BC Hydro and Power Authority

2021/22 – 2023/24
Service Plan

April 2021

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Board Chair's Accountability Statement

The 2021/22 – 2023/24 BC Hydro Service Plan was prepared under the Board's direction in accordance with the *Budget Transparency and Accountability Act*. The plan is consistent with government's strategic priorities and fiscal plan. The Board is accountable for the contents of the plan, including what has been included in the plan and how it has been reported. The Board is responsible for the validity and reliability of the information included in the plan.

All significant assumptions, policy decisions, events and identified risks, as of February 28, 2021 have been considered in preparing the plan. The performance measures presented are consistent with the *Budget Transparency and Accountability Act*, BC Hydro's mandate and goals, 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.

Doug Allen
Board Chair

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Strategic Direction and Alignment with Government Priorities

In 2021/22, British Columbians continue to face significant challenges as a result of the global COVID-19 pandemic. Recovering from the pandemic will require focused direction, strong alignment and ongoing engagement between public sector organizations and the Government of British Columbia. The government has identified five foundational principles that will inform each Crown agency's policies and programs and contribute to COVID recovery: putting people first, lasting and meaningful reconciliation, equity and anti-racism, a better future through fighting climate change and meeting our greenhouse gas commitments, and a strong, sustainable economy that works for everyone.

BC Hydro is one of the largest electric utilities in Canada and is publicly owned by the people of British Columbia. We generate and provide electricity to 95 percent of B.C.'s population and serve over four million people. The electricity we generate and deliver to customers throughout the province powers our economy and quality of life.

As a provincial Crown Corporation, BC Hydro reports to the Provincial Government through the Minister of Energy, Mines and Low Carbon Innovation. Government's expectations are expressed through the following legislation and policy:

- The *Hydro and Power Authority Act*
- The *Utilities Commission Act*
- The *BC Hydro Public Power Legacy and Heritage Contract Act*
- The *Clean Energy Act* (CEA)
- CleanBC

Our mission is: we are here to safely provide our customers with reliable, affordable, clean electricity. We have set out a three-year plan with strategies, performance measures and targets, aligned with the priorities in the B.C. Government's Mandate Letter to BC Hydro, to fulfill our mission on behalf of our customers and the Province.

Climate change, technological advances and evolving customer energy needs continue to transform our business. While we navigate these ongoing developments, we have the important responsibility of keeping electricity rates affordable for our customers and funding necessary investments in our system to ensure British Columbians continue to receive reliable and clean electricity.

We are implementing the outcomes from the Comprehensive Review of BC Hydro to strategically position BC Hydro for long-term success, while meeting the Province's climate goals and keeping rates affordable for British Columbians. To help advance the Province's CleanBC climate and economic development objectives, we are encouraging our customers to use our clean and reliable electricity to power their homes, vehicles and businesses in order to reduce greenhouse gas (GHG) emissions. We are also advancing affordability initiatives to help our customers save money on their electricity bills and continuing to focus on making it easier for our customers to do business with us.

To ensure sustained economic and social benefits for customers, we manage our capital portfolio with an emphasis on cost consciousness, respect for the environment and communities in which we work, and in particular, strengthening our relationships with Indigenous communities.

BC Hydro will continue making investments to expand and maintain the system to meet our customers' growing needs and expectations, while managing our costs, helping keep electricity bills affordable for our customers and improving our service.

Operating Environment

As a utility that operates in a high hazard industry, we are committed to ensuring our workforce goes home safely every day and that the public is safe around our system. We are continuously working to improve our performance by implementing integrated safety and compliance framework and programs.

The COVID-19 pandemic has presented unprecedented challenges for BC Hydro and our customers. However, it has also made our role as an essential service, providing clean, reliable and affordable electricity to our customers more important than ever. As a Crown Corporation, we will continue to support the Province and our customers to help B.C.'s economy recover from the effects of COVID-19.

BC Hydro will continue to address the considerable challenges of the Site C project to allow us to continue to provide the clean, reliable and affordable electricity that is vital to British Columbia's economic prosperity. Prior to the onset of COVID-19, BC Hydro had identified that the project was facing significant cost pressures that were being assessed, monitored and managed to the best extent possible. The COVID-19 pandemic, along with the need for foundation enhancements on the right bank to contend with unanticipated geotechnical conditions, added further significant cost and schedule pressures.

On February 26, 2021, the Province of B.C. announced an updated cost estimate for the Site C project of $16 billion. This includes a new expected in-service date of 2025, a one-year delay due to COVID-19. The Province also released the independent review of the project by Peter Milburn, with 17 recommendations aimed at improving oversight and governance. The Province and BC Hydro accepted all recommendations and will work to implement them in order to safely complete the Site C project.

BC Hydro is regulated by the British Columbia Utilities Commission (BCUC). As the independent regulator of BC Hydro, the BCUC reviews BC Hydro's costs, proposed rate increases, integrated resource planning and almost all regulatory accounts, programs and capital projects. On December 22, 2020, BC Hydro submitted the Fiscal 2022 Revenue Requirements Application to the BCUC and in 2021/22, we will prepare a comprehensive Revenue Requirements Application for Fiscal 2023 onwards. These applications reflect our efforts to continue to deliver safe and reliable power, while keeping electricity affordable for our customers.

We are developing an Integrated Resource Plan that will outline how BC Hydro is preparing for the evolving energy landscape that includes climate goals, technological advances, changing

customer preferences and market conditions. The plan, which will be filed with the BCUC this year, will include electrification scenarios to show how BC Hydro will leverage our clean electricity to support the Province's CleanBC plan to transform and electrify British Columbia's economy. BC Hydro is also developing new measures to monitor our progress in supporting the plan.

The electricity we generate and deliver throughout B.C. meets a high standard of reliability, but we are always looking for ways to improve our service to our customers and help power British Columbia's strong, sustainable economy. We are continuing to build our resilience against cyber and physical attacks on our system to continue to safely provide reliable electricity to our customers.

