-MIND

The safety of our employees and the public must always remain top-of-mind for us as we operate our system. We will continue to make organizational efforts to improve our employee safety performance.

Since 2011, a team of BC Hydro employees has been taking action on recommendations made by our Safety Taskforce in order to transform our safety culture. We are on a multi-year path that employees across the organization have contributed to, and we're committed to staying the course in the years ahead. Public safety is an important driver for many of our projects and initiatives such as the seismic upgrading of many key facilities and our ongoing efforts to educate the public about electrical safety.

We are working hard to carefully manage our costs and ensure we are running a lean and efficient business so that we can keep our rates competitive for our customers. BC Hydro continues to make progress in implementing all of the recommendations of the 2011 Government Review. Work is well underway on all recommendations directed to BC Hydro with 44 of the 50 recommendations completed by the end of March 2013. By the end of fiscal 2014, BC Hydro is expecting to complete the remaining six recommendations.

We are undertaking a number of initiatives to create a more efficient and streamlined business that serves our customers better. For example, a multi-year Transformation initiative is improving the processes and technology underpinning our transmission and distribution side of the business.

System modernization is also pivotal to our business and, today, nearly every home in British Columbia is equipped with a new smart meter. Smart meters will measure energy use on an hourly basis, allowing customers to understand their bills much more comprehensively online. They will also enable our crews to deploy resources more efficiently on the ground during power outages, as they will be able to isolate precisely where outages occur and their extent, and then prioritize a restoration plan accordingly.

Safely keeping the lights on is core to everything we do—it is an essential service to British Columbia's people, communities and businesses. We are focusing on continually improving how we achieve this goal and take pride in the many projects and initiatives that are the foundation of our continued success. BC Hydro is well-positioned to provide clean, reliable electricity to British Columbians at competitive rates well into the future.



Stephen Bellringer, Chair

# STRATEGIC CONTEXT

BC Hydro was created to generate and deliver clean, reliable and affordable electricity to British Columbia's homes and businesses. The electricity generated by our dams and delivered by our transmission and distribution infrastructure has powered B.C.'s economy and quality of life for generations.

Today, as demand for electricity grows due to population and economic growth, residential consumers and industry look to BC Hydro's clean electricity to power their homes and businesses. This growth comes as BC Hydro's dams and other assets reach an age when they need significant investment in order to continue operating safely and effectively while maintaining B.C.'s clean electricity advantage.

That's why we are in the midst of updating and upgrading our assets—everything from the hydro-generating facilities to the metering system that measures the power we deliver to customers' homes. In addition to advancing our capital investment program, our other immediate priorities include continuing to operate more efficiently by looking for further opportunities to reduce costs, encourage conservation and Power Smart initiatives, and modernize the electricity system by developing a smart grid and adopting new technologies.

While making these much-needed investments and balancing the long term energy requirements of the province, BC Hydro must also balance the need to keep rates competitive for customers. With prudent reinvestment and careful planning, BC Hydro is positioned to safely deliver clean, reliable power for the long-term benefit of the growing province.\*

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## SAFETY IS A FUNDAMENTAL VALUE

Enhancing employee, contractor and public safety is critical to BC Hydro, and we continue to work hard to transform our safety culture. We have begun to action the recommendations put forward by a Safety Taskforce, which was established in 2010. These include BC Hydro's endorsement of *Life Saving Rules* and *Just Culture Principles* to further improve worker safety. The *Life Saving Rules* support BC Hydro's focus on addressing hazards that have the potential to result in loss of life or permanently disabling injury in alignment with our performance measure of Zero Fatality and Serious Injury.

Key to transforming our safety culture will be embedding safety in our business processes and information technology systems, as well as working within an aligned management system. The Safety Health and Environment Management System will enable proactive, systematic management of issues and integrate a risk-based approach to focusing and prioritizing safety, health and environment improvement initiatives.

## PLANNING TO MEET FUTURE DEMAND

Meeting current and future demand for electricity is the foundation of BC Hydro's planning activities. It must consider trends that could increase electricity needs such as industrial growth and economic activity, population increases, electrification and new consumer technologies. BC Hydro must be prepared to meet those needs if and as they occur while at the same time avoiding building surplus capability.

Meeting uncertain future need in a reliable fashion is done by pursuing conservation and energy efficiency programs, generation resources and transmission infrastructure and maintaining options for additional resources should the need be greater. This balanced approach to both building and maintaining options allows BC Hydro to meet future demand while minimizing costs to current customers.

BC Hydro has consulted with First Nations, the public and stakeholders on its draft *Integrated Resource Plan* (IRP). The IRP will be consistent with the provincial energy objectives formalized by the Province of B.C. in the *Clean Energy Act*, including electricity self-sufficiency, reduced greenhouse gas emissions and economic development. The IRP is

\* See Appendix B for the details on the Specific Corporate Accountabilities for BC Hydro from the B.C. Government's Letter of Expectations for fiscal 2013/14 and BC Hydro's Action Responses.

currently being updated to reflect the most recent demand forecasts and is to be submitted to the Minister of Energy and Mines.

## CONSERVATION AND ENERGY EFFICIENCY

Conservation is the most cost-effective way to meet B.C.'s future energy needs. BC Hydro's Power Smart program is a world leader in promoting conservation and efficiency, through increasing public awareness, educating customers on conservation actions, and offering incentives and rebates to transform the market towards the use of energy efficient products technologies and building designs. Power Smart achieves significant energy savings, which reduces the amount of new energy BC Hydro must secure, either through upgrades to the electrical system or energy purchases. The *Clean Energy Act* calls for BC Hydro to meet 66 per cent of future incremental power demand through conservation and energy efficiency by 2020. BC Hydro considers the risk of energy savings not being delivered through initiatives and plan design, monitoring and adjustments and through contingency plans in its IRP. BC Hydro will continue to work to create a permanent conservation culture in B.C. by collaborating with the Province, local governments, First Nations and Natural Resources Canada to implement new programs, codes and standards and encouraging British Columbians to be smart with their use of power.

## INVESTING TO ENSURE RELIABILITY

Currently, hundreds of capital projects are planned and underway, which, together, make up one of the largest expansions of electrical infrastructure in British Columbia's history. BC Hydro's planned capital investments span the generation, transmission and distribution systems. These investments create jobs and economic activity in communities around the province and are necessary to meet customers' current and future energy needs. The aging critical infrastructure in B.C.'s electrical system leads to a risk of lower reliability. Timely investments in the system by BC Hydro will enhance safety and long-term reliability. BC Hydro uses a risk-based approach to prioritize investment decisions.

Highlights include:

- Mica Generating Station—installation of two additional 500 megawatt generating units into existing turbine bays to ensure additional capacity.
- Gordon M. Shrum generating facility—replacement of the turbines for Units 1 to 5. The work on these five 1960s-era units, which represent 12 per cent of BC Hydro's generating capacity, will ensure ongoing reliability, availability and operational flexibility.
- Northwest Transmission Line—construct an approximately 340-kilometre transmission line between Terrace and Bob Quinn Lake to ensure a reliable supply of clean power to communities and industrial developments in northwest B.C.
- Interior-to-Lower Mainland Transmission Line—construct an approximately 255-kilometre transmission line between Merritt and Coquitlam to expand the capacity of the transmission system that brings power from where it's generated in the North and Southern Interior of the province to the Lower Mainland and Vancouver Island.
- Smart Metering and Infrastructure Program—provide customers with new smart meters, a key piece to modernizing the electrical grid, so that our system can support new technologies, including customer applications and clean energy initiatives.

The Site C Clean Energy Project is a proposed third dam and hydroelectric generating station on the Peace River in northeast B.C. The project would provide enough energy to power the equivalent of 450,000 homes per year. Subject to approvals, Site C would be a source of clean, reliable and cost-effective electricity for more than 100 years.

## KEEPING RATES COMPETITIVE

BC Hydro's electricity rates are among the lowest in North America, in large part due to the past investments in infrastructure that help us generate and deliver cost-effective, clean energy. According to Hydro Quebec's 2012 survey comparing electricity prices, BC Hydro's rates overall are the 4th lowest in North America.

BC Hydro's challenge is to balance the need to invest in revitalizing this system with the need to manage the pressure on rates and keep rates competitive for our customers. This means that BC Hydro will focus on carefully managing costs and operating in an efficient and cost-effective manner and will strive to ensure that projects are delivered on time, and within both scope and budget. This is part of an ongoing effort to manage costs and operate more efficiently.



# ORGANIZATIONAL OVERVIEW

BC Hydro is one of the largest electric utilities in Canada, serving 95 per cent of B.C.'s population and delivering electricity safely and reliably at competitive rates to approximately 1.9 million customers. Nearly 90 per cent of customer accounts are residential, with the remainder either commercial or industrial. Each of these three groups consumes roughly one third of the total electricity supplied.

With offices and line rooms situated throughout the province, BC Hydro operates 31 hydroelectric facilities and three thermal generating plants, totalling approximately 12,000 MW of installed generating capacity.

Over 95 per cent of the electricity generated by BC Hydro comes from hydroelectric facilities, which are located throughout the Peace, Columbia and Coastal regions of B.C. Three thermal generating plants produce the remainder. BC Hydro delivers electricity to customers through a network of nearly 76,000 kilometres of transmission and distribution lines. This system also includes approximately 300 substations, 900,000 utility poles and 325,000 individual transformers. The transmission network connects with transmission systems in Alberta and Washington State, which both improves the overall reliability of the system and provides opportunities for trade.

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## MANDATE

As a Provincial Crown corporation, the owner and sole Shareholder of BC Hydro is the Province of British Columbia. BC Hydro reports to the B.C. Government through the Minister of Energy and Mines and the Government's expectations are expressed through legislation, policy and instructions.

### Legislation

The *BC Hydro Public Power Legacy and Heritage Contract Act* ensures public ownership of BC Hydro's heritage resources, which include BC Hydro's transmission and distribution systems, and all of BC Hydro's existing generation and storage assets. The Province's 2007 BC Energy Plan lays out the general energy policies BC Hydro is required to follow and the 2010 *Clean Energy Act (CEA)* updated several elements and targets included in that plan and provided further guidance for how BC Hydro is to meet the Province's energy objectives.

The B.C. Government's Letter of Expectations (GLE) describes the relationship between BC Hydro and the Province, and sets out objectives that the Shareholder wishes BC Hydro to achieve. The Province and BC Hydro review the letter annually and update it as required. Directions outlined in the letter focus on:

- Implementing the Integrated Resource Plan.
- Finding cost savings and maintaining competitive rates.

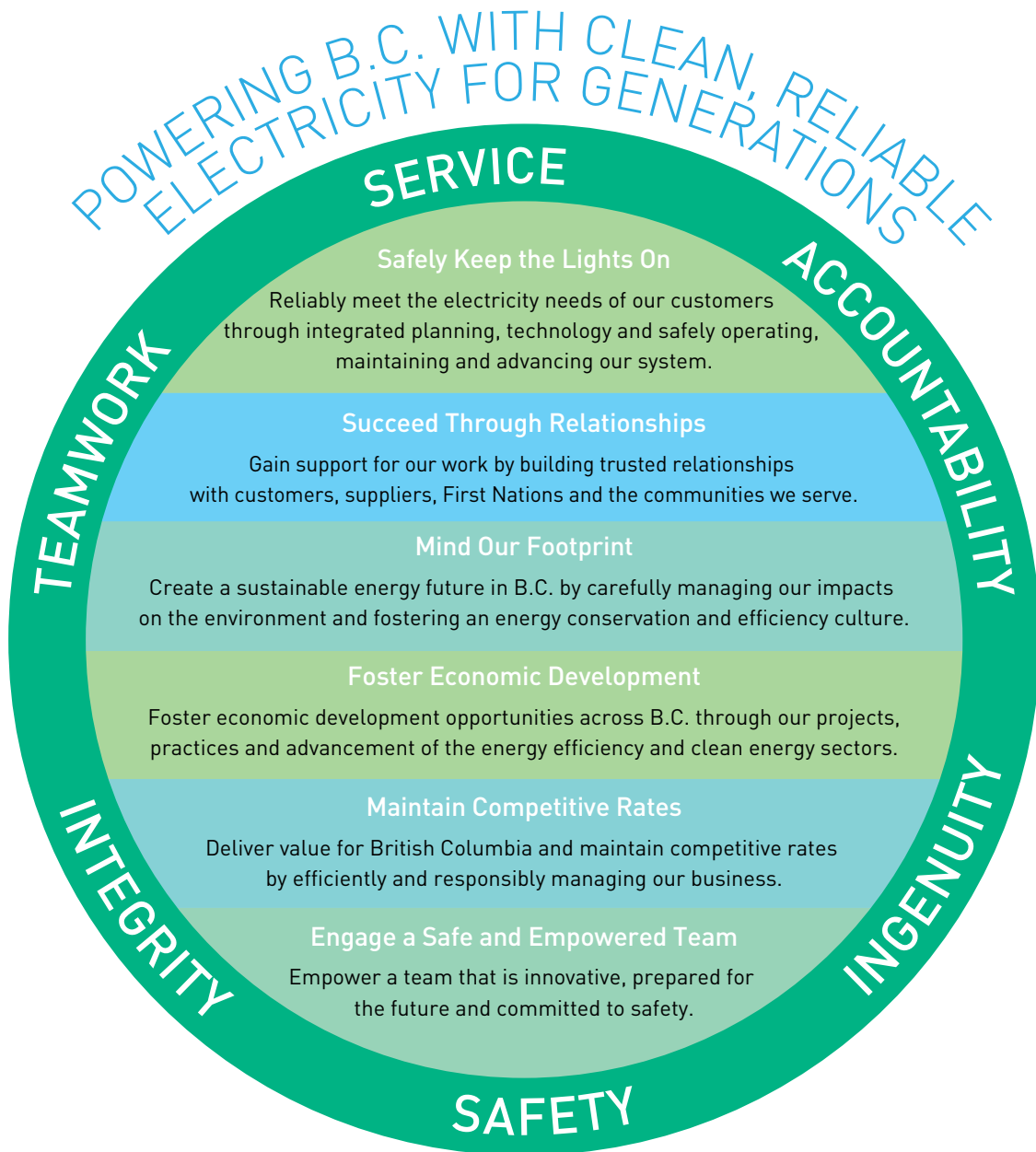
- Ensuring adequate supplies of electricity are available to support new investments in liquefied natural gas and mining.
- Advancing Site C through the environmental assessment process, including consultation and input by the public, Aboriginal groups, communities, property owners and stakeholders.

