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June 29, 2020

GHG Reduction (Clean Energy) Regulation Reporting
Director, Communities and Transportation
Electricity and Alternative Energy Division
Ministry of Energy, Mines and Petroleum Resources
Email: GGRRReporting@gov.bc.ca

British Columbia Utilities Commission
GHG Reduction (Clean Energy)
Regulation Reporting

Email: commission.secretary@bcuc.com

RE: Ministry of Energy, Mines and Petroleum Resources (MEMPR or Ministry)
British Columbia Hydro and Power Authority (BC Hydro)
Greenhouse Gas Reduction (Clean Energy) Regulation Reporting
Fiscal 2020 Annual Report

BC Hydro writes to submit the Business Information and Declaration (Attachment 1), the Fiscal 2020 Greenhouse Gas Reduction Regulation (**GGRR**) Annual Report (**Report**) (Attachment 2) and LCE Program Results in an excel format (Attachment 3). The Report includes results for the period from April 1, 2019 to March 31, 2020 (**Fiscal 2020**) for BC Hydro's prescribed undertakings as defined in section 4 of the GGRR.

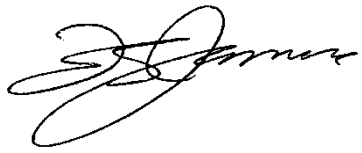
Under section 18 of the *Clean Energy Act*, a public utility implementing prescribed undertakings defined in the GGRR, must submit to the MEMPR a report respecting the prescribed undertaking. Specifically, section 18(5) states that "a report to be submitted under section (4) must include the information the minister specifies and be submitted in the form and by the time the minister specifies."

In April 2018, Ministry staff issued the GGRR reporting requirements. The reporting requirements state that an annual report is due by June 30 of each year and prescribed the form of the report.

BC Hydro is redacting customer-specific information in this version of the Report. An un-redacted version of the Report is being filed with the Ministry and BCUC only under separate cover.

For further information, please contact Chris Sandve at 604-974-4641 or by email at bchydroregulatorygroup@bchydro.com.

Yours sincerely,



Fred James
Chief Regulatory Officer

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Enclosures (3)

BC Hydro
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Attachment 1

Business Information and Declaration

Business Information and Declaration

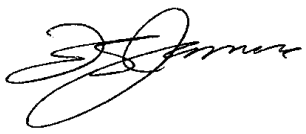
Full Legal and Operating Name	Address Including Postal Code and Email	Telephone
British Columbia Hydro and Power Authority	333 Dunsmuir Street, Vancouver BC V6B 5R3	604-623-4046
Reporting Period:	April 1, 2019 to March 31, 2020 (Fiscal 2020)	

I understand that the information in this report is collected for the purposes of administering the Greenhouse Gas Reduction (Clean Energy) Regulation under the authority of the *Clean Energy Act* and section 26 of the *Freedom of Information and Protection of Privacy Act*.

I certify that records evidencing each matter reported under the Greenhouse Gas Reduction (Clean Energy) Regulation (the Regulation) Reporting Requirements are available on request.

I certify that a record evidencing my authority to submit this report on behalf of the public utility is available on request.

I certify that the information in this report is true and complete to the best of my knowledge and I understand that I may be required to provide to the Ministry of Energy, Mines and Petroleum Resources or the Commission records evidencing the truth of that information.

Signature of Authorized Signing Authority	Name and Title of Authorized Signing Authority (please print)	Date Signed YYYY/MM/DD
	Fred James Chief Regulatory Officer	June 29, 2020

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Attachment 2

Fiscal 2020 Annual Report No. 3

April 2019 to March 2020

PUBLIC

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1 Executive Summary

This is BC Hydro's third annual report regarding its programs and projects that are "prescribed undertakings" as defined in the Greenhouse Gas Reduction (Clean Energy) Regulation (**GGRR**) for the purposes of section 18 of the *Clean Energy Act* (**CEA**). It is provided in response to the December 2018 "British Columbia Greenhouse Gas Reduction (Clean Energy) Regulation Reporting Requirements" (**Reporting Requirements**) provided to BC Hydro by the Ministry of Energy, Mines and Petroleum Resources. The report covers the annual period from April 1, 2019 to March 31, 2020 (**Fiscal 2020**).

In Fiscal 2020, BC Hydro undertook the activities and expenditures listed below. BC Hydro collectively refers to these activities or expenditures that fall within a class of undertakings prescribed under sections 4(3)(a)(i), 4(3)(a)(ii), 4(3)(b)(i), 4(3)(b)(ii), 4(3)(c) and 4(3)(d) of the GGRR as Low Carbon Electrification (**LCE**) Programs. The expenditure for the LCE Programs in Fiscal 2020 is approximately $16.9 million.