BC Hydro is focused on delivering our renewed customer service strategy, with the goal of making it easier to do business with us and helping customers make smart energy choices through our conservation and energy management programs. Part of this focus includes working to understand the evolving needs of our customers and how they use the electricity we provide. We will also continue to advance affordability initiatives to help our customers save money on their electricity bills. To help advance the Province's CleanBC climate and economic development objectives, we are encouraging our customers to use our clean and reliable electricity to power their homes, vehicles and businesses in order to reduce GHG emissions.

We continue to make significant investments to expand the system and maintain aging infrastructure, while prudently managing all costs to help keep electricity affordable for our customers. We work across teams, suppliers and experts to ensure thoughtful assessment of how to successfully deliver these projects on time and on budget while respecting the unique community, environmental and Indigenous interests associated with each project.

Operating, maintaining and expanding BC Hydro's extensive electricity system impacts a significant number of Indigenous communities across the province. We continue to pursue meaningful, long-term relationships with Indigenous groups to better understand their interests, so they can be incorporated in our planning and business operations. With the historic passing of the *Declaration on the Rights of Indigenous Peoples Act* in November 2019, BC Hydro is working to implement the United Nations Declaration on the Rights of Indigenous Peoples, the Calls to Action of the Truth and Reconciliation Commission and the Draft Principles that Guide the Province of British Columbia's Relationship with Indigenous Peoples into our business.

With thoughtful planning and prudent decision-making, BC Hydro is well positioned to safely provide reliable, affordable, clean electricity throughout B.C., today and into the future.

Performance Planning

Goal 1: Safety Above All

Objective 1.1: Safety at BC Hydro is a core value. We are committed to ensuring our workforce goes home safely every day, and that the public is safe around our system.

Key Strategies

- Form a strong partnership with operational teams to guide and assist them in creating and sustaining a safe work place.
- Implement an integrated and sustainable safety and compliance framework with defined governance, processes, accountabilities and responsibilities to manage risk.
- Support a learning culture within BC Hydro by using incident and near miss data and investigation learnings to inform improvements in job planning, work methods, training and other elements of our safety framework.
- Continue to standardize and consolidate safety information in one location so employees can easily find and understand rules, procedures and work methods they require to complete their work.
- Continue public education efforts on hazards associated with electricity.
- Protect the public from hazards around our reservoirs and dams through adherence to the Canadian Dam Association Public Safety Around Dams guidelines.
- Develop safety analytic and reporting services that will assist the organization to turn data into actionable information that improves safety outcomes.

Performance Measure(s)[1]	2020/21 Forecast	2021/22 Target	2022/23 Target	2023/24 Target
1.a Zero Fatality & Serious Disabling Injury[2] [Loss of life or the injury has resulted in a permanent disability]	0	0	0	0
1.b Lost Time Injury Frequency [Number of employee injury incidents resulting in lost time (beyond the day of the injury) per 200,000 hours worked]	0.70	0.76	0.74	0.74
1.c Timely Completion of Corrective Actions (%)	97	97	98	98

[1] Performance Measure descriptions, rationale, data source information and benchmarking are available online at www.bchydro.com/performance

[2] Zero Fatality and Serious Disabling Injury – BC Hydro's safety performance measures do not include contractor or public safety injuries or fatalities.

Linking Performance Measure to Objective

1.a Achieving our target of Zero Fatality and Serious Disabling Injury supports our objective that everyone goes home safely, every day.

1.b Lost Time Injury Frequency (LTIF) is an indicator of the likelihood of a full-time employee sustaining a time loss injury in a normal work year and is a comparable metric to other provincial organizations and the Canadian Electricity Association. LTIF of 1 equates to a 1 per cent chance of a time loss injury for any given employee in a work year.

1.c Timely Completion of Corrective Actions supports our strategy towards becoming a learning organization by addressing systemic improvements to our business to manage risk in a timely manner.

Discussion

BC Hydro forecasts that it will achieve its LTIF 2020/21 target largely due to a continued focus on job planning and ergonomics, as most of our lost time injuries result from body mechanic injuries. The 2022/23 target has been reduced by 2.0 percent, while the 2023/24 target has been set to sustain future performance.

Our Timely Completion of Corrective Actions targets focus on meeting the due dates of these actions. Results are reported using the definition of the measure introduced in the 2018/19 – 2020/21 Service Plan: the percentage of safety corrective actions closed on or before the scheduled due date on an annual basis. The 2021/22 and 2022/23 targets sustain our current performance, which supports regulatory reporting requirements and our goal to learn from safety incident data.

Goal 2: Set the Standard for Reliable and Responsive Service

Objective 2.1: BC Hydro will reliably meet the evolving expectations of our customers by prudently planning and investing in the system, improving our service and advancing reconciliation with Indigenous Peoples.

This objective has been updated using more concise language to ensure alignment with Goal 2.

Key Strategies

- Ensure the reliability and resilience of the generation, transmission and distribution system by effectively implementing capital, maintenance and vegetation programs to manage the overall condition of the power system and ensure supply to meet customer load.
- Safeguard the system with risk-prioritized security solutions and prepare our operations with well-practiced emergency response plans to support system reliability and resilience.
- Continue to make it easier for customers to do business with us through a series of customer facing improvements such as: exploring new contact centre technologies, engaging customers in our rate design and project planning processes; exploring new rate proposals to meet our customers' needs; and incorporating the Gender Based Analysis Plus lens to broaden our understanding of how policies and practices impact our customers.
- Sustain gold-level certification under the Progressive Aboriginal Relations program by successfully preparing and presenting BC Hydro's 2021 Progressive Aboriginal Relations Certification submission and clearly demonstrating the corporation's continuous improvement in advancing practices in the areas of leadership, employment, business development and community relationships.
- Continue to advance reconciliation by incorporating the United Nations *Declaration on the Rights of Indigenous Peoples Act*, the Calls to Action of the Truth and Reconciliation Commission and the Draft Principles that Guide the Province of British Columbia's Relationship with Indigenous Peoples into our business.