This Service Plan outlines how BC Hydro intends to meet the Shareholder's expectations over the next three years. Appendix B outlines specific directives received from the Province in the GLE and BC Hydro's corresponding actions. For more details on the current GLE, see Appendix B or go to: [bchydro.com/about/company\\_information/openness\\_accountability.html](http://bchydro.com/about/company_information/openness_accountability.html)

## STRATEGIC OBJECTIVES

BC Hydro's vision is: "Powering B.C. with clean, reliable electricity for generations" and there are six core values that are essential to our success: accountability, integrity, safety, service, teamwork and ingenuity.

We also have six Strategic Objectives that guide our actions. These are each supported by corresponding strategies, performance measures and targets. Each performance measure is supported by a definition and rationale, as well as benchmarking measures that allow a comparison of performance over time. These measures track our progress on delivering key priorities. BC Hydro management is responsible for measuring performance against targets, and results are reported to the Board on a quarterly basis and publicly in the Annual Report.





# STRATEGIC OBJECTIVES, PERFORMANCE MEASURES AND TARGETS

## SAFELY KEEP THE LIGHTS ON

Reliably meet the electricity needs of our customers through integrated planning, technology and safely operating, maintaining and advancing our system.

Safely and reliably meeting our customers' needs is the focus of BC Hydro's workforce supporting the generation, transmission and distribution of electricity.

In addition to operating and maintaining the system, BC Hydro is also responsible for maintaining the long-term health of our assets, identifying the sources of supply to meet future customers' needs, and utilizing new technologies and methods that support safe and reliable operations.

Producing and delivering electricity safely involves keeping a well-maintained electrical system that is safe for workers and the public. This includes preventing employee and contractor injuries as well as vandalism and theft, and anticipating and responding to the impacts of natural disasters, such as storms, floods and forest fires.

BC Hydro has a Four Pillar Safety Plan that includes Safety-By-Design, Job Planning, Job Observation, and Incident Management. A Safety Taskforce, comprised of a cross-section of employees, led a comprehensive process and best practice review, and a culture and organization effectiveness review. Their work resulted in the development of 20 recommendations that are largely focused on leadership and culture. Implementation began in September 2011.

The targeted future state of safety at BC Hydro will be one where all employees are aware of risks, feel that their voice matters in resolving issues, and take accountability for their choices.

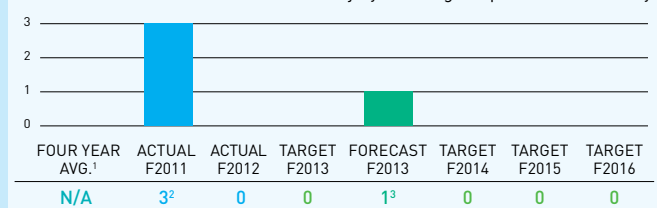
It is expected that the implementation of these recommendations will take multiple years followed by continued effort for sustainment and continuous improvement before the changes will be fully embedded in the organization to realize our future state vision.

### PERFORMANCE MEASURES

(Please see Appendix A for Performance Measure definitions, rationales and benchmarking information.)

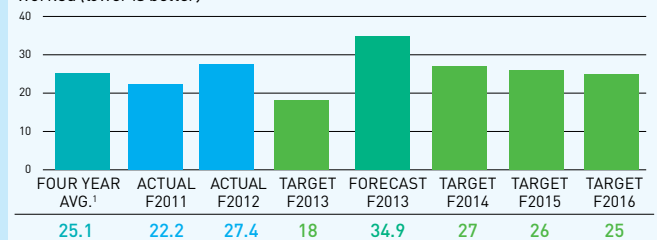
#### ZERO FATALITY AND SERIOUS INJURY

There has either been a loss of life or an injury resulting in a permanent disability.



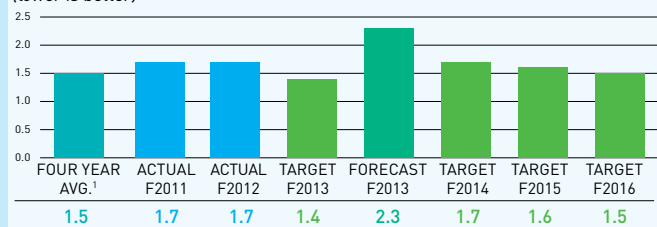
#### SEVERITY

Number of days lost due to injury per 200,000 hours, based on actual hours worked (lower is better)



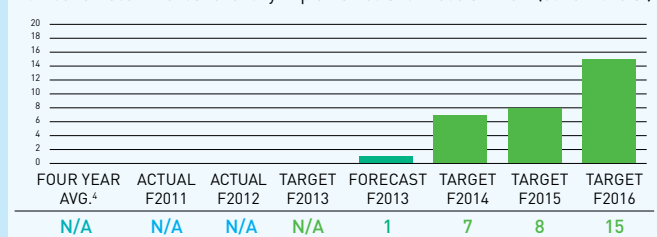
#### ALL INJURY FREQUENCY

Number of injuries per 200,000 hours, based on actual hours worked (lower is better)



#### SAFETY TASKFORCE RECOMMENDATIONS IMPLEMENTATION

Number of recommendations fully implemented and in sustainment (out of 20 total)



<sup>1</sup> For trending purposes, four-year averages are included in the Targets section, where applicable. Four-year averages are based on historical actuals.

<sup>2</sup> One fatality and two serious injuries.

<sup>3</sup> Injury not fatality.

<sup>4</sup> This is a cumulative target and an average is not applicable.

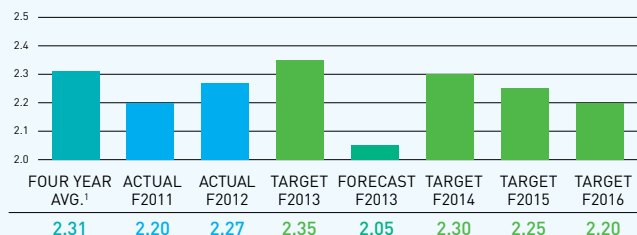
## STRATEGIES

- Continue to implement the recommendations of the Safety Taskforce, complementing and supporting the existing Four Pillar Safety Plan. Develop leading metrics reflective of progress and outcomes from the Plans.
- Systematically identify and, where possible, reduce the number of hazards through work-planning activities and work procedure development.
- Increase integration of job-safety planning into day-to-day work for all operating facilities and all operational activities.
- Participate in regional planning initiatives to identify opportunities to increase regional transmission capacity and advance work on major transmission infrastructure projects.
- Continue implementation of a comprehensive, long-term reliability strategy to improve the system and customer reliability.
- Invest in projects that utilize new technologies that support safe and reliable operations, such as: the Smart Metering and Infrastructure Program, Distribution Management System, Enterprise Geographic Information System, and other business intelligence solutions.
- Continue to effectively manage dam safety issues, risks and regulatory requirements.

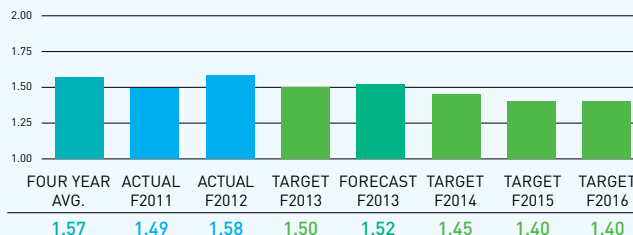
## PERFORMANCE MEASURES

(Please see Appendix A for Performance Measure definitions, rationales and benchmarking information.)

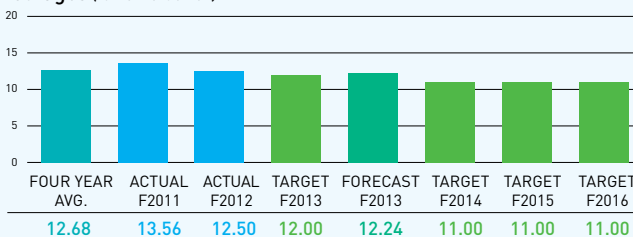
**CAIDI—Average interruption in hours per interrupted customer**  
(lower is better)



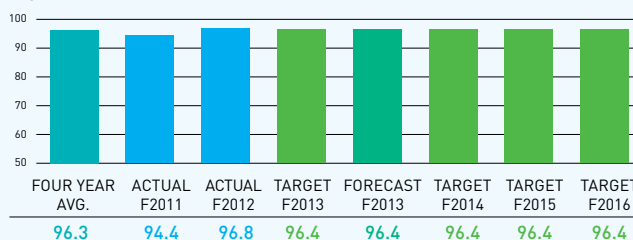
**SAIFI—Number of interruptions per customer per year**  
(lower is better)



**CEMI-4 (%)—Percentage of customers experiencing 4 or more outages**  
(lower is better)



**WINTER GENERATION AVAILABILITY FACTOR (%)—Heritage Asset units >20 MW available to generate electricity, excluding certain planned capital and maintenance outages**  
(higher is better)



<sup>1</sup> For trending purposes, four-year averages are included in the Targets section, where applicable. Four-year averages are based on historical actuals.

<sup>2</sup> Reliability targets are based on specific values, however performance within 10 per cent is considered acceptable given the wide range of variations in weather patterns and other uncontrollable elements that can significantly disrupt the electrical system. BC Hydro measures reliability under normal circumstances, because major events are not predictable and largely uncontrollable. The reliability measure is therefore based on data that excludes major events. BC Hydro reviews performance during major events and takes that performance into consideration in reliability improvement initiatives.

# STRATEGIC OBJECTIVES, PERFORMANCE MEASURES AND TARGETS

## SUCCEED THROUGH RELATIONSHIPS

Gain support for our work by building trusted relationships with First Nations, customers, suppliers and the communities we serve.

BC Hydro works to build and improve relationships with customers and suppliers. The organization's goals include delivering outstanding value and service to our customers and being a customer of choice for our suppliers.

We recognize the importance of building mutually beneficial relationships with Aboriginal communities and continue to implement a comprehensive approach that provides a foundation for long-term and effective business relationships with Aboriginal people in B.C. This can uncover new opportunities for collaboration and reduce financial, legal and operating risks for BC Hydro associated with the outstanding claims of Aboriginal rights and title.

BC Hydro is also focusing on communities, including local governments, regional districts and constituents, to advance shared goals by working together. BC Hydro's Power Smart and Community Relations programs help gain support for work in communities where BC Hydro operates or has projects underway.

### STRATEGIES

- Sustain BC Hydro's gold-level certification under the Progressive Aboriginal Relations (PAR) program by maintaining leading practices in the areas of Aboriginal employment, business development, capacity development and community engagement.
- Obtain project and operational certainty through various strategies, including continuing to work to build collaborative and enduring relationships with First Nations.
- Strengthen BC Hydro's understanding of customers' needs and expectations through customer engagement, targeted segmentation and benchmarking.
- Increase the efficiency, consistency and quality of customer integration of all customer channels.
- Educate, support and encourage regional districts, municipalities and large-scale developers in creating integrated, community-wide energy strategies.

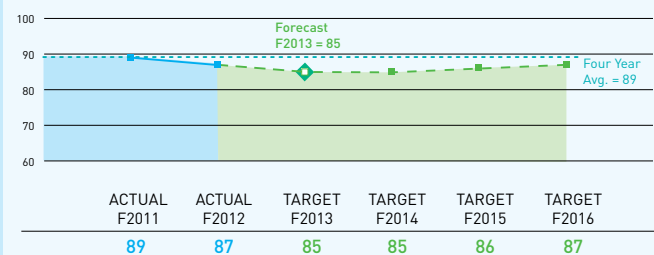
- Implement recommendations from our supplier engagement review to improve how we engage and interact business with our suppliers.