- BC Hydro provided supporting resources[1] for six new LCE studies and two new LCE projects which are prescribed undertakings under section 4(3)(a) of the GGRR, further described in section 4.2 below;
- BC Hydro undertook public awareness campaign activities under section 4(3)(a) of the GGRR, including a rebate 'Top-up' promotion in conjuction with the Province of B.C.'s (**Province**) 'Go Electric BC' electric vehicle (**EV**) charger rebate program;
- BC Hydro provided supporting resources to seven studies that advance research related to new applications of technologies that have not yet been proven or adopted in BC, and to projects with specific customers researching

[1] Supporting resources can include: funding provided by BC Hydro to enble studies, research, pilots, public awareness campaigns, projects, and enabling the development of standards.

technology applications where the learnings will inform future BC Hydro programs and customer opportunities. These seven studies are undertakings prescribed under section 4(3)(c) of the GGRR; and

- BC Hydro provided supporting resources to enable the development of standards respecting technologies that use electricity instead of other sources of energy that produce more greenhouse gas emissions. These projects are undertakings prescribed under section 4(3)(d) of the GGRR.

BC Hydro also made significant progress on the Peace Region Electricity Supply (**PRES**) Project, which is an undertaking under section 4(2) of the GGRR. In Fiscal 2020, actual expenditure on the PRES Project was $83.0 million, with a cumulative cost of $152.9 million as at the end of the reporting period. It is premature to report any avoided greenhouse gas emissions for the PRES Project as it is not yet in-service. Total expenditures of $1.7 million were incurred in Fiscal 2020 with respect to a [redacted] generation agreement BC Hydro entered into with [redacted] (hereinafter referred to as **Company X**) to ensure the provision of reliable electricity service from the transmission system [redacted]. This is also an undertaking under section 4(2) of the GGRR.

2 The GGRR and Cost Recovery

Section 18(1) of the CEA empowers the Lieutenant Governor in Council to prescribe, by regulation, classes of undertakings for the purpose of reducing greenhouse gas (**GHG**) emissions. Public utilities that choose to engage in undertakings that are within one or more prescribed class of undertaking are assured of being able to recover the costs of the undertaking in their rates, and may not be prevented by the British Columbia Utilities Commission from engaging in the undertaking. The GGRR was first issued in 2012, and amended in 2017 to include eight new classes of

electrification undertakings. Together, CEA section 18 and the GGRR provide one of the statutory pillars of the Province's GHG emission reduction policy.

The eight new classes of electrification undertaking prescribed by GGRR section 4 can be divided into two broad categories: (i) those that are program based, similar to BC Hydro's demand-side management programs;[2] and (ii) those that are infrastructure based.[3] BC Hydro refers to all the prescribed undertakings it carries out as Low Carbon Electricfication or LCE activities, and further refers to its undertakings that fall within one of the classes in the former category as LCE Programs, and to its undertakings that fall within one of the classes in the latter category as LCE Infrastructure Projects.

This nomenclature corresponds to the "Electrification Programs" referred to in subsection 6.8 of the GGRR Reporting Requirements, and "Transmission, Distribution and Generation" referred to in subsection 6.9 of the GGRR Reporting Requirements, respectively.

One of the legal consequences of the public utility program or project being a "prescribed undertaking" is that the public utility is entitled to recover the costs of the program or project in its rates. That legal consequence is meaningful only if the costs associated with particular programs and projects that are prescribed undertakings can be identified and thus are accounted for by the public utility.[4] Accordingly, the prescribed undertakings described in this Fiscal 2020 GGRR Annual Report are those programs and projects with recorded costs in Fiscal 2020.

[2] Being the classes of undertaking prescribed by subsections 4(3)(a)(i), 4(3)(a)(ii), 4(3)(b)(i), 4(3)(b)(ii), 4(3)(c) and 4(3)(d) of the GGRR. Under section 4(3)(c) and (d) of the GGRR, undertakings can be both projects or programs. For simplicity, BC Hydro may refer to projects under these sections as programs as well or use projects/program interchangeably.

[3] Being the classes of undertaking prescribed by subsections 4(2) and 4(3)(e) of the GGRR.

[4] BC Hydro notes that the costs it incurs with regard to its LCE programs are all deferred to the DSM Regulatory Account, pursuant to Order in Council No. 100, issued March 1, 2017. Generally, the costs it incurs in regard to its LCE Infrastructure Projects are capitalized.

3 State of the Market and Program Planning

3.1 Background

In December 2018, the Province launched the CleanBC Plan, which set out a pathway to enable the Province to meet its 2030 GHG emission targets. The CleanBC Plan calls for BC Hydro to continue to make investments in our transmission system to make it easier for large industrial operations to access clean electricity.

The February 2019 Minister's Mandate Letter to BC Hydro included an expectation for BC Hydro to continue to provide leadership in advancing the Province's climate action strategies, including through electrification, fuel switching, and energy efficiency initiatives in the built environment, transportation, oil and gas, and other sectors.

In July 2019, the Terms of Reference for Phase 2 of the Comprehensive Review (**Phase 2 Review**) were released by the Province. The objective of the Phase 2 Review is to develop recommendations that will strategically position BC Hydro for long-term success, while meeting the Province's climate goals, keeping rates affordable for British Columbians, furthering reconciliation with Indigenous Nations, and supporting quality economic development. The actions taken as part of the Phase 2 Review will support the Province's CleanBC plan, including to expand the electrification of our growing economy over the coming decades.