Performance Measure(s)[1]	2020/21 Forecast	2021/22 Target	2022/23 Target	2023/24 Target
2.a SAIDI (System Average Interruption Duration Index)[2] [Total outage duration (in hours) of sustained interruptions experienced by an average customer in a year (excluding major events)]	3.09	3.20	3.17	3.17
2.b SAIFI (System Average Interruption Frequency Index)[2] [Total number of sustained interruptions experienced by an average customer in a year (excluding major events)]	1.41	1.40	1.38	1.38
2.c Key Generating Facility Forced Outage Factor (%)	1.25	1.80	1.80	1.80
2.d CSAT Index[3] [Customer Satisfaction Index: % of customers satisfied or very satisfied]	91	85	85	85
2.e Progressive Aboriginal Relations Certification[4]	Gold	Gold	Gold	Gold

[1] Performance Measure descriptions, rationale, data source information and benchmarking are available online at www.bchydro.com/performance

[2] Reliability targets are based on specific values, however performance within 10 per cent is considered acceptable given the reliability projection modelling uncertainty, the wide range of variations in weather patterns and the uncontrollable elements that can significantly disrupt the electrical system. BC Hydro reports 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 the performance into consideration in reliability improvement initiatives.

[3] Customer Satisfaction Index (CSAT) is an index measuring customer satisfaction of BC Hydro's three main customer groups (residential, commercial and key accounts). The index is comprised of the five key drivers of satisfaction weighted equally across the three customer types.

[4] Progressive Aboriginal Relations is a certification program by the Canadian Council of Aboriginal Business. It is reviewed on a three-year cycle.

Linking Performance Measure to Objective

2.a &b Customer reliability is measured using the System Average Interruption Duration Index (SAIDI) and System Average Interruption Frequency Index (SAIFI). These, along with correlated cause analysis for customer outages, support targeted investment, planning and process improvements to meet our customers' needs for reliability.

By measuring the average number of service interruptions and number of hours of sustained interruptions experienced by the average customer in a year, we are able to track our ability to reliably meet the electricity requirements of customers.

2.c A forced outage occurs when a generating unit is unable to start generating or does not stay in service when needed. The Key Generating Facility Forced Outage Factor shows the trend of how the generation assets are performing and supports investment decisions to maintain asset reliability.

2.d The Customer Satisfaction (CSAT) Index measures customer satisfaction with BC Hydro on five key drivers: value for money; commitment to customer service; providing reliable electricity; acting in the best interest of British Columbians; and efforts to communicate to customers and communities. This measure gauges the degree to which BC Hydro is meeting customers' electricity and service needs.

2.e The Canadian Council of Aboriginal Business's Progressive Aboriginal Relations (PAR) Gold certification offers validation of BC Hydro's continuous improvement and focus on enhanced Indigenous relations. With BC Hydro's extensive footprint throughout the province, and our role as a Crown corporation, the comprehensiveness of the PAR certification acts as a measure for us to ensure our policies and practices across the company appropriately reflect Indigenous interests and our employees understand the importance of building and maintaining strong relationships with Indigenous Peoples.

Discussion

SAIDI and SAIFI targets are based on several factors including long-term historic reliability trending, current year performance, previous years' investments and future years' investment plans, while also accounting for annual variability due to weather. Consistent focus on customer reliability has continued to enable the 2021/22 targets to remain stable and to improve in 2022/23 to align with historical performance, planned investment, ongoing process improvements and expected benefits from planned increased investment in transmission and distribution vegetation programs.

There are seven Key Generating Facilities, representing those plants with installed capacity greater than 200 megawatts (MW). Together, they provide over 90 percent of the average annual electricity generated by BC Hydro's facilities. Key Generating Facility Forced Outage Factor is reported as a five-year rolling average and defined as the total forced outage time in a period relative to the total number of hours in the same period (usually one year). Annually, the Forced Outage Factor can be relatively volatile, and applying the historical five-year rolling average smooths the range to provide a more stable measure for which targets can be set. The objective is to keep the Forced Outage Factor below 1.80 percent of the total number of hours per year, which demonstrates the effectiveness of BC Hydro's maintenance and capital investment programs.

BC Hydro's CSAT 2020/21 forecast result reflects our responses to the COVID-19 pandemic, which included providing payment assistance to residential, small business and industrial customers. In 2021/2022 - 2023/2024, we will work to meet a CSAT index of 85.0 by consistently improving customer experience and meeting customers' growing expectations based on their interactions with other organizations.

The Canadian Council of Aboriginal Business' PAR is a certification program designed to help Canadian businesses benchmark, improve and signal their commitment to progressive relationships with Indigenous communities, businesses and people. It evaluates four areas of performance including: leadership actions; employment; business development; and community relations. PAR certification provides a high degree of assurance to Indigenous communities, as certification every three years is supported by an independent third-party verification and is determined by a jury comprised of Indigenous business people. BC Hydro has attained the highest, gold-level designation from the Canadian Council for Aboriginal Business since 2012. In 2021/22, BC Hydro will apply for the next certification and seek to sustain our gold level certification.

Goal 3: Help Keep Electricity Bills Affordable for our Customers

Objective 3.1: BC Hydro will help keep electricity bills affordable by managing our costs, exploring innovative solutions to support our customers and making cost-effective investments to maintain and expand our electricity system.