### PERFORMANCE MEASURES

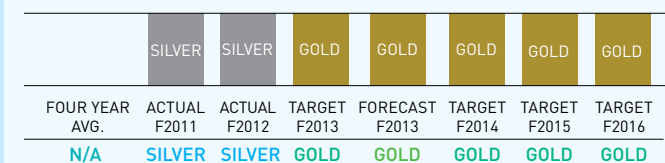
(Please see Appendix A for Performance Measure definitions, rationales and benchmarking information.)

#### CSAT INDEX—CUSTOMER SATISFACTION INDEX (%)

(higher is better)

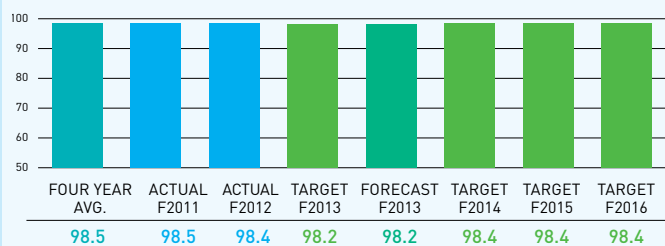


#### PROGRESSIVE ABORIGINAL RELATIONS DESIGNATION



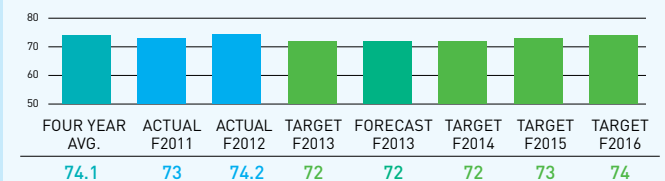
#### BILLING ACCURACY (%)

(higher is better)



#### FIRST CALL RESOLUTION (%)

(higher is better)



# STRATEGIC OBJECTIVES, PERFORMANCE MEASURES AND TARGETS

## MIND OUR FOOTPRINT

Create a sustainable energy future in B.C. by carefully managing our impacts on the environment and fostering an energy conservation and efficiency culture.

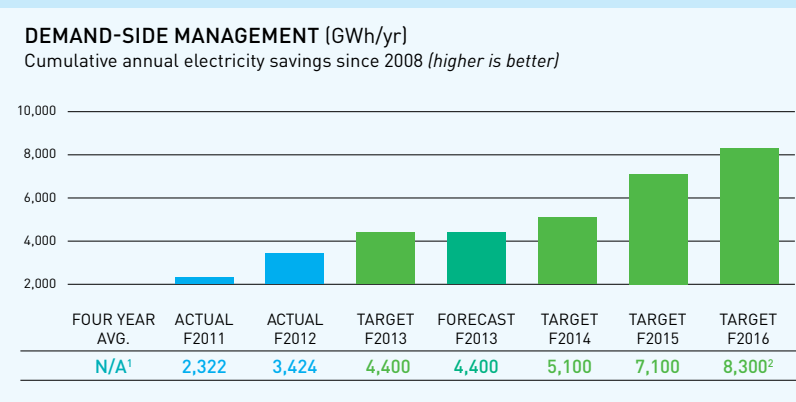
At BC Hydro, we mind our footprint by investing in energy conservation and efficiency programs; incorporating effective design in capital projects by managing, understanding and reducing risks from operational interactions with the environment; and, funding compensation programs and projects. We are assessing the scope of our metrics related to these efforts across operations, and through benchmarking will identify those that reflect an opportunity to best communicate our performance in managing our impacts.

B.C.'s lowest cost resource option continues to be energy conservation and efficiency. By helping customers be more efficient and use their power wisely, BC Hydro can reduce the need for additional generation and help customers lower their bills. The *Clean Energy Act* also raises the bar for BC Hydro's reliance on demand-side measures. Demand-Side Management (DSM) is crucial for meeting the Act's requirement to meet 66 per cent of all new power demand through conservation by 2020.

Provincial legislation reinforces BC Hydro's commitment to reducing our company-wide greenhouse gas (GHG) emissions and specifies that our low-carbon electricity generation is to remain at least 93 per cent clean or renewable. In 2012, we successfully passed an independent review of our Carbon Neutral Program Emissions reporting and we continue to pursue cost-effective emission reduction initiatives, such as energy efficiency improvements at our buildings and rightsizing our fleet vehicles. BC Hydro has also invested in a number of initiatives, such as electric vehicle charging infrastructure, to facilitate the electrification of transportation in B.C. and help reduce overall GHG emissions.

### PERFORMANCE MEASURES

(Please see Appendix A for Performance Measure definitions, rationales and benchmarking information.)



<sup>1</sup> This is a cumulative target; an average is not applicable.

<sup>2</sup> BC Hydro's energy savings are drawn from its DSM plan presented in its fiscal 2012–fiscal 2013 DSM Expenditure Application in the fiscal 2012–fiscal 2014 RRA. Numbers are presented in cumulative run rate savings since F2008 and are rounded down to the nearest 100 GWh. As BC Hydro is required to seek BCUC approval for DSM expenditures beyond fiscal 2013, the energy savings targets over the period of fiscal 2014–fiscal 2016 are planned only and subject to change. BC Hydro intends to align its future DSM targets against its Integrated Resource Plan, where the date for submission to Government has been deferred to August 2013.

### STRATEGIES

- Continue to implement the DSM plan, including Power Smart programs and conservation rate structures, supporting new energy efficiency regulations, and fostering an energy conservation and efficiency culture.
- Continue to meet the 93 per cent clean energy objective in the *Clean Energy Act* through purchasing energy from clean or renewable independent power producers and advancing clean energy capacity resources.
- Continue to meet regulatory requirements related to GHG emissions reporting and verification. Ensure that BC Hydro's buildings, vehicles and paper use are carbon neutral under the *B.C. Greenhouse Gas Reduction Targets Act*. Continue to facilitate the electrification of transportation in B.C.

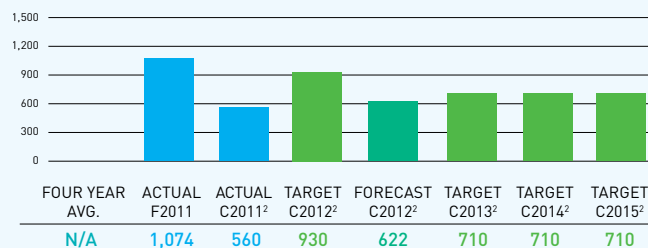
- Manage the impact on the environment from BC Hydro’s new developments and retrofits of existing facilities by incorporating an “avoid, minimize and offset” approach to project design, planning and implementation.
- Continue to implement environmental studies and projects related to water licence requirements under BC Hydro’s Water Use Plans, to confirm the suitability of operational controls at hydroelectric generating plants.
- Continue implementing the PCB electrical equipment phase-out strategy, and pursue a long-term strategy for the handling, decontamination and disposal of PCB-contaminated equipment and materials.
- Ensure resources, training and tools are in place “on the ground” at BC Hydro’s facilities and throughout our operations to identify risks and prevent environmental incidents; and, to deploy the best, most effective approaches to minimize impacts when incidents occur.
- Work in partnership with First Nations and communities to understand impacts related to managing BC Hydro’s assets and implement compensation programs and other environmental projects reflective of this input.

## PERFORMANCE MEASURES

(Please see Appendix A for Performance Measure definitions, rationales and benchmarking information.)

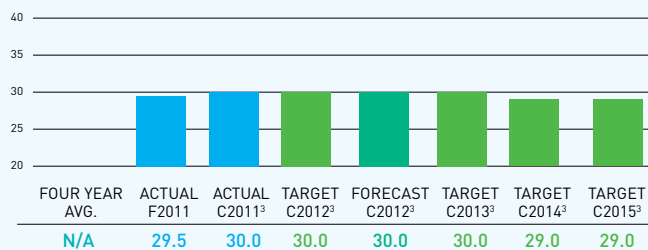
### ELECTRICITY PRODUCTION GHG EMISSIONS<sup>1</sup> (kt)

Carbon dioxide equivalent metric kilotonnes from electricity production (lower is better)



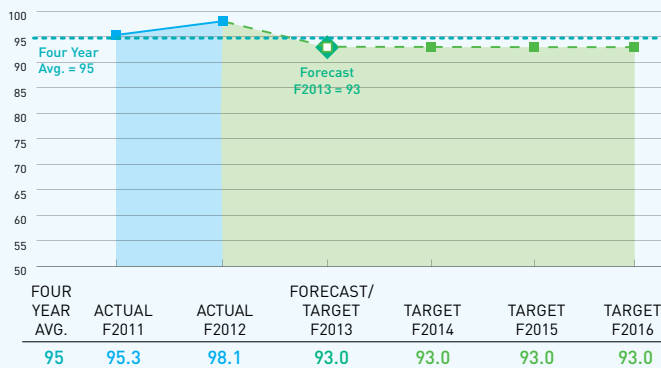
### CARBON NEUTRAL PROGRAM EMISSIONS (kt)

Carbon dioxide equivalent metric kilotonnes from building energy use and vehicles (lower is better)



### CLEAN ENERGY (%)

Energy from clean or renewable resources (higher is better)



<sup>1</sup> For the purpose of the Electricity Production GHG metric, emissions from natural gas-fired generation are included based on forecast need to run these resources, taking into account hydrology, reliability, system needs and market conditions, including the expected price of carbon emissions. We have recalibrated the targets for Electricity Production GHG Emissions from the F2013–F2015 Service Plan to reflect updates to the forecast.

<sup>2</sup> Electricity Production GHG Emissions are reported by calendar year rather than fiscal year to ensure consistency with GHG emissions reports filed under the *Canadian Environmental Protection Act, 1999* and the *B.C. Reporting Regulation*.

<sup>3</sup> Carbon Neutral Program Emissions are reported by calendar year rather than fiscal year to ensure consistency with GHG emissions reports filed under the *B.C. Carbon Neutral Government Regulation*.

# STRATEGIC OBJECTIVES, PERFORMANCE MEASURES AND TARGETS

## FOSTER ECONOMIC DEVELOPMENT

Foster economic development opportunities across B.C. through our projects, practices and advancement of the clean energy sector.

By virtue of our business, BC Hydro has always been and will continue to be a major contributor to economic development in B.C. Through our projects and investments, we are responsible for approximately one to two per cent of B.C.'s overall GDP in any given year. BC Hydro also contributes to economic development through our provision of clean, reliable power; competitive rates; and our role in attracting, expanding and retaining domestic and trade customers.

BC Hydro's economic development strategy supports the objectives of the BC Jobs Plan, which recognizes that BC Hydro's scale and product are critical enablers of business expansion. BC Hydro will continue to support new development, such as the unprecedented growth in mining and natural gas in northern B.C., in ways that foster economic development while minimizing impacts to customers.

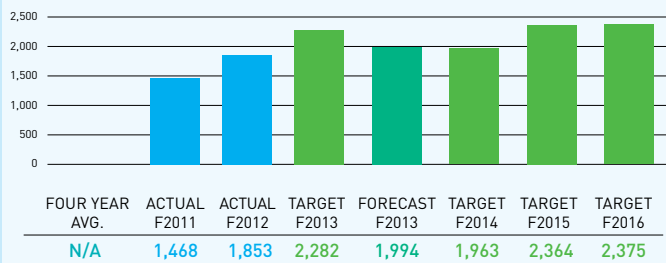
### STRATEGIES

- Integrate economic development principles into decision-making tools, procurement practices, business cases and corporate policies.
- Ensure appropriate tariff/rate structures are in place to enable the expansion of business activity across B.C.
- Develop new business models to enable new energy projects that make sense from a long-term, provincial perspective while minimizing customer impacts.
- Help expand and retain current customers by fostering business competition through Power Smart programs and the delivery of clean, reliable energy.

### PERFORMANCE MEASURE

(Please see Appendix A for Performance Measure definitions, rationales and benchmarking information.)

**BC HYDRO CAPITAL SPENDING IN BRITISH COLUMBIA<sup>1</sup>**  
(\$ millions)



<sup>1</sup> Total capital expenditures adjusted for estimated spend within B.C. In this chart, capital spending is adjusted to exclude estimates of major capital purchases from outside B.C., as these expenditures do not directly contribute to economic activity in B.C.

# STRATEGIC OBJECTIVES, PERFORMANCE MEASURES AND TARGETS

## MAINTAIN COMPETITIVE RATES

Deliver value for British Columbia and maintain competitive rates by efficiently and responsibly managing our business.

BC Hydro's goal is to maintain competitive rates over the long term and provide value for the Province.

Due in large part to the development of our heritage assets—large generating facilities that were built between the 1950s and 1980s—BC Hydro's electricity rates remain some of the lowest among major utilities across North America.

As BC Hydro moves forward with significant investments to B.C.'s electricity system, we will spend an average of \$2.3 billion a year (not including any construction costs related to Site C) for the next three years on capital projects. These investments are required to renew and replace aging facilities that were built decades ago and to build new generating capacity and new transmission lines to deliver the power reliably to people's homes and businesses.

While making these significant investments, BC Hydro recognizes that there is an impact on rates and we will carefully manage costs, operate in an efficient and cost-effective manner, and strive to ensure that projects deliver benefits and are on time, and within both scope and budget. The operating cost target for F2014 is slightly lower than F2013 with only modest increases, less than inflation, for F2015 and F2016.