Key Strategies

- Working with the Province, continue delivering affordability measures, including demand-side management programs targeted to low-income households, to help our customers manage their electricity bills.
- Advance efficient and flexible rate proposals with the BCUC to help keep customers' electricity bills affordable.
- Submit Revenue Requirements Applications to the BCUC consistent with the goal of achieving rate increases that are less than the provincial rate of inflation, on a cumulative basis, for the period of Fiscal 2021 to Fiscal 2030.
- Make all reasonable efforts to keep rates affordable by implementing the outcomes of Phase 1 of the Comprehensive Review, including strategies to reduce future energy procurement costs.
- Implement recommendations of Phase 2 of the Comprehensive Review, to improve affordability of electricity, enable clean technological innovation, reduce GHG emissions through electrification, and advance reconciliation with Indigenous Peoples.
- Safely complete the Site C project within lowest practicable cost by the new expected in-service date of 2025. This includes work to:
    - Implement foundation enhancement measures to address geotechnical issues on the project's right bank.
    - Implement the recommendations of the independent consultant (Milburn) report, which include enhancing the independence, mandate and expertise of the Site C Project Assurance Board and strengthening BC Hydro's risk reporting and management.
    - Provide quarterly progress and exception reporting to Treasury Board.
- Implement our 10 Year Capital Plan so that our customers can continue to receive clean, reliable and affordable electricity.
- Continue to refine and enhance our systematic and disciplined project delivery methodology to ensure that our projects are put into service safely, on time, on budget and to a high standard of quality.
- Achieve benefits of improved procurement and supply chain management practices and tools.

Performance Measure(s)[1]	2020/21 Forecast	2021/22 Target	2022/23 Target	2023/24 Target
3.a Affordable Bills – Residential[2]	1st quartile	1st quartile	1st quartile	1st quartile
3.b Affordable Bills – Commercial[2]	1st quartile	1st quartile	1st quartile	1st quartile
3.c Affordable Bills – Industrial[3]	1st quartile	1st quartile	1st quartile	1st quartile
3.d Project Budget to Actual Cost[4]	-4.09% on $4.07 billion[5]	Within+5% to -5% of budget excluding project reserve amounts	Within+5% to -5% of budget excluding project reserve amounts	Within+5% to -5% of budget excluding project reserve amounts

[1] Performance Measure descriptions, rationale, data source information and benchmarking are available online at www.bchydro.com/performance

[2] As of 2020/21, BC Hydro calculates the Affordable Bills performance measure for residential and commercial customers as the median consumption level for residential and commercial customer classes compared to the equivalent power consumption sub-category from Hydro Quebec's annual report on North American electricity rates. The rankings of the 22 participating utilities are then allocated into quartiles. The 1st quartile ranking represents the six utilities that have the lowest monthly electricity bills on April 1 of a given year.

[3] BC Hydro measures affordability within the industrial category based on the largest consumption level from Hydro Quebec's annual report on North American electricity rates.

[4] This measure compares actual project costs at completion to the original approved expected cost budget for the project, not including project reserve amounts, for capital projects that were put into service during the five-year rolling period.

[5] This represents projects that went or are forecasted to go into service for the five-year period of 2016/17 to 2020/21.

Linking Performance Measure to Objective

3.a, b & c The Affordable Bills measures are based on BC Hydro's rankings in the residential, commercial, and transmission service rate categories in the annual Hydro Quebec report, Comparison of Electricity Prices in Major North American Cities. The report is used as a benchmark to demonstrate that our bills are affordable compared to other major North American utilities.

3.d Since 2015/16, BC Hydro has utilized the Project Budget to Actual Cost measure for the delivery of capital projects, with a target of actual project costs to be within +5 percent to -5 percent of the budget, excluding project reserves at the portfolio level. The +/- 5 percent target is the same over the plan period, as it is the objective to have the entire project portfolio in-service within this actual cost range. BC Hydro has consistently met this performance target, as we continue to prudently manage capital expenditures and keep rates affordable for our customers.

Discussion

The Affordable Bills measure was previously based on residential customers only and was calculated by averaging BC Hydro's ranking across multiple residential sub-categories, as reported in Hydro Quebec's annual report on North American electricity rates. While affordability in the residential rates category is important, we recognize that it is also important to our other customer classes and this measure has now been expanded to include commercial

and industrial customers. The methodology for calculating these performance measures uses the median consumption level for the residential and commercial performance measures and the largest consumption level for the industrial performance measure. Median consumption level provides a better representation of the central tendency than average and the largest consumption level provides the best indication of BC Hydro's performance regarding rate competitiveness for large industrial customers.

The Project Budget to Actual Cost measure includes Dam Safety, Generation, Transmission Line, Substation and large Distribution projects, managed by BC Hydro Capital Infrastructure Project Delivery and Properties for the last five years. Annually, BC Hydro reports the past five years' performance at the portfolio level in delivering capital projects.

Goal 4: Help Make Renewable, Clean Power British Columbia's Leading Energy Source

Objective 4.1: BC Hydro will encourage the use of its renewable, clean power for electrification to reduce greenhouse gas emissions and will continue to invest in its energy-efficiency and conservation programs.

This objective was restated to highlight importance of electrification.

Key Strategies

- Support the implementation of the CleanBC plan to increase British Columbians' use of clean energy in transportation, buildings and industry by advancing an electrification plan and related performance measures.
- Support customers with initiatives and rate structures that help them make smart energy choices through our energy management (e.g. energy efficiency and conservation programs) and low carbon electrification initiatives.
- Provide customers with the opportunity to more easily access clean, renewable power to displace the use of higher carbon energy sources.
- As part of the CleanBC plan, partner with the Province and the federal government to help remote communities, with a focus on Indigenous communities, reduce or eliminate diesel generation and replace it with energy from cleaner sources.

Performance Measure(s)[1]	2020/21 Forecast	2021/22 Target	2022/23 Target	2023/24 Target
4.a Energy Conservation Portfolio (New incremental GWh/year)[2]	765	500	500	500
4.b Clean Energy (%)	98.0	93.0	93.0	93.0

[1] Performance Measure descriptions, rationale, data source information and benchmarking are available online at www.bchydro.com/performance

[2] BC Hydro's future Energy Conservation Portfolio targets will be informed by the next Integrated Resource Plan, filed with the BCUC.

Linking Performance Measure to Objective

4.a The Energy Conservation Portfolio performance measure reflects new incremental energy savings from programs, codes and standards and conservation rates. This measures the success of BC Hydro's planned conservation targets. Targets are rounded values and considered to be achieved if performance is within 10 percent of the stated values.

4.b The Clean Energy performance measure demonstrates BC Hydro's efforts to generate clean, sustainable, affordable electricity in order to reduce GHG emissions in the province and continue to meet the 93 percent minimum clean energy objective in the *Clean Energy Act*. The higher the percent clean energy that BC Hydro achieves, the lower the GHG emissions in the province.

Discussion

The targets for Energy Conservation Portfolio are based on BC Hydro's forecast of annual new incremental energy savings and do not reflect past performance and/or adjustments made to energy savings in prior years (e.g., persistence, evaluations, measurement and verification). In some cases, the timing of savings for anticipated codes and standards and timing of large customer projects can shift, which will cause actual incremental energy savings to vary from the targets that have been set for the period.

The Clean Energy performance measure represents the minimum threshold generation output in accordance with the B.C. Government's requirement that at least 93 percent of electricity generation in the province be from clean or renewable resources, as specified in the *Clean Energy Act.* While actual output of the non-clean resources in the system supports system reliability and can vary depending on market conditions and water inflows to our reservoirs, BC Hydro expects that the actual performance will remain close to 98 percent.

Financial Plan

Summary Financial Outlook

Consolidated Statement of Operations[1] ($ millions)	2020/21 Forecast	2021/22 Budget	2022/23 Budget	2023/24 Budget
Domestic	5,191	5,527	5,641	5,765
Trade	1,080	1,121	984	949
Total Revenues	**6,271**	**6,648**	**6,624**	**6,714**
Operating Costs				
Cost of energy	2,231	2,389	2,460	2,494
Personnel expenses, materials & external services[2]	1,236	1,317	1,332	1,364
Amortization	1,006	1,033	1,022	1,041
Grants and taxes	265	274	286	302
Finance charges	838	552	480	435
Other	198	101	120	111
Total Expenses	**5,775**	**5,667**	**5,700**	**5,747**
Net Income before movement in regulatory balances	497	981	924	967
Net movement in regulatory balances	194	(269)	(212)	(255)
Net Income	**691**	**712**	**712**	**712**
Other Selected Financial Information:				
Dividends	**-**	**-**	**-**	**-**
Net Debt[3]	**25,338**	**28,115**	**30,590**	**31,819**
Equity	**6,346**	**7,058**	**7,770**	**8,482**
Capital Expenditures	**3,573**	**4,738**	**4,413**	**3,305**

[1] Table may not add due to rounding.

[2] These amounts are net of capitalized overhead and consist of the following:

	2020/21	2021/22	2022/23	2023/24
Domestic Base Operating Costs	833	905	918	937
Other	403	412	415	427
	1,236	1,317	1,332	1,364

Other largely consists of Powerex & Powertech operating costs, IFRS-ineligible capital overhead phased into operating costs over a 10-year period ending in 2020/21, and expenses subject to regulatory deferral.

[3] Debt figures are net of sinking funds and cash and cash equivalents.

Key Forecast Assumptions, Risks and Sensitivities

Key Assumptions	2020/21 Forecast	2021/22 Budget	2022/23 Budget	2023/24 Budget
Growth and Load				
B.C. Real Gross Domestic Product Growth (%)[1]	(6.7)	3.0	3.8	2.7
Domestic Sales Load Growth (%)[2, 3]	(2.46)	3.54	1.54	2.43
Load and System Exports:				
Domestic Sales Volume (GWh)	50,655	52,448	53,258	54,552
System Exports Volume (GWh)	9,220	6,979	5,893	4,827
Line Loss and System Use (GWh)	4,947	5,376	5,417	5,509
Total Load and System Exports (GWh)	64,821	64,802	64,568	64,887
Energy Generation				
Total System Water Inflows (% of average)	110	100	100	100
Sources of Supply:				
Hydro Generation (GWh)	48,807	46,718	45,635	45,253
System Imports (GWh)	1,257	1,836	2,588	3,291
Independent Power Producers and Long-term Purchases (GWh)	14,502	15,970	16,059	16,036
Thermal Generation & Other (GWh)	255	278	287	307
Sources of Supply (GWh)	64,821	64,802	64,568	64,887
Average Mid-C Price (U.S.$/MWh)	27.87	30.83	29.78	28.67
Average Natural Gas Price at Sumas (U.S.$/MMBTU)	3.11	3.08	2.61	2.46
Financial				
Canadian Short-Term Interest Rates (%)[4]	0.24	0.24	0.30	0.60
Canadian Long-Term Interest Rates (%)[4]	1.49	1.86	2.12	2.37
Foreign Exchange Rate (U.S.$:Cdn$)[4]	0.7452	0.7630	0.7660	0.7712

[1] Economic assumption based on calendar year, 2020/21 to 2021/22 from Ministry of Finance September 2020 First Quarter Report; 2022/23 to 2023/24 from Conference Board of Canada – August 2020.
[2] Includes the impact of Demand Side Management programs.
[3] Excludes system exports.
[4] Financial assumptions from Ministry of Finance, October 2020.

Sensitivity Analysis

Factor	Change	Approximate change in 2021/22 earnings before regulatory account transfers (in $ millions)
Customer Load[1]	+/- 1%	35
Interest Rates[2]	+/- 100 basis points	30
Electricity/Gas trade margins[3]	+/- 10%	30
Hydro Generation (GWh)[4]	+/- 1%	10
Exchange rates (US/ CDN)	+/-$0.01	5

[1] Assumes a percentage change is applied equally to all customer classes. Assumes a change in customer load is offset by a corresponding change in system imports or exports.
[2] Relates to debt subject to interest rate variability.
[3] Trade revenues less trade energy costs.
[4] Assumes a change in hydro generation is offset by a corresponding change in system imports or exports.