### STRATEGIES

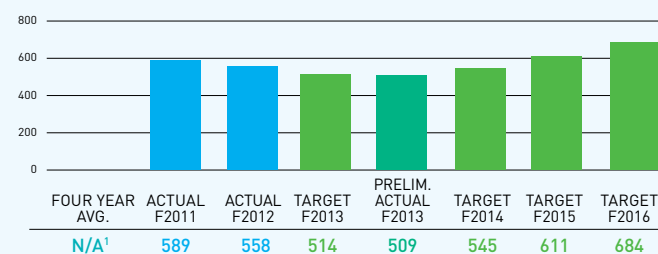
- Implement recommendations from the Government Review report to realize cost-savings and efficiencies and continue to focus on management and control of our cost structure.
- Develop a 10-year capital plan and effectively deliver on BC Hydro's capital investment program, including process and procurement improvements.
- Implement people, process and technology to improve operational excellence, safety and reliability of the T&D organization through the Transformation Initiative. This initiative includes improving work delivery methods, resourcing strategies, integrated T&D planning, as well as technology platforms.
- Realize value through innovative procurement strategies, strategic sourcing and by building strong supplier relationships.

- Manage the cost of energy by: implementing a 20-year Demand-Side Management plan; procuring and/or building new electricity supply at competitive costs; making prudent short-term generate and buy decisions; and, optimizing BC Hydro's ability to use the flexibility of our heritage assets.
- Optimize BC Hydro's balance sheet and cost of capital.

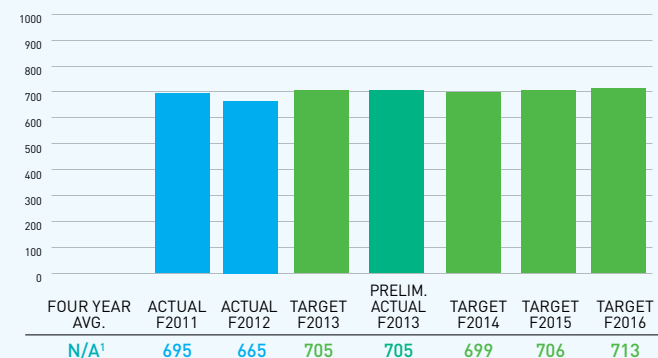
### PERFORMANCE MEASURE

(Please see Appendix A for Performance Measure definitions, rationales and benchmarking information.)

#### NET INCOME (\$ millions)



#### OPERATING COSTS (\$ millions)



#### COMPETITIVE RATES

**1<sup>st</sup> Quartile**

- FOUR YEAR AVERAGE
- ACTUAL F2011 & F2012
- PRELIM. ACTUAL F2013
- TARGET F2013, F2014, F2015, F2016

#### DEBT TO EQUITY (%)

**80/20**

- FOUR YEAR AVERAGE
- ACTUAL F2011 & F2012
- PRELIM. ACTUAL F2013
- TARGET F2013, F2014, F2015, F2016

<sup>1</sup> As a result of reintegration of BCTC in July 2010 and changes to the presentation of certain financial statement items, previous year numbers are not comparable.



# STRATEGIC OBJECTIVES, PERFORMANCE MEASURES AND TARGETS

## ENGAGE A SAFE AND EMPOWERED TEAM

Empower a team that is innovative, prepared for the future and committed to safety.

The unique nature of the utility industry has been a constant factor in BC Hydro's requirement for highly qualified technical and trades workers. In the future, BC Hydro's demand for people with industry-specific expertise and specialized skills will continue as it undertakes large-scale capital projects. At the same time, burgeoning labour markets in Western Canada and the retirement of aging workers within B.C.'s workforce are creating higher demand for people across the region, which, in turn, drives up attrition rates within BC Hydro.

To help address this need for a highly qualified, diverse and flexible workforce, BC Hydro has established programs to close the gap between our need for workers and supply. BC Hydro has invested in a new Trades and Technical Training School, which will enhance BC Hydro's ability to deliver specialized technical and safety training in a simulated environment. The Trades Training Center will be the primary venue for formal apprenticeship and journey person training across all trades at BC Hydro as well as Safety training for the broader BC Hydro employee audience. Given we operate in a high-hazard industry, BC Hydro will continue to consistently emphasize improving our safety culture, and ensure technical and safety leadership competencies in work delivery.

By ensuring safety first, BC Hydro's employee development can focus on how best to deliver BC Hydro's strategic objectives while demonstrating the corporate values.

### STRATEGIES

- Create strategies to address workforce gaps and development plans to ensure a readily available talent pool for critical roles.
- Continue to prudently manage staffing levels; ensure the optimal complement of new recruits, skilled, experienced and high-performing employees; and leverage contracted and outsourced service providers in an efficient manner.
- Provide a sustainable total compensation offer that serves to attract the best possible candidates, align employees to our key objectives, retain top performers and enhance employees' well-being.
- Support leaders to engage employees so they are innovative and highly motivated to work together safely and effectively.

### PERFORMANCE MEASURE

(Please see Appendix A for Performance Measure definitions, rationales and benchmarking information.)

**EMPLOYEE SUSTAINABLE ENGAGEMENT SCORE<sup>1</sup>**  
(% favourable)

**80**

TARGET F2014, F2015, F2016

<sup>1</sup> New measure. The target is to meet or exceed the annual Towers Watson Canadian Utilities Index score (2012 score was 80 per cent).

# FINANCIAL OUTLOOK

BC Hydro's financial performance considers the financial return to the Province of British Columbia and the electricity rates paid by customers.

In fiscal 2013, BC Hydro's return to government was \$1,083 million. This amount includes water rental fees (royalties paid for the use of provincial water resources), provincial and municipal property taxes and grants-in-lieu of taxes, and BC Hydro's net income (return on equity). BC Hydro's dividend to the Province was \$215 million in fiscal 2013.

BC Hydro is projecting its return to government will average approximately \$1,240 million per year for the fiscal 2014 to fiscal 2016 plan period and its dividend will average approximately \$245 million per year over the same period.

## CAPITAL AND REGULATORY STRUCTURE

BC Hydro is regulated by the British Columbia Utilities Commission (BCUC) and both entities are subject to general or special directives and directions issued by the Province. BC Hydro operates primarily under a cost of service regulation as prescribed by the BCUC. Orders in Council from the Province establish the basis for determining BC Hydro's equity for regulatory purposes, as well as its allowed return on deemed equity and the annual dividend to the Province.

BC Hydro's deemed equity for regulatory and rate setting purposes is 30 per cent of the company's rate base, comprised largely of BC Hydro's property, plant and equipment in service.

BC Hydro's allowed return on its deemed equity is equal to the pre-income tax annual rate of return allowed by the BCUC to the most comparable investor-owned energy utility regulated under the *Utilities Commission Act*, being FortisBC Energy. BC Hydro's allowed net income is therefore calculated by multiplying its deemed equity and allowed rate of return. The BCUC recently issued a decision to change the return on equity of FortisBC Energy. The Province has requested that BC Hydro contribute to ongoing balanced budgets by maintaining its net income forecast for fiscal 2014 through fiscal 2016 from the February 2013 Budget, subject to minor adjustments to reflect preliminary year end actuals as of March 31, 2013.

BC Hydro is required to make an annual dividend to the Province on or before June 30 each year. The dividend is equal to 85 per cent of BC Hydro's net income assuming that the actual debt to equity ratio, after deducting the dividend, is not greater than 80:20. If the dividend would result in a debt to equity ratio exceeding 80:20, then the dividend will be based on the greatest amount that can be paid without causing the debt to equity ratio to exceed 80:20.

## COST INFLUENCES

BC Hydro's costs are driven by capital investment costs, cost of energy, recovery of its regulatory account balances, and costs required to run and maintain its utility business.

- Capital investment costs relate to costs associated with capital expenditures and additions including finance charges, amortization and return to the Shareholder. Many large capital projects to refurbish and maintain the system to ensure ongoing reliability of our assets and to build new assets to meet growing demand are planned or underway, with annual expenditures of over \$2 billion (excluding Site C) over the next several years. An average of approximately 45 per cent of BC Hydro's total cost structure over the fiscal 2014 to fiscal 2016 period relates to capital investment costs.
- Cost of energy includes water rental charges, purchase costs from Independent Power Producers (IPPs), market electricity purchases and purchases of gas for thermal generation. New sources of energy supply are more expensive than heritage resources and the supply of contracted energy from IPPs is expected to increase from 20 per cent to 25 per cent of BC Hydro's domestic needs over the next several years. An average of approximately 30 per cent of BC Hydro's total cost structure over the fiscal 2014 to fiscal 2016 period relates to cost of energy.
- The costs required to run and maintain its utility business average approximately 15 per cent of BC Hydro's total cost structure over the fiscal 2014 to fiscal 2016 period. BC Hydro is continuing with its cost savings and efficiency programs and has already made significant reductions to its base operating costs. Operating costs are forecast to increase at an average of 0.5 per cent per year over the F2011 to F2016 period.

- Over the last several years, BC Hydro has deferred costs and expenditures through the use of regulatory and deferral accounts in order to match expenditures to the customer benefit and mitigate rate increases. The recovery of these deferred expenditures will increase BC Hydro's cost structure and is forecast to average approximately 5 per cent of BC Hydro's total cost structure over the fiscal 2014 to fiscal 2016 period.

## REGULATORY ACCOUNTS

The use of regulatory accounts is common amongst regulated utility industries throughout North America. Regulatory accounts are used to capture differences between how items are recovered in rates and how they would be treated under accounting rules. They reflect costs BC Hydro has not yet recovered from ratepayers and also amounts that will be returned to ratepayers in future revenue requirement applications. BC Hydro uses various regulatory accounts, in compliance with BCUC orders, in order to:

1. Better match costs and benefits for different generations of customers.
2. Smooth out the rate impact of large non-recurring costs.
3. Defer to future period differences between forecast and actual costs or revenues.

## FINANCING STRATEGY

As a provincial Crown corporation, BC Hydro borrows all funds through the Province, and all of BC Hydro's debt is either held or guaranteed by the Province, resulting in a credit rating on our long-term debt similar to the Province's own rating of Aaa by Moody's and AAA by Standard and Poors.

BC Hydro's overall borrowing requirement was approximately \$1.4 billion in fiscal 2013, \$200 million of which was used to refinance retired debt for a net requirement of \$1.2 billion. This borrowing is largely required to finance BC Hydro's \$1.9 billion capital expenditure program in fiscal 2013. BC Hydro financed its borrowing requirements through long-term debt. BC Hydro's debt net of sinking funds, as of March 31, 2013, was \$14.0 billion, and is forecast to increase to \$18.5 billion at the end of fiscal 2016.

BC Hydro's capital expenditure program and higher interest rates result in increasing debt levels and subsequently an increase in finance charges. BC Hydro's finance charges were approximately \$540 million in fiscal 2013 and are forecasted to increase to \$788 million in fiscal 2016.

## FINANCIAL PROJECTIONS

BC Hydro's operations are subject to a range of risks and uncertainties. As a result, actual financial results may differ materially from those described in this Service Plan.

BC Hydro prepared the following financial projections for revenues and expenses through fiscal 2016 which were approved by the Board and submitted to the Ministry of Finance in June 2013.

The financial information related to fiscal periods up to the end of fiscal 2012 is prepared based on Canadian GAAP before its transition to International Financial Reporting Standards (IFRS). The forecast information related to periods after fiscal 2012 is prepared based on prescribed accounting standards in accordance with a Directive issued by Treasury Board pursuant to section 23.1 of the *Budget Transparency and Accountability Act* and section 9(1) of the *Financial Administration Act*. The prescribed accounting standards reflect IFRS and apply United States Financial Accounting Standards Board Accounting Standards Codification 980 (Regulated Operations).

CONSOLIDATED STATEMENT OF OPERATIONS <sup>1</sup> (\$ MILLIONS)	ACTUAL F2012 <sup>4</sup>	PRELIM. ACTUAL F2013	FORECAST F2014	FORECAST F2015	FORECAST F2016
<b>REVENUES</b>					
Domestic	3,692	4,038	4,214	4,710	5,122
Trade	975	860	711	775	783
	<b>4,667</b>	<b>4,898</b>	<b>4,925</b>	<b>5,485</b>	<b>5,904</b>
<b>EXPENSES</b>					
Operating Costs					
Cost of energy	1,851	1,806	1,687	1,966	2,077
Other operating expenses					
Personnel expenses, materials & external services <sup>2</sup>	849	840	851	875	920
Amortization	721	953	1,003	1,121	1,172
Finance charges	483	540	597	661	788
Grants and taxes	184	196	205	212	220
Other operating expenses	20	54	37	40	42
	<b>4,108</b>	<b>4,389</b>	<b>4,380</b>	<b>4,874</b>	<b>5,220</b>
<b>NET INCOME</b>	<b>558</b>	<b>509</b>	<b>545</b>	<b>611</b>	<b>684</b>
Net Debt <sup>3</sup>	12,795	13,962	15,463	17,289	18,489
Equity	3,198	3,500	3,866	4,322	4,622
Capital Expenditures	1,917	1,929	2,031	2,445	2,457

Notes:

<sup>1</sup> Table may not add due to minor rounding.

<sup>2</sup> These amounts are net of capitalized overhead and consist of the following:

	F2012	F2013	F2014	F2015	F2016
Domestic Base Operating Costs	665	705	699	706	713
Other	184	135	152	169	207
	<b>849</b>	<b>840</b>	<b>851</b>	<b>875</b>	<b>920</b>

Other largely consists of Powerex & Powertech operating costs, operating costs related to embedded IPP capital leases and the transitioning of IFRS capital overhead into operating costs over a 10-year period.

<sup>3</sup> Debt figures are net of sinking funds and cash and cash equivalents.

<sup>4</sup> Fiscal 2012 Actual is reported based on Canadian GAAP before the transition to International Financial Reporting Standards (IFRS).

## KEY ASSUMPTIONS

BC Hydro used the following key assumptions in preparing these financial projections:

KEY ASSUMPTIONS	ACTUAL F2012	PRELIM. ACTUAL F2013	FORECAST F2014	FORECAST F2015	FORECAST F2016
<b>GROWTH AND LOAD:</b>					
B.C. Real Gross Domestic Product Growth (%) <sup>1</sup>	2.7	1.9	1.8	2.3	2.5
Domestic Sales Load Growth (%) <sup>2</sup>	1.74	0.96	3.35	0.61	3.05
Residential Sales Load Growth (%) <sup>2</sup>	3.36	(3.76)	3.38	(0.16)	0.35
Light Industrial and Commercial Sales Load Growth (%) <sup>2</sup>	(0.26)	2.10	(0.18)	(5.39)	1.82
Large Industrial Sales Load Growth (%) <sup>2</sup>	2.72	(0.10)	2.95	7.02	6.51
Domestic Load (GWh):					
Domestic Sales Volume (GWh) <sup>3</sup>	52,197	57,012	56,538	56,234	57,969
Line Loss and System Use (GWh)	5,514	5,515	5,124	4,733	4,654
Total Domestic Load (GWh)	57,711	62,527	61,662	60,967	62,623
<b>ENERGY GENERATION:</b>					
Total System Water Inflows (% of average)	108	109	100	100	100
Sources of Supply to Meet Domestic Load:					
Net Hydro Generation (GWh)	45,791	51,260	48,377	46,497	47,797
Market Electricity Purchases (GWh)	840	359	40	146	79
Independent Power Producers and Long-term Purchases (GWh)	10,827	10,673	12,810	13,873	14,283
Thermal Generation (GWh)	253	235	436	451	465
Sources of Supply for Domestic Load (GWh)	57,711	62,527	61,662	60,967	62,623
Average Mid-C Price (U.S.\$/MWh)	23.73	21.45	29.23	33.52	35.80
Average Natural Gas Price at Sumas (U.S.\$/MMBTU)	3.51	2.95	3.62	4.01	4.21
<b>FINANCIAL:</b>					
Canadian Short-Term Interest Rates (%) <sup>4</sup>	1.29	1.30	1.39	2.10	2.98
Canadian Long-Term Interest Rates (%) <sup>4</sup>	2.74	2.23	3.26	4.08	5.08
Foreign Exchange Rate (U.S.\$:Cdn\$) <sup>4</sup>	0.9895	1.0037	1.0119	1.0113	1.0055

## Notes:

<sup>1</sup> Economic assumptions, based on calendar year, from Government's First Quarter Report September 2012.

<sup>2</sup> Includes the impact of Demand-Side Management programs.

<sup>3</sup> Includes surplus sales volume.

<sup>4</sup> Fiscal 2012 from Bloomberg; three months rates for short term and 10 years for long term. Fiscal 2013 to fiscal 2016, financial assumptions from Ministry of Finance, October 2012.

## SENSITIVITY ANALYSIS

The following table shows the effect on earnings based on changes in some key variables. The analysis is based on business conditions and production volumes forecast for fiscal 2014. Each separate item in the sensitivity analysis assumes the others are held constant. While these sensitivities are applicable to the period and magnitude of changes on which they are based, they may not be applicable in other periods, under other economic circumstances or greater magnitude of changes.

The volatility between BC Hydro's plan and actual results are mostly mitigated through the use of BCUC-approved regulatory deferral accounts.

Factor	Change	Approximate change in earnings before regulatory deferral account transfers (in millions)
Hydro Generation (GWh) <sup>1</sup>	+/- 1%	15
Electricity trade margins	+/- 10%	20
Interest rates	+/- 1%	50
Exchange rates (US/ CDN)	\$0.01	5
Weather	1°C change in average temperature	20

<sup>1</sup> Assumes a change in hydro generation is offset by corresponding change in energy imports. (i.e. increase in hydro generation is offset by decrease in energy imports.)

BC Hydro reports on actual performance in annual reports and provides updated forecasts each year in its Service Plan.

# CAPITAL EXPENDITURES SUMMARY

BC Hydro is refurbishing its heritage assets to ensure system reliability, and undertaking new projects to meet future electricity demand in B.C. These projects span the entire system, and provide economic and business development opportunities in different communities and regions across the province.

BC Hydro's forecast capital expenditures are based on an Enterprise-Wide Capital Prioritization Framework that uses a risk-based methodology to prioritize capital investments across the company. BC Hydro classifies capital expenditures as either sustaining capital or growth capital:

- Many of BC Hydro's assets were built before 1970—over 40 years ago—and the aging and deteriorating state of portions of BC Hydro's system needs to be addressed. Sustaining capital is required to meet targeted levels of customer and supply reliability. It includes expenditures to ensure the continued availability and reliability of generation, transmission and distribution facilities. It also includes expenditures to support the business, such as vehicles and information technology. Large sustaining capital projects include the John Hart Generating Station Replacement and Ruskin Dam and Powerhouse Upgrade projects.
- Growth capital is required to meet customer load growth and other business investments. B.C.'s electricity demand is expected to increase significantly over the next 20 years due to economic expansion, population growth and the increased use of, or conversion to, electricity. Growth capital expenditures relate to the expansion of existing generation assets as well as expansion and reinforcement of the transmission and distribution system. Projects include the Northwest Transmission Line, the Interior to Lower Mainland Transmission Project, the addition of generating capacity by adding a sixth unit at Revelstoke, and a fifth and sixth unit at Mica.

CAPITAL EXPENDITURES <sup>1</sup> (\$ MILLIONS)	ACTUAL F2012 <sup>2</sup>	PRELIM. ACTUAL F2013 <sup>3</sup>	FORECAST F2014 <sup>3</sup>	FORECAST F2015 <sup>3</sup>	FORECAST F2016 <sup>3</sup>
Sustaining	1,069	1,009	1,028	1,449	1,640
Growth	848	920	1,003	996	817
<b>TOTAL CAPITAL PLAN</b>	<b>1,917</b>	<b>1,929</b>	<b>2,031</b>	<b>2,445</b>	<b>2,457</b>
Generation	476	421	513	755	935
Transmission	582	758	860	967	827
Distribution	405	309	302	385	450
Smart Metering & Infrastructure Program (SMI)	234	258	123	59	16
Properties, Technology and Other	220	183	234	279	229
<b>TOTAL BC HYDRO CAPITAL FORECAST</b>	<b>1,917</b>	<b>1,929</b>	<b>2,031</b>	<b>2,445</b>	<b>2,457</b>

<sup>1</sup> Table may not add due to minor rounding.

<sup>2</sup> Fiscal 2012 Actuals is reported based on Canadian GAAP before the transition to International Financial Reporting Standards (IFRS).

<sup>3</sup> Fiscal 2013–fiscal 2016 Forecast is based on prescribed accounting standards that reflect IFRS, and apply United States Financial Accounting Standards Board Accounting Standards Codification 980 (Regulated Operations).

Capital expenditures in the above table do not include construction costs related to the Site C project. Site C is undergoing a cooperative environmental assessment process by federal and provincial regulatory agencies and will include a joint review panel. The Site C project will require an environmental certification, other regulatory approvals and permits, as well as a final decision before it can proceed to construction. In addition, the Crown has a duty to consult and, where appropriate, accommodate Aboriginal groups. The completion of the environmental assessment process is expected to be in the fall of 2014. Construction costs of \$975 million are expected for the fiscal 2015 to fiscal 2016 period assuming the project proceeds to construction. This estimate is subject to change as planning and implementation of procurement for Site C progresses. Site C costs prior to construction are captured within the Site C Regulatory Account.



## PLANNED PROJECTS OVER \$50 MILLION

BC Hydro has planned for the following projects, each with capital costs expected to exceed \$50 million, listed according to targeted completion date. Some of the projected cost ranges may be large, particularly for projects still in Definition Phase, as scope, final costs and completion dates are still to be determined. These projects have been approved by the Board of Directors.

<b>COLUMBIA VALLEY TRANSMISSION PROJECT (CVT)</b>	Oct 2012 In-Service	\$112 Total cost (\$ millions) <sup>1</sup>	\$112 LTD cost <sup>2</sup> (\$ millions)
Constructed a new 230 kV transmission line from the existing Invermere substation to a new substation (called Kicking Horse) built on the west side of the Columbia River near the town of Golden; constructed a new 69 kV transmission line between the new Kicking Horse substation and the existing Golden substation; expanded Golden and Invermere substations and modified the Cranbrook substation—all to meet load growth in the Columbia Valley area. CVT project is now in close out phase.			

<b>STAVE FALLS SPILLWAY GATE REPLACEMENT</b>	Mar 2013 In-Service	\$46 Total cost (\$ millions) <sup>1</sup>	\$46 LTD cost <sup>2</sup> (\$ millions)
Upgraded the spillway gates <sup>3</sup> at the Stave Falls dam to increase public and employee safety and ensure the gates meet flood discharge reliability requirements.			

<b>SMART METERING &amp; INFRASTRUCTURE PROGRAM</b>	F2015 Targeted completion	\$840-930 <sup>4</sup> Total cost (\$ millions) <sup>1</sup>	\$583 LTD cost <sup>2</sup> (\$ millions)
The Smart Metering and Infrastructure Program (SMI) includes the installation of 1.9 million smart meters in homes and businesses across the province, optional conservation tools, an advanced telecommunications infrastructure to support electricity system management and customer applications, and information technology to support customer billing, load forecasting and outage management systems.			
The SMI Program plays a key role in modernizing BC Hydro's electricity grid. All customers will benefit from more choice and control over their electricity usage and operational efficiencies.			

<b>VANCOUVER CITY CENTRAL TRANSMISSION (VCCT)</b>	F2014 Targeted completion	\$160-201 Total cost (\$ millions) <sup>1</sup>	\$138 LTD cost <sup>2</sup> (\$ millions)
Build an enclosed 230/12 kV substation in the Mt. Pleasant area of Vancouver and two new underground 230 kV transmission lines connecting the new substation to the existing transmission network to serve growing loads in the Mt. Pleasant/False Creek area and maintain a reliable supply of electricity to other areas of Vancouver.			

<b>MICA SF<sub>6</sub> GAS INSULATED SWITCHGEAR (GIS) REPLACEMENT PROJECT</b>	F2014 Targeted completion	\$199 Total cost (\$ millions) <sup>1</sup>	\$140 LTD cost <sup>2</sup> (\$ millions)
Replace the switchgear system at the Mica Generating Station to ensure the reliability of this key generating station and reduce SF <sub>6</sub> (a greenhouse gas) leakage. The switchgear system uses 500 kV circuits to conduct the energy from the Mica underground powerhouse to the surface, where it transitions to transmission lines.			

<b>SEYMOUR ARM SERIES CAPACITOR STATION (SASC)</b>	F2015 Targeted completion	\$49-58 Total cost (\$ millions) <sup>1</sup>	\$13 LTD cost <sup>2</sup> (\$ millions)
Construct a 500 kV series capacitor station adjacent to the existing transmission lines 5L71 and 5L72, which run between Mica Generating Station and the Nicola Substation near Merritt. The capacitor station will increase the transmission capacity of the lines and allow the Mica Generating Station to securely deliver its full station output with the new generating units 5 and 6 in place.			

<b>DAWSON CREEK/CHETWYND AREA TRANSMISSION (DCAT)</b>	F2015 Targeted completion	\$220-255 Total cost (\$ millions) <sup>1</sup>	\$24 LTD cost <sup>2</sup> (\$ millions)
The project will expand the Peace Region 230kV transmission system to the Dawson Creek-Chetwynd Area to supply the high area load growth. The solution will include the construction of new 230kV lines between Dawson Creek (DAW) and Bear Mountain (BMT), and from BMT to a new station called Sundance (SLS), located approximately 19 km east of Chetwynd.			