Management's Perspective on the Financial Outlook

In December 2020, BC Hydro filed an application with the BCUC for its revenue requirements for 2021/22. BC Hydro expects a decision in spring 2021 which may change the financial projections for revenues and expenses.

The current financial projections for revenues and expenses through 2023/24 were approved by the BC Hydro Board of Directors and submitted to the Ministry of Finance in March 2021.

The COVID-19 pandemic continues to adversely impact global economic activity and has contributed to significant volatility in financial markets. The pandemic could have a sustained adverse impact on economic and market conditions and could adversely impact BC Hydro's future performance if it were to cause a prolonged decrease in customer load, volatility in electricity/gas trade margins and interest rates, difficulty accessing debt, project delays and project cost escalations.

While BC Hydro engages in emergency preparedness (including business continuity planning) to mitigate risks, the persisting uncertainty of this situation limits the ability to predict the ultimate adverse impact of COVID-19 on BC Hydro's performance, financial condition, results of operations and cash flows.

This plan contains forward looking statements, including statements regarding the business and anticipated financial performance of BC Hydro. These statements are subject to a number of risks and uncertainties such as customer load, interest rates, electricity/gas market conditions and our ability to deliver our capital projects on-time and on-budget. These and other risks and uncertainties may cause actual results to differ from those contemplated in the forward-looking statements.

Capital Expenditures by Year and Type and Function

($millions)	2020/21 Forecast	2021/22 Forecast	2022/23 Forecast	2023/24 Forecast
Capital Expenditures by Type[1]				
Sustaining	1,004	1,146	1,259	1,234
Growth	2,569	3,592	3,154	2,071
Subtotal – BC Hydro Capital Expenditures before CIA	3,573	4,738	4,413	3,305
Contributions-in-Aid (CIA)[2]	(160)	(214)	(167)	(171)
Total – BC Hydro Capital Expenditures net of CIA	3,413	4,524	4,246	3,134
Generation	351	388	427	486
Transmission and Distribution	891	995	1,091	1,153
Properties, Technology and Other	224	226	210	215
Site C Project[3]	2,107	3,129	2,685	1,451
Subtotal – BC Hydro Capital Expenditures before CIA	3,573	4,738	4,413	3,305
CIA	(160)	(214)	(167)	(171)
Total BC Hydro Capital Expenditures net of CIA	3,413	4,524	4,246	3,134

1. BC Hydro classifies capital expenditures as either sustaining capital or growth capital:
   - Sustaining capital 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.
   - Growth capital includes expenditures to meet customer load growth and other business investments. Growth capital includes expenditures to expand existing generation assets as well as expand and reinforce the transmission and distribution system, and includes Site C.
2. Contributions in aid of construction are amounts paid by certain customers toward the cost of property, plant and equipment required for the extension of services to supply electricity.
3. Site C project forecast expenditures have been updated to reflect the costs estimated at $16 billion, which was announced on February 26, 2021.

Projects over $50 million

BC Hydro has the following projects, each with capital costs expected to exceed $50 million, listed according to targeted completion date. These projects have been approved by the Board of Directors.

Major Capital Projects (over $50 million)	Targeted Completion Date (Calendar Year)	Project Cost to Dec 31, 2020 ($ millions)	Estimated Cost to Complete ($ millions)	Anticipated Total Capital Cost of Project ($ millions)
Projects Recently Put Into Service				
Fort St. John and Taylor Electric Supply This project maintained adequate supply capability, reduced line losses and improved reliability to the loads in the Fort St. John and Taylor areas by re-terminating 138kV transmission lines at the new Site C switchyard, and the addition of a 75 MVA transformer and new feeder positions.	2020 In-Service	$51	$1	$52
UBC Load Increase Stage 2 Project This project was on behalf of BC Hydro's customer, the University of British Columbia, to continue to reliably meet the growing electricity needs of its Point Grey campus and the surrounding community.	2020 In-Service	$48	$7	$55

Major Capital Projects (over $50 million)	Targeted Completion Date (Calendar Year)	Project Cost to Dec 31, 2020 ($ millions)	Estimated Cost to Complete ($ millions)	Approved Total Capital Cost of Project ($ millions)
Ongoing				
South Fraser Transmission Relocation Project* This project is intended to relocate certain sections of two 230kV transmission circuits (Circuit 2L62 and Circuit 2L58) from their present location adjacent to Highway 99 and in the George Massey tunnel to accommodate the replacement of the tunnel. These two 230kV circuits form a critical part of BC Hydro's transmission network supplying power to customers in Richmond, Delta and the Greater Vancouver area. ******Construction work on the South Fraser Transmission Relocation project is currently suspended pending the government's review of the George Massey Tunnel replacement.*	TBD	$30	$46	$76
Downtown Vancouver Electricity Supply: West End Strategic Property Purchase This project is to acquire property rights to build and connect a new underground substation that will upgrade the aging electricity system in downtown Vancouver.	2021 Targeted In-Service	$67	$14	$81