<b>NORTHWEST TRANSMISSION LINE PROJECT (NTL)</b>	F2015 Targeted completion	\$736-746 Total cost (\$ millions) <sup>1</sup>	\$340 LTD cost <sup>2</sup> (\$ millions)
Construct an approximately 340 km, 287 kV transmission line between Skeena Substation near Terrace and a new substation to be built near Bob Quinn Lake to ensure a reliable supply of clean power to potential industrial developments in the area; provide a secure interconnection point for clean generation projects; and potentially help certain northwest communities access their power from the electricity grid rather than diesel generators.			
<i>*Total cost range represents the gross cost of the project and has not been netted for contributions, which total \$220 million from the Federal Government and a customer. The LTD cost has not been netted for \$23.4 million in contributions received from the Federal Government.</i>			

<sup>1</sup> The capital expenditure amounts are presented to reflect the impact of IFRS and do not include dismantling or asset retirement costs.

<sup>2</sup> Life to date (LTD) costs to March 31, 2013.

<sup>3</sup> Spillway gates control the amount of water that can be discharged from the reservoir. They are generally used in times of flood to pass high inflows.

<sup>4</sup> Smart Metering & Infrastructure Program amount includes both capital costs and operating expenditures subject to regulatory deferral.

## CAPITAL EXPENDITURES SUMMARY

<b>INTERIOR TO LOWER MAINLAND PROJECT (ILM)</b>	<b>F2015</b> Targeted completion	<b>\$690-725</b> Total cost (\$ millions) <sup>1</sup>	<b>\$251</b> LTD cost <sup>2</sup> (\$ millions)
Construct a new 500 kV transmission line, approximately 255 km in length, between the Nicola Substation near Merritt and the Meridian Substation in Coquitlam and build a new series capacitor station at Ruby Creek near Agassiz to help meet domestic load growth in the Lower Mainland.			

<b>MERRITT AREA TRANSMISSION PROJECT (MAT)</b>	<b>F2015</b> Targeted completion	<b>\$58-66</b> Total cost (\$ millions) <sup>1</sup>	<b>\$5</b> LTD cost <sup>2</sup> (\$ millions)
Construct a new 138 kV radial transmission line from the existing Highland Substation to a new substation in Merritt to meet the increased demand for power in the Merritt area.			

<b>UPPER COLUMBIA CAPACITY ADDITIONS AT MICA—UNITS 5 &amp; 6</b>	<b>F2015–F2016</b> Targeted completion	<b>\$627-714</b> Total cost (\$ millions) <sup>1</sup>	<b>\$284</b> LTD cost <sup>2</sup> (\$ millions)
Install two additional 500 MW generating units into existing turbine bays at the Mica Generating Station. The new units are similar to the four existing units, but with more efficient turbines. Includes construction of a series capacitor station located near the mid-point on the existing Mica-Nicola 500kV transmission lines.			

<b>HUGH KEENLEYSIDE SPILLWAY GATE RELIABILITY UPGRADE</b>	<b>F2016</b> Targeted completion	<b>\$116-123</b> Total cost (\$ millions) <sup>1</sup>	<b>\$45</b> LTD cost <sup>2</sup> (\$ millions)
Upgrade the spillway gates <sup>3</sup> at the Hugh Keenleyside Dam to increase public and employee safety and ensure the gates meet flood discharge reliability requirements.			

<b>G.M. SHRUM UNITS 1 TO 5 TURBINE REPLACEMENT</b>	<b>F2016</b> Targeted completion	<b>\$197-272</b> Total cost (\$ millions) <sup>1</sup>	<b>\$70</b> LTD cost <sup>2</sup> (\$ millions)
Replace the turbines for Units 1 to 5 to reduce the risk of runner failure, decrease maintenance costs and improve operating efficiency.			

<b>ISKUT EXTENSION PROJECT</b>	<b>F2016</b> Targeted completion	<b>\$167-180</b> Total cost (\$ millions) <sup>1</sup>	<b>\$0</b> LTD cost <sup>2</sup> (\$ millions)
Construction of a 92 km, 287 kV transmission extension, plus a 16 km distribution line from Bob Quinn substation. The transmission line would terminate at a new substation at Tatooga Lake and the 16 km, 25 kV distribution line continuing to Iskut.			
<i>*The total cost range represents the gross cost of the project and has not been netted to reflect contributions of \$39.6 million from a customer.</i>			

<b>SURREY AREA SUBSTATION PROJECT</b>	<b>F2016</b> Targeted completion	<b>\$76-94</b> Total cost (\$ millions) <sup>1</sup>	<b>\$1</b> LTD cost <sup>2</sup> (\$ millions)
Construct a new 200 MVA 230/25 kV substation in the Fleetwood area of Surrey. The supply to the station will be from circuit 2L75 and will allow for increased station capacity of 400 MVA.			

<b>RUSKIN DAM SAFETY AND POWERHOUSE UPGRADE</b>	<b>F2018</b> Targeted completion	<b>\$626-748</b> Total cost (\$ millions) <sup>1</sup>	<b>\$145</b> LTD cost <sup>2</sup> (\$ millions)
This project upgrade will meet modern safety and seismic requirements and replace the powerhouse equipment, which is in poor condition. It is expected to take six years to complete and includes: reinforcement of the right bank; seismic upgrade of the dam and water intakes; powerhouse upgrades; and, relocation of the switchyard. Once completed, the upgraded facility will be reliable and safe and will produce enough electricity to serve more than 33,000 homes.			

<b>JOHN HART GENERATING STATION REPLACEMENT</b>	<b>F2019</b> Targeted completion	<b>\$1,004-1,149</b> Total cost (\$ millions) <sup>1</sup>	<b>\$81</b> LTD cost <sup>2</sup> (\$ millions)
Replace the existing six-unit 126 MW generating station (in operation since 1947) and add integrated emergency bypass capability to ensure reliable long-term generation and to mitigate earthquake risk and environmental risk to fish and fish habitat. In February 2013, BC Hydro received a Certificate of Public Convenience and Necessity from the BCUC for the project.			

<b>SITE C CLEAN ENERGY PROJECT</b>	<b>2023*</b> Targeted completion	<b>\$7,900</b> Total cost (\$ millions) <sup>1</sup>	<b>\$258</b> (deferred capital) LTD cost <sup>2</sup> (\$ millions)
Site C is a proposed third dam and 1,100 megawatt hydroelectric generating station on the Peace River approximately seven kilometres southwest of Fort St. John. It would be capable of producing approximately 5,100 gigawatt-hours of electricity annually and would deliver firm electricity with a high degree of flexibility. The Site C project is currently in Stage 3—environmental and regulatory review, which includes an independent federal and provincial environmental assessment. Subject to environmental certification, construction would take about seven years and Site C would provide clean, reliable power to B.C. for more than 100 years.			
<i>*Planned in-service date for all units. This timeline reflects the project's current regulatory schedule and is subject to change based on a review of the construction schedule.</i>			

<sup>1</sup> The capital expenditure amounts are presented to reflect the impact of IFRS and do not include dismantling or asset retirement costs.

<sup>2</sup> Life to date (LTD) costs to March 31, 2013.

<sup>3</sup> Spillway gates control the amount of water that can be discharged from the reservoir. They are generally used in times of flood to pass high inflows.

## CONTEMPLATED PROJECTS OVER \$50 MILLION

BC Hydro is contemplating the following projects over \$50 million commencing during fiscal 2014–fiscal 2016, listed in alphabetical order. These projects are in the early Identification or Definition Phases; scope, final costs and completion dates are still to be determined. These projects have not yet been approved by the Board of Directors.

### BIG BEND SUBSTATION

The South Burnaby, Big Bend area requires a new greenfield, 100 MVA, 69/12 kV Substation to meet local residential and commercial load growth.

### BRIDGE RIVER 2 UNITS 5 AND 6 REHABILITATION

Restore Bridge River 2 Units 5 and 6 (commissioned over 60 years ago) to “as new condition.” This would address known major component deficiencies and enable the units to run at full capacity (currently derated from 70 MW to 60 MW).

### CHEAKAMUS UNIT 1 AND UNIT 2 GENERATOR REPLACEMENT

Replace the two units at Cheakamus generating station (commissioned over 50 years ago) and ancillary equipment to address the condition and known deficiencies of major components.

### DOWNTOWN VANCOUVER REDEVELOPMENT PROGRAM

Upgrade and expand the transmission and distribution network serving downtown Vancouver over the next 20 to 30 years. The project includes the addition of a new transmission cable coming into the downtown core, the construction of new substations, and the refurbishment and/or replacement of the existing substations. The project also includes converting the existing distribution system from a 12 kV dual radial system to a 25 kV open-loop system to feed off the new transmission system.

### G.M. SHRUM G1-G10 CONTROL SYSTEM UPGRADE

The existing legacy controls for GMS U1-10 do not meet BC Hydro’s current standards. Unit 1 to 10 controls are becoming unreliable, have increased maintenance requirements, are difficult to troubleshoot and are lacking spare parts.

### JOHN HART DAM SEISMIC UPGRADE

Upgrade the John Hart Dam to reliably withstand moderate to severe earthquake loadings and meet normal operations criteria post-earthquake.

### LA JOIE SEISMIC IMPROVEMENTS

Upgrade the La Joie Dam (a rock fill structure completed in 1955) to address ongoing seepage and seismic withstand deficiencies, ensure dam and public safety and maintain reliability of supply.

### LONG BEACH AREA TRANSMISSION (LBAR)

Expansion of Long Beach and Great Central Lake substations with two new transformers at each and capacitor banks at LBH to support the load growth and provide voltage support in the area.

### PEACE REGION ELECTRIC SUPPLY

Increase transmission capacity to the South Peace area by providing a second 230 kV supply to Dawson Creek in response to the significant load growth in the area, mainly from the gas production industry.

### PRINCE GEORGE TERRACE CAPACITY UPGRADE

The Prince George to Terrace Capacitors project will increase the capacity of the 500kV circuit supplying the north coast areas. This will increase the transfer capacity by approximately 60 per cent through the addition of reactive compensation. This additional capacity is required to provide capacity for industrial loads expected to interconnect to the Northwest Transmission Line (NTL). The timing of the PGTC project is linked to the interconnection of Apache’s Kitimat Liquefied Natural Gas (LNG) plant (phase 2) that is scheduled for March 2016.

### REVELSTOKE UNIT 6 INSTALLATION

Supply and install an approximately 500 MW unit in the existing empty Unit 6 bay at Revelstoke Generating station to add capacity to the BC Hydro system.

### W.A.C. BENNETT DAM IMPROVEMENTS

Improve BC Hydro’s ability to manage the performance risks at W.A.C. Bennett Dam by gathering, reviewing, and updating all existing information on the performance of the dam; along with the evaluation, development, and application of new technologies for monitoring and improvement of dam performance. Implement necessary upgrades to ensure ongoing safe performance of the embankment dam.

### W.A.C. BENNETT DAM RIP-RAP UPGRADE

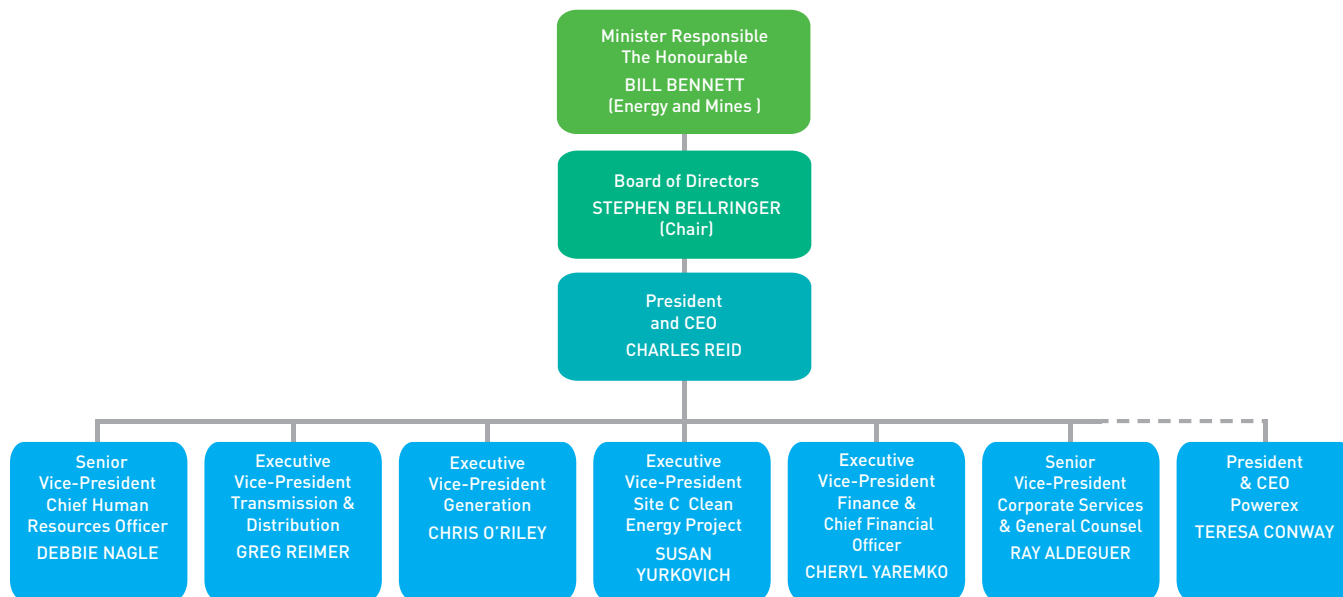
The W.A.C. Bennett Dam Rip-rap has functionally degraded since its completion in 1968. The project will rebuild the upstream slope to ensure there is adequate protection and shielding to the embankment dam from the wind generated waves.

# CORPORATE GOVERNANCE

## EXECUTIVE OF BC HYDRO

BC Hydro’s organizational structure is designed to ensure we deliver on our strategic objectives and the mandate of the *Clean Energy Act*; and facilitates coordination among business functions. BC Hydro regularly reviews and updates the governance framework to ensure business needs are met.

The following chart shows the current organizational structure of the Executive Team.



BC Hydro is committed to best practices in corporate governance. Strong corporate governance practices provide for greater public accountability and transparency.

BC Hydro’s practices and policies meet the “Best Practice Guidelines on Governance and Disclosure” for public sector organizations, which was issued by the B.C. Provincial Government in February 2005.

The governance framework is reviewed regularly to ensure it meets BC Hydro’s ongoing business needs, while being consistent with the government’s guidelines.

The links below provide further information about our Board of Directors and our Corporate Code of Conduct:

[http://www.bchydro.com/about/who\\_we\\_are/board\\_of\\_directors.html](http://www.bchydro.com/about/who_we_are/board_of_directors.html); and,

[http://www.bchydro.com/about/who\\_we\\_are/corporate\\_citizenship/code\\_of\\_conduct/corporate\\_governance.html](http://www.bchydro.com/about/who_we_are/corporate_citizenship/code_of_conduct/corporate_governance.html).

## BC HYDRO BOARD OF DIRECTORS

The BC Hydro Board of Directors oversees the conduct of business and supervises management, which in turn is responsible for the day-to-day operations of BC Hydro. Directors are appointed by the B.C. Cabinet to bring special skills and experience to the Board's deliberations.

**CHAIR:** Stephen Bellringer

**MEMBERS:** Kim Baird, Brad Bennett, Larry Blain, James Brown, James Hatton (appointed Jan. 17, 2013), John Knappett, Tracey McVicar, Janine North, John Ritchie

The Board's broad set of responsibilities includes:

- Ensuring there is a strategic and business planning process, and then reviewing, validating and endorsing a strategy for the Corporation and monitoring its implementation.
- Ensuring that effective controls and appropriate governance are in place as part of its oversight of management.
- Having a continuing understanding of the principal risks associated with the Corporation's business and ensuring that the appropriate processes and systems are in place to mitigate that risk.
- The Board acts in accordance with the Best Practices Guidelines Governance and Disclosure Guidelines for Governing Boards of B.C. Public Sector Organizations, which can be found at: [fin.gov.bc.ca/brdo/governance/index.asp](http://fin.gov.bc.ca/brdo/governance/index.asp). More information on the

<b>AUDIT AND FINANCE COMMITTEE*</b> CHAIR: Tracey McVicar MEMBERS: Larry Blain, Jamie Brown	<b>Purpose:</b> The Audit and Finance Committee assists the Board in fulfilling its obligations and oversight responsibilities relating to the audit process, financial reporting, information technology and telecommunications, the system of corporate controls and governance of the Corporation's pension plans. The Committee is also responsible for ensuring that principal risks associated with these issues are appropriately identified, monitored and managed.
<b>CAPITAL PROJECTS COMMITTEE*</b> CHAIR: John Ritchie MEMBERS: Brad Bennett, James Hatton, John Knappett	<b>Purpose:</b> The Capital Projects Committee assists the Board of Directors in fulfilling its obligations and oversight responsibilities relating to the Corporation's long-term capital plans, capital budgets and capital projects, including dam safety, aboriginal relations and negotiations, and transmission projects. The Committee is also responsible for ensuring that principal risks associated with these issues are appropriately identified, monitored and managed.
<b>CONSERVATION AND CLIMATE ACTION COMMITTEE*</b> CHAIR: Janine North MEMBERS: Kim Baird, James Hatton, Tracey McVicar	<b>Purpose:</b> The Conservation and Climate Action Committee assists the Board by monitoring and directing the environmental performance of the Corporation and monitoring and supporting the implementation of an energy conservation strategy as described in the BC Energy Plan. The Committee also provides guidance and direction to management and makes recommendations to the Board regarding initiatives and programs related to meeting the Corporation's environmental goals. The Committee is also responsible for ensuring that principal risks associated with these issues are appropriately identified, monitored and managed.
<b>CORPORATE GOVERNANCE COMMITTEE*</b> CHAIR: Brad Bennett MEMBERS: All Directors	<b>Purpose:</b> The Corporate Governance Committee is structured as a Committee of the Whole. This means that its membership includes all Directors. Nonetheless, the Committee has independent Terms of Reference and is responsible for ensuring that BC Hydro and its Board develops and implements an effective approach to corporate governance which enables the business and affairs of the Corporation to be carried out, directed and managed with the objective of enhancing shareholder value. The Committee is also responsible for ensuring that principal risks associated with these issues are appropriately identified, monitored and managed.
<b>EXECUTIVE COMMITTEE*</b> CHAIR: Stephen Bellringer MEMBERS: Kim Baird, Brad Bennett, Larry Blain, Janine North, Tracey McVicar, John Ritchie	<b>Purpose:</b> The Executive Committee 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.
<b>ENERGY PLANNING AND PROCUREMENT COMMITTEE*</b> CHAIR: Larry Blain MEMBERS: Brad Bennett, Janine North, John Ritchie	<b>Purpose:</b> The Energy Planning and Procurement Committee provides advice and direction to the Corporation on both its strategic direction relating to resource planning, export strategy, economic development and energy procurement activities, and its execution of related initiatives. In addition, the Committee provides advice and support to the Board Chair in his or her dealings with government pertaining to these issues. The Committee is also responsible for ensuring that principal risks associated with these issues are appropriately identified, monitored and managed.
<b>HUMAN RESOURCES AND SAFETY COMMITTEE*</b> CHAIR: Kim Baird MEMBERS: Janine North, Stephen Bellringer	<b>Purpose:</b> The Human Resources and Safety Committee assists the Board in fulfilling its obligations relating to human resources and compensation issues, related specifically to senior management and generally to the Corporation. The Committee also monitors safety performance. The Committee is also responsible for ensuring that principal risks associated with these issues are appropriately identified, monitored and managed.

\*The Board Chair is an ex-officio member of all committees.

# BC HYDRO SUBSIDIARIES

## POWEREX CORPORATION

Powerex Corp. is a wholly owned subsidiary of BC Hydro and a key participant in energy markets across North America, buying and supplying wholesale power, renewable energy, natural gas, ancillary services, and financial energy products and services. Established in 1988, its export, marketing and trade activities help optimize BC Hydro's electric system resources and provide significant economic benefits to British Columbia.

Powerex supports BC Hydro's electric system requirements through importing and exporting energy as required in addition to meeting its own trade commitments. Powerex also markets, on behalf of the Province, the Canadian Entitlement to the Downstream Benefits of the Columbia River Treaty.

The Chief Executive Officer (CEO) of Powerex reports directly to the Board of Directors of Powerex through the Chair of Powerex and works closely with the President & CEO of BC Hydro as a member of the Executive Team. The Chair of the Powerex Board, the Powerex CEO and BC Hydro's Chief Executive Officer, ensure the Board of BC Hydro is informed of Powerex's key strategies and business activities. Powerex's Directors are Larry Blain (Chair), Stephen Bellringer and James Brown.

Powerex operates in complex and volatile energy markets, which can cause net income in any given year to vary significantly. Over the previous five years, Powerex income has ranged from \$8 to \$244 million. Market and economic conditions, reduced BC Hydro system flexibility, income timing differences and the strength of the Canadian dollar can materially impact Powerex net income.

The Service Plan includes an annual net income from Powerex ranging from \$112 million to \$135 million in fiscal 2014 to fiscal 2016. Powerex net income amount may vary significantly year over year. For more information, visit [powerex.com](http://powerex.com).

## POWERTECH LABS INC.

Powertech Labs has operated as a separate commercial entity since their inception in 1979. It provides research and development, standards and certifications and technical services to the international energy community including BC Hydro. Powertech is internationally recognized as experts in their respective fields.

Powertech's Directors are John Knappett (Chair), Brenda Eaton, and Nancy Olewiler. Powertech's senior management includes President and CEO Don Stuckert and Managing Director, Raymond Lings.

Powertech's revenue in fiscal 2012 was \$27 million with a net income of \$2 million. The forecasted revenue for fiscal 2013 is \$29 million with a net income of \$2 million. The Service Plan includes annual net income from Powertech ranging from \$2 million for fiscal 2014 to \$4 million for fiscal 2016. For more information, visit [powertechlabs.com](http://powertechlabs.com).

## OTHER SUBSIDIARIES

BC Hydro has created a number of other subsidiaries to help it manage risk in developing projects and/or contracting with third parties. The Boards and management of these subsidiaries are made up of BC Hydro employees, who perform these duties without additional remuneration.

# APPENDIX A: PERFORMANCE MEASURES

BC Hydro relies on various data sources for relevant and accurate reporting of its Performance Measures. This includes, but is not limited to, internal financial records, external research findings, and association indexes. The Performance Measures listed in this Appendix have unique requirements for source data and accompanying considerations.

## SAFELY KEEP THE LIGHTS ON

DESCRIPTION OF PERFORMANCE MEASURES	RATIONALE/BENCHMARKING ACTIVITIES
<p><b>ZERO FATALITY AND SERIOUS INJURY</b> a “Level 1 injury incident” is one where there has either been a loss of life or the injury has resulted in a permanent disability (for which a disability pension has been received or is expected).</p>	<p>To underscore our commitment to ensuring no serious incidents occur, BC Hydro established the zero fatality or serious injury target. Both <b>Severity</b> and <b>AIF</b> metrics, as defined in the CEA Standard, are generally harmonized with the U.S. Occupational Safety and Health Administration Standards for safety statistics. BC Hydro benchmarks its safety performance against available Canadian Electricity Association (CEA) composite AIF and Severity results.</p>
<p><b>SEVERITY</b> is a standard Canadian Electricity Association (CEA) measure and is defined as the number of calendar days lost due to injury per 200,000 hours worked. The Severity metric does not include data on fatal incidents. One or two injuries can have a major impact on severity.</p>	
<p><b>ALL INJURY FREQUENCY (AIF)</b> is a standard CEA measure and is defined as the total number of employee Medical Aids and Disabling injuries occurring in the last 12 months per 200,000 hours worked. Medical Aid injuries are those where a medical practitioner has rendered services beyond the level defined as “first aid” and the employee was not absent from work after the day of the injury. Disabling injuries are those where the employee is absent beyond the day of injury.</p>	
<p><b>SAFETY TASKFORCE RECOMMENDATIONS IMPLEMENTATION</b> is the number of recommendations fully implemented and in sustainment (out of 20 total recommendations).</p>	



## SAFELY KEEP THE LIGHTS ON (CONTINUED)

DESCRIPTION OF PERFORMANCE MEASURES	RATIONALE/BENCHMARKING ACTIVITIES
<p><b>CAIDI</b> is the average interruption in hours per interrupted customer.</p>	<p>BC Hydro's targets are set against normalized results, which exclude major uncontrollable events.</p>
<p><b>SAIFI</b> is a measure of how many sustained interruptions (longer than one minute) an average customer will experience over the course of a year.</p>	<p>Annually, BC Hydro participates in Transmission and Distribution benchmarking surveys conducted by the First Quartile Consulting and the Distribution Service Continuity survey conducted by the Canadian Electricity Association.</p>
<p><b>CEMI-4</b> is the percentage of customers experiencing four or more outages over the course of a fiscal year.</p>	<p>The data gathered to measure the three reliability measures is collected and validated in a process that starts with operational staff who record the start and end time of each power outage as well as the cause. Based on the location of the outage, the number of customers impacted is calculated automatically. This information is collected in a centralized database that allows outage records to be reviewed by managers each day to ensure accuracy. Outages that impact a significant number of customers or involve lengthy repair times require a formal outage report to be written by an engineer and approved by management. On a monthly basis, the most significant outages are reviewed to ensure accuracy of data, effectiveness of restoration actions, and to better understand vulnerabilities. As a second check for accuracy, trends in recent performance measures are compared against past results and forecast performance. Senior management reviews the performance measures monthly and takes action when actual performance deviates from forecast.</p> <p>Operational staff are sometimes limited in their ability to capture the exact timing and number of customers restored when they are busy responding to large storms; however, since major uncontrollable events are excluded from the performance calculations, these errors have minimal impact on the reported measures.</p> <p>As BC Hydro completes the implementation of its Smart Metering Initiative, most of this outage data will be collected from the smart meters and the performance measures will be calculated automatically.</p> <p>In fiscal 2012, BC Hydro's reliability performance is ranked in the fourth quartile for both normalized <b>CAIDI</b> and <b>SAIFI</b> using IEEE 2.5 Beta method and in second and third quartiles for actual <b>CAIDI</b> and <b>SAIFI</b> respectively. <b>CEMI</b> is not benchmarked externally as utilities are at varying stages in their development of this metric.</p> <p>Reliability is a challenge given the size of the service area, predominantly overhead distribution system, abundance of trees and rough terrain. BC Hydro has two to three times as many trees per overhead pole kilometre as the North American average, and trees, together with adverse weather, account for half of the annual lost customer hours. These constraints significantly affect our ability to achieve higher levels of reliability while balancing the needs to remain as one of the lowest cost service providers in North America.</p>
<p><b>WINTER GENERATION AVAILABILITY FACTOR (WGAF)</b> is a percentage of Heritage Asset units in the system greater than 20 MW and available to generate electricity (total hours available for service/total hours) excluding certain planned capital and maintenance outages, during the critical peak-load period of November 15 to February 15.</p>	<p>BC Hydro focuses on <b>WGAF</b> to manage the availability of generation during the critical winter period when customer loads are most likely to reach their annual peaks, and ensure all BC Hydro generating units will remain in-service barring a forced outage or urgent maintenance. BC Hydro is not aware of any external benchmarks suitable for comparison with the <b>WGAF</b>, and instead uses historical trend information to track performance.</p>