Major Capital Projects (over $50 million)	Targeted Completion Date (Calendar Year)	Project Cost to Dec 31, 2020 ($ millions)	Estimated Cost to Complete ($ millions)	Approved Total Capital Cost of Project ($ millions)
Peace Region Electricity Supply (PRES) Project This project is needed to provide sufficient transmission system capacity to serve load growth and increase the reliability of electricity supply to existing customers in the South Peace. This project will facilitate reductions in provincial greenhouse gas emissions by enabling electrification of natural gas production, processing, and compression. **The total cost represents the gross cost of the project and has not been netted for potential Federal Government contributions.*	2021 Targeted In-Service	$193	$92	$285*
LNG Canada Load Interconnection Project This project is to facilitate the interconnection of LNG Canada's facility. A new double circuit 287kV transmission line will be constructed from Minette Substation (MIN) to LNG Canada's facility and system reinforcements at MIN will also be implemented. Under BC Hydro's standard tariffs, the customer is required to pay for a portion of this project's costs. **The total cost represents the gross cost of the project and has not been netted for a customer's contribution of $24M.*	2021 Targeted In-Service	$65	$17	$82*

Major Capital Projects (over $50 million)	Targeted Completion Date (Calendar Year)	Project Cost to Dec 31, 2020 ($ millions)	Estimated Cost to Complete ($ millions)	Approved Total Capital Cost of Project ($ millions)
Bridge River 2 Upgrade Units 7 and 8 Project This project will replace the two generators and other related equipment to restore the historical operating capacity. Units 7 and 8 were placed into service in 1960, are unreliable and in poor and unsatisfactory condition.	2021 Targeted In-Service	$50	$36	$86
Wahleach Refurbish Generator Project This project will improve the reliability of the generator at Wahleach Generating Facility, and its scope includes replacement of the stator and rotor poles, refurbishment of the remaining major components, and a combination of new, replacement, and refurbishment of the auxiliary components. The project also includes the installation of a new powerhouse crane and structural upgrades to the powerhouse building.	2022 Targeted In-Service	$24	$27	$51
Mica Replace Units 1 to 4 Generator Transformers Project This project will address the reliability and safety risks of the Unit 1-4 Generator Step-up Unit transformers at the Mica Generating Station, which are nearing end of life. There is a heightened reliability and safety risk from continuing to operate these transformers in an underground powerhouse as they age.	2022 Targeted In-Service	$41	$39	$80

Major Capital Projects (over $50 million)	Targeted Completion Date (Calendar Year)	Project Cost to Dec 31, 2020 ($ millions)	Estimated Cost to Complete ($ millions)	Approved Total Capital Cost of Project ($ millions)
G.M. Shrum G1 to 10 Control System Upgrade This project will replace the controls equipment, provide full remote-control capability from the remote-control center, and rectify deficiencies in the current system. The condition of the legacy controls for the GMS generating units, which were originally installed in the 1960s and 1970s, is of growing concern due to increasing maintenance requirements, lack of available spare parts and decreasing reliability. The controls are well beyond their expected life, which causes operating problems and increases the risk of damage to major equipment.	2022 Targeted In-Service	$51	$24	$75
Mount Lehman Substation Upgrade Project This project will increase the firm capacity of the Mount Lehman Substation to address safety and asset health concerns at both the Clayburn and Sumas Way substations.	2023 Targeted In-Service	$20	$39	$59

Major Capital Projects (over $50 million)	Targeted Completion Date (Calendar Year)	Project Cost to Dec 31, 2020 ($ millions)	Estimated Cost to Complete ($ millions)	Approved Total Capital Cost of Project ($ millions)
Street Light Replacement Program The program will convert approximately 95,000 BC Hydro owned and maintained High Pressure Sodium (HPS) and Mercury Vapour (MV) street lights to Light Emitting Diode (LED) street lights. This is required to meet federal polychlorinated biphenyl (PCB) environmental regulations by the end of 2025, manage increasing operations and maintenance costs, and better meet our customers' expectations. Lights have started to be converted and conversions will complete in 2023.	2023 Targeted In-Service	$4	$76	$80
5L063 Telkwa Project This project will increase the reliability and reduce the safety risks of the 500kV radial transmission line (5L063) that provides service for customers in Northwest British Columbia. A portion of the 5L063 line will be relocated away from the current area of unstable terrain.	2023 Targeted In-Service	$15	$51	$66
Mica Modernize Controls Project This project will address the reliability, maintainability, and operability of the Units 1-4 exciters, governors, unit controls and control room controls at the Mica Creek Generating Station.	2023 Targeted In-Service	$26	$30	$56

Major Capital Projects (over $50 million)	Targeted Completion Date (Calendar Year)	Project Cost to Dec 31, 2020 ($ millions)	Estimated Cost to Complete ($ millions)	Approved Total Capital Cost of Project ($ millions)
Capilano Substation Upgrade Project This project will address the existing asset health, reliability, safety, and environmental issues associated with the Capilano Substation, and to ensure that the capacity of the substation meets the long term area needs. The project will also introduce a 25kV source to enable 25kV voltage conversion and facilitate the execution of other future substation projects in the North Shore area.	2024 Targeted In-Service	$11	$76	$87
Sperling Substation (SPG) Metalclad Switchgear Replacement Project This project will address the existing asset health, reliability and safety risks associated with the 12kV 60 series feeder section and the bulk oil breaker in the 12 kV 70/80 series feeder section, insufficient electrical clearances in the 60 series feeder section, and arc flash safety risks associated with the 12kV indoor metalclad switchgear.	2024 Targeted In-Service	$5	$49	$54

Major Capital Projects (over $50 million)	Targeted Completion Date (Calendar Year)	Project Cost to Dec 31, 2020 ($ millions)	Estimated Cost to Complete ($ millions)	Estimated Total Capital Cost of Project ($ millions)
Site C Project*** This project will construct a third dam and a hydroelectric generating station on the Peace River approximately seven kilometres southwest of Fort St. John. It will be capable of producing approximately 5,100 gigawatt-hours of electricity annually and 1,100 megawatts of capacity. Site C will provide clean, renewable and cost-effective power in B.C. for more than 100 years. **Planned in-service date for all units.* ***Site C project total anticipated cost and project cost to date include capital costs, charges subject to regulatory deferral and certain operating expenditures.* ****As announced on February 26, 2021, the cost of the Site C project is estimated at $16 billion, with a one year delay to 2025 for the project in-service date.BC Hydro continues to review the updated cost estimate, along with risks, further to recommended actions in the Milburn Report*	2025* Targeted In-Service	$6,455	$9,545	$16,000**

Information Technology (IT) Projects over $20 million

BC Hydro has the following IT project with capital costs expected to exceed $20 million. This project has been approved by the Board of Directors.