## SUCCEED THROUGH RELATIONSHIPS

DESCRIPTION OF PERFORMANCE MEASURES	RATIONALE/BENCHMARKING ACTIVITIES
<p><b>CUSTOMER SATISFACTION (CSAT)</b> is the percentage of customers—residential, small and medium-sized businesses and key accounts—who are satisfied or very satisfied with BC Hydro (as measured on a four-point verbal scale) in five equally weighted areas:</p> <ul style="list-style-type: none"> <li>• Providing reliable electricity;</li> <li>• Value for money;</li> <li>• Commitment to customer service;</li> <li>• Acting in the best interests of British Columbians; and</li> <li>• Efforts to communicate with customers and communities.</li> </ul>	<p>BC Hydro maintains a minimum threshold target of 85 per cent for CSAT to ensure it has strong customer support. BC Hydro benchmarks against leading regional service providers and other electric utilities in an effort to better understand our performance relative to customer perceptions and understand what is needed to be a leader in industry and the province. Benchmarking results to date demonstrate BC Hydro compares well against both non-electric utility service providers and other electric utilities.</p>
<p><b>BILLING ACCURACY</b> is the percentage of invoices that are accurately calculated based on the customer's consumption and do not require adjustment or rebilling.</p>	<p>This is a core expectation of customers. BC Hydro has therefore set targets to deliver consistently high performance. Billing accuracy is affected by items such as incorrect meter reads and various adjustments such as correction to rate applied.</p>
<p><b>FIRST CALL RESOLUTION</b> is the percentage of customer calls that are resolved during the first contact with a call centre agent, without the need for additional investigation or follow-up.</p>	<p>This is a measure that assesses customer service operations as a whole in terms of accurate and timely information flow, agent capability and quality, and a satisfying customer experience at a transaction level.</p>
<p>The Canadian Council for Aboriginal Relations' <b>PROGRESSIVE ABORIGINAL RELATIONS (PAR)</b> program is an externally verified certification program that measures an organization's success in the areas of Aboriginal employment, business development, capacity development and community engagement. The gold-level standard is an indication of sustained excellence in all four areas.</p>	<p>BC Hydro attained a gold-level designation in 2012. BC Hydro must maintain excellence in Aboriginal relations over the next three years in order to attain a gold-level designation in the next certification scheduled for 2015.</p>

## MIND OUR FOOTPRINT

DESCRIPTION OF PERFORMANCE MEASURES	RATIONALE/BENCHMARKING ACTIVITIES
<p><b>DEMAND-SIDE MANAGEMENT (DSM)</b> reflects the cumulative rate of annual electricity savings resulting from DSM activities including programs, codes and standards and rate structures. The new programs and reported savings began in fiscal 2008, following the 2007 BC Energy Plan.</p>	<p>BC Hydro developed its annual cumulative DSM targets as part of long-term DSM and resource planning using the results from a Conservation Potential Review and research related to other DSM tools as benchmarks for achievable savings. DSM targets are lower than those in BC Hydro's previous Service Plan due to changes since that time among codes and standards, conservation rate structures and selected DSM programs.</p> <p>Note that fiscal 2011 actual savings are 10 GWh/yr less than reported in BC Hydro's 2011 Annual Report due to the removal of savings from substation voltage optimization stemming from a decision made after issuing the 2011 Annual Report. The fiscal 2012 target is 200 GWh/yr less than reported in BC Hydro's 2011 Annual Report due to a change in the methodology for estimating savings from conservation rate structures and the removal of savings from substation voltage optimization and in-home devices.</p>
<p>The <b>ELECTRICITY PRODUCTION GHG EMISSIONS</b> measure includes carbon dioxide equivalent (CO<sub>2</sub>e) emissions from stationary combustion for electricity generation (owned natural gas plants on the integrated grid, purchased electricity from natural gas and biomass IPPs, and diesel generation in the non-integrated areas) and fugitive SF<sub>6</sub> losses.</p>	<p>Electricity Production GHG Emissions are reported by calendar year rather than fiscal year to ensure consistency with GHG emissions reports filed under the <i>Canadian Environmental Protection Act, 1999</i> and the B.C. <i>Reporting Regulation</i>.</p> <p>The Electricity Production GHG Emissions targets are based on the forecasted need to run the generating stations, taking into account hydrology, reliability, system needs and market conditions, including the expected price of carbon emissions.</p> <p>BC Hydro compares its Electricity Production GHG Emissions performance against published emission data from other Canadian hydroelectric utilities and from the Canadian Electricity Association (CEA).</p>
<p>The <b>CARBON NEUTRAL PROGRAM EMISSIONS</b> measure includes carbon dioxide equivalent (CO<sub>2</sub>e) emissions from BC Hydro's vehicle fleet, buildings (heating and cooling, and lighting) and paper use, in accordance with the Province's guidelines for public sector organizations.</p>	<p>Carbon Neutral Program Emissions are reported by calendar year rather than fiscal year to ensure consistency with GHG emissions reports filed under the B.C. Carbon Neutral Government Regulation. The Carbon Neutral Program Emissions targets are based on a forecast of emissions, taking into account emission reduction initiatives that are planned or underway.</p> <p>Under the B.C. Carbon Neutral Government Regulation, public sector organizations are required to report their emissions to the Province. BC Hydro will compare its results for the Carbon Neutral Program Emissions against other public sector organizations.</p>

## MIND OUR FOOTPRINT (CONTINUED)

DESCRIPTION OF PERFORMANCE MEASURES	RATIONALE/BENCHMARKING ACTIVITIES
<p>The <b>CLEAN ENERGY</b> measure represents a minimum threshold generation target in accordance with the B.C. Government's requirement that at least 93 per cent of electricity generation in the province be from clean or renewable resources—i.e., from biogas, biomass, energy recovery generation, geothermal, hydro, solar, tidal, wave, wind or other potential clean or renewable electricity sources recognized by the B.C. Government. Consistent with B.C. regulation, this measure does not include electricity to serve demand from facilities that liquefy natural gas for export by ship.</p>	<p>The <b>Clean Energy</b> target aligns with the objectives set forth in the 2010 <i>Clean Energy Act</i>. BC Hydro does not compare its results for this performance measure against other utilities.</p>

## MAINTAIN COMPETITIVE RATES

DESCRIPTION OF PERFORMANCE MEASURES	RATIONALE/BENCHMARKING ACTIVITIES
<p><b>COMPETITIVE RATES</b> measures BC Hydro's rates against other utilities across North America for three types of power classes:</p> <ul style="list-style-type: none"> <li>• A typical residential customer with an estimated monthly consumption of 1,000 kWh.</li> <li>• A medium customer with an estimated monthly consumption of 400,000 kWh.</li> <li>• A large customer with an estimated monthly consumption of 30,600 MWh.</li> </ul>	<p>Pursuant to Rate Comparison Regulation under the <i>Clean Energy Act</i>, issued on June 28, 2011, BC Hydro provides an Electricity Rate Comparison Annual Report to the Minister of Energy and Mines and to the BCUC. This is based on survey information taken from the Hydro-Quebec report, Comparison of Electricity Prices in Major North American Cities, which compiles monthly bill and average prices for 12 Canadian utilities and 10 U.S. utilities.</p>
<p><b>NET INCOME</b> equals net income as reported in BC Hydro's financial statements.</p>	<p>BC Hydro bases Net Income targets on the latest forecast. The targets reflect expected rate increases required to enable BC Hydro to cover costs and earn its allowed return on equity.</p>
<p><b>OPERATING COSTS</b> are defined as personnel, materials and external services expenses included in income, that are incurred in the day to day operation of BC Hydro's electric utility, net of recoveries, capitalized costs and reclassification adjustment.</p>	<p>BC Hydro regards Operating Costs as an important measure for benchmarking and to evaluate its prudence of expenditures.</p>
<p><b>DEBT TO EQUITY</b> is defined as the ratio of debt to the sum of the total of debt and equity.</p>	<p>This is of interest to sector analysts, rating agencies, and finance providers. It is commonly used in the financial community. It measures the leverage in the company and is used in the regulation of electricity companies in some jurisdictions.</p>

## FOSTER ECONOMIC DEVELOPMENT

DESCRIPTION OF PERFORMANCE MEASURES	RATIONALE/BENCHMARKING ACTIVITIES
<p>BC Hydro <b>CAPITAL SPENDING IN BRITISH COLUMBIA</b> is the total capital spend adjusted for estimated spend within British Columbia.</p>	<p>Investments by BC Hydro enable economic growth across the province. The performance measure for economic development reflects these investments in infrastructure. The estimated economic impact of BC Hydro's activities is periodically benchmarked against other industries in B.C.</p>

## ENGAGE A SAFE AND EMPOWERED TEAM

DESCRIPTION OF PERFORMANCE MEASURES	RATIONALE/BENCHMARKING ACTIVITIES
<p>The <b>EMPLOYEE SUSTAINABLE ENGAGEMENT SCORE</b> is BC Hydro's annual measure of employee engagement through an all-employee survey. In fiscal 2013, BC Hydro and its external survey provider, Towers Watson, updated the survey tool to provide an efficient process that could be administered annually based on leading practice. New baseline measures and targets were set in anticipation of the fiscal 2014 survey.</p>	<p>The new sustainable engagement score indicates the level to which employees connect with the organization, whether or not they feel the company provides the tools and resources to work effectively, and whether or not they feel that the company cares about their personal well-being. BC Hydro's results are benchmarked against a number of Towers Watson indicators, including their Global Utilities Norm &amp; their Canada National Norm.</p> <p>Our target is to meet or exceed that score annually; therefore, when we get the 2013 Utilities Index score and our 2013 score we want ours to be the same or higher.</p>

# APPENDIX B: SERVICE PLAN DIRECTIVES AND ACTION RESPONSES—FISCAL 2014

The B.C. Government’s Letter of expectations (GLE) describes the relationship between BC Hydro and the Province, and sets out objectives that the Province wishes BC Hydro to achieve. In accordance with the Crown Corporation Service Plan Guidelines, Appendix B outlines the direction for fiscal 2014 and BC Hydro’s action responses as outlined in the Specific Corporate Accountability section of the GLE.

DIRECTIVE	ACTION RESPONSE
BC Hydro will work to implement the Integrated Resource Plan approved by the Shareholder.	BC Hydro will file the Final Draft Integrated Resource Plan submission with government August 2013.
Consistent with the recommendations of the BC Hydro Review Panel, BC Hydro will continue to work to find cost savings and maintain competitive rates by efficiently and responsibly managing the business.	BC Hydro has committed to implementing all of the Panel’s recommendations and is providing regular progress reports to the Shareholder. We are making good progress on all of the recommendations. BC Hydro completed 44 of the 50 recommendations by the end of March 2013. By the end of fiscal 2014, BC Hydro is expecting to complete the remaining six recommendations.
Work in collaboration with the Shareholder to ensure that adequate supplies of electricity are available to support new investments in liquefied natural gas and mines, consistent with <i>Canada Starts Here: The BC Jobs Plan</i> .	BC Hydro will work with the Shareholder to ensure an adequate and reliable source of electricity for new investments in liquefied natural gas and mines.
BC Hydro will advance Site C through the environmental assessment process, including consultation and input by the public, Aboriginal groups, communities in the region, property owners and stakeholders. BC Hydro-led consultations for Site C are proceeding to ensure regulatory timelines are met, and will be coordinated with other Natural Resource Sector consultations being undertaken by the Shareholder.	The Site C Clean Energy Project is undergoing a cooperative environmental assessment process by federal and provincial regulatory agencies, which will include an independent joint review panel. The environmental assessment process includes multiple opportunities for participation by the public, Aboriginal groups, governments, and other interested stakeholders.

Back Cover Photo: Cheakamus Lake in Garibaldi Provincial Park (and BC Hydro’s Cheakamus watershed) towards the mountains of the McBride Range. Photographer Scott Weston.

## HOW TO CONTACT BC HYDRO:

### Lower Mainland

604 BCHYDRO (604 224 9376)

### Outside Lower Mainland

1 800 BCHYDRO (1 800 224 9376)

### Head Office

333 Dunsmuir Street

Vancouver, B.C. V6B 5R3

[bchydro.com](http://bchydro.com)

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