Significant IT Projects (over $20 million in total)	Targeted Completion Date (Calendar Year)	Project Cost to Dec 31, 2020 ($ millions)	Estimated Cost to Complete ($ millions)	Anticipated Total Capital Cost of Project ($ millions)
Project Recently Put Into Service				
Supply Chain Applications Project This project replaced BC Hydro's existing PassPort supply chain information technology (IT) system with an SAP-based IT system and made improvements to BC Hydro's supply chain business processes for third-party materials and service acquisitions.	2020 In-Service	$67	$2	$69

Appendix A: Additional Information

Corporate Governance

Information about Corporate Governance can be found at:

http://www.bchydro.com/about/accountability_reports/financial_reports/service_plan.html.

This includes links to information regarding, and includes all information detailed in the Best Practice Guidelines: Governance and Disclosure Guidelines for Governing Boards of British Columbia Public Sector Organizations:

- Board of Directors
- Executive Team
- Code of Conduct
- Board Governance Manual

Organizational Overview

Information about BC Hydro's organizational overview can be found at:

https://www.bchydro.com/toolbar/about.html

This includes links to information about BC Hydro's operations, governance and mandate.

Appendix B: Subsidiaries and Operating Segments

Active Subsidiaries

As wholly-owned subsidiaries, and like BC Hydro itself, Powerex Corp. and Powertech Labs Inc. follow best practices in corporate governance and subsidiary activities align with BC Hydro's mandate, strategic priorities and fiscal plan.

Powerex Corp.

Powerex Corp., an energy marketer, is a wholly-owned corporate subsidiary of BC Hydro and a key participant in wholesale energy markets across North America. Powerex's business consists of trading wholesale power and natural gas, environmental products (renewable energy credits or other similar products), carbon products (allowances and other similar products), ancillary energy services, and financial energy products.

Through its contractual agreements with BC Hydro, Powerex supports BC Hydro's system requirements by importing and exporting energy. Powerex also markets, through a contractual agreement with the Province, the Canadian Entitlement to the Downstream Power Benefits under the Columbia River Treaty.

The Chief Executive Officer (CEO) of Powerex reports directly to the Board of Directors of Powerex. The Chair of the Powerex Board ensures the Board of BC Hydro is informed of Powerex's key strategies and business activities. The Powerex CEO also informs the BC Hydro President & CEO and Executive Team of Powerex's key strategies and business activities.

Powerex operates in competitive and complex wholesale energy-markets, which can cause net income in any given year to vary significantly. Market, economic and weather conditions, reduced hydro system flexibility, unrealized mark-to-market gains or losses and the strength of the Canadian dollar can materially impact Powerex net income. The Service Plan forecast includes annual trade income from Powerex of approximately $190 million per year for 2021/22 to 2023/24, based on the average earnings over the last five fiscal years. For more information, visit powerex.com

Board of Directors:

- Ken Peterson – Chair
- Len Boggio
- Valerie Lambert
- Chris O'Riley

Powertech Labs Inc.

Powertech Labs Inc., operating in Surrey since its inception in 1979, is a wholly-owned subsidiary of BC Hydro. Powertech is internationally recognized as technical experts in a range of fields related to the electric utility and clean energy industries and offers services and solutions including performance and type testing, asset lifecycle management solutions, engineering studies, and power system modelling and analysis to energy clients, including BC Hydro, and other sectors globally. Powertech is also a technical leader in hydrogen energy, providing certification, performance, and safety testing services for hydrogen components and systems, as well as the design and construction of innovative hydrogen vehicle refueling systems.

The President and CEO of Powertech reports to Powertech's Chair of the Board. The Powertech Board is chaired by BC Hydro's President and CEO and its Directors include senior Executives of BC Hydro.

The Service Plan forecast includes annual net income from Powertech ranging from approximately $2 to $4 million per year for 2021/22 to 2023/24. For more information, visit powertechlabs.com.

Board of Directors:

- Chris O'Riley - Chair
- Melissa Holland
- Kip Morison
- David Wong

Other Subsidiaries

BC Hydro has created or retained a number of other subsidiaries for various purposes, including holding licences in other jurisdictions, to manage real estate holdings and to manage various risks.

All the staff and management needs of the active subsidiaries below are fulfilled by BC Hydro employees, who perform these duties without additional remuneration. Three of these subsidiaries are considered active:

BCHPA Captive Insurance Company Ltd.
Procures insurance products and services on behalf of BC Hydro.

Columbia Hydro Constructors Ltd.
Administers and supplies the labour force to specified projects.

Tongass Power and Light Company
Provides electrical power to Hyder, Alaska from Stewart, B.C. due to its remoteness from the Alaska electrical system.

Nominee Holding Companies and/or Inactive/Dormant Subsidiaries
BC Hydro's remaining subsidiaries either serve as nominee holding companies (indicated with an *) or are considered to be inactive/dormant. The inactive/dormant subsidiaries do not carry on active operations. As of February 28, 2021, these other subsidiaries consisted of the following:

1. British Columbia Hydro International Limited
2. British Columbia Power Exchange Corporation
3. British Columbia Power Export Corporation
4. British Columbia Transmission Corporation
5. Columbia Estate Company Limited*
6. Edmonds Centre Developments Limited*
7. Fauquier Water and Sewerage Corporation
8. Hydro Monitoring (Alberta) Inc.*
9. Victoria Gas Company Limited
10. Waneta Holdings (US) Inc.*
11. 1111472 BC Ltd.