3.2 State of the Market Discussion

This section presents an overview of the LCE market with respect to BC Hydro's activities in Fiscal 2020. Detailed information on the LCE Programs and LCE Infrastructure Projects is set out in section 4 and section 5, respectively below.

Beginning in fiscal year ending March 31, 2018, BC Hydro moved forward with eight projects, refered to as Initial LCE Projects, to assess and support immediate low

carbon electrification opportunities among our customers. These projects are within one (or more) class of undertakings defined in subsections 4(3)(a) and 4(3)(c). These Initial LCE Projects also

- helped us gain a greater understanding of the technology, market, and barriers that customers and BC Hydro would face when developing low carbon electrification options; and
- provided BC Hydro with the ability to act early and capture time sensitive opportunities that could help inform the development of a broader low carbon electrification plan.

The Initial LCE Projects introduced in the GGRR Annual Report filed in July 2018 have been updated in subsequent reports as the expenditures were incurred. They are also included in Table 5 within this report.

In fiscal year ending March 31, 2019 (**Fiscal 2019**), BC Hydro developed and advanced a new multi-year BC Hydro funded LCE program that was designed to work in coordination with the Province's programs and is generally refered to as the BC Hydro LCE Program. The BC Hydro LCE Program is further described in section 4.

BC Hydro is forecast to be in an energy surplus position for an extended period of time. During this surplus period, the LCE-driven incremental electricity sales will increase BC Hydro's revenues and can make rates lower than they otherwise would have been to the extent there is a positive differential between domestic electricity rates and forecast export prices. Such incremental electricity sales are also expected to reduce GHG emissions from what they otherwise would have been, thus having an environmental benefit.

Pursuant to the Reporting Requirements, a report by a Fairness Advisor must be provided on the competitiveness of any call process held during the reporting period.

Consistent with our DSM process, opportunities for LCE Programs are solicited broadly through BC Hydro's customer and community-facing employees and our existing commercial and industrial energy manager networks. BC Hydro confirms that in Fiscal 2020 it did not hold any call processes in regard to its LCE Programs or its LCE Infrastructure Projects and therefore no Fairness Advisor report is required.

3.3 Province of B.C. Programs

In Fiscal 2019, BC Hydro became responsible for delivering the CleanBC Better Buildings program (initially called EfficiencyBC) on behalf of the Province. The CleanBC Better Buildings is a program funded by provincial and federal governments that provides financial incentives to help households and businesses save energy and reduce GHG emissions by switching to high efficiency heating equipment and making building envelope improvements. BC Hydro is delivering the component of the CleanBC Better Buildings program that helps customers switch from fossil fuels to clean electricity.

In Fiscal 2020, BC Hydro became responsible for delivering the CleanBC 'Go Electric BC' EV charger rebate program. The program provides rebates toward the cost of the purchase and installation of eligible level 2 EV charging equipment, and supports multi-unit residential buildings (**MURB**) and workplaces seeking solutions for their EV charging needs. The CleanBC program influences what programs BC Hydro funds as it seeks to align with and complement the programs and projects funded by the Province through the CleanBC program. BC Hydro's programs that complement the CleanBC programs are discussed in section 4 below.

4 LCE Programs

4.1 Overview

In Fiscal 2020, BC Hydro spent approximately $16.9 million on its LCE Programs, including expenditures for Initial LCE Projects[5] and the BC Hydro LCE Program. Particularly, expenditures for two new projects, six new studies, and public awareness campaign activities, all undertaken in accordance with section 4(3)(a) of the GGRR. Additionally, expenditures were incurred for seven new studies undertaken under section 4(3)(c) of the GGRR. BC Hydro also incurred expenditures to enable the development of standards under section 4(3)(d) of the GGRR. These LCE undertakings listed above are discussed in section 4.2.

In Fiscal 2020, BC Hydro made new funding commitments of approximately $1.1 million, but there are no expenditures for the projects associated with those commitments in the financial reporting for Fiscal 2020. As noted in the previous Annual Reports, all funding commitments that do not result in expenditures in Fiscal 2020 will not be included in this document and will be included in future GGRR reports in the fiscal year when the expenditures are incurred.

As discussed above, since Fiscal 2019, BC Hydro delivers the CleanBC Better Buildings program on behalf of the Province. To complement the Province's program, in Fiscal 2019, BC Hydro developed and advanced a new multi-year BC Hydro funded LCE Program which was designed to reach customers and to enable opportunities not covered by GHG emissions reduction programs funded by the Province or the federal government.[6] BC Hydro approved expenditures of $16.6 million for this multi-year program, focusing on opportunities in industrial process, transportation, and new construction. In Fiscal 2020, the Province working

[5] The Fiscal 2020 expenditures referenced as Initial LCE projects include two projects classified under section 4(3)(a) and one study classified under section 4(3)(c). All other expenditures are referenced as BC Hydro LCE Program.

[6] This multi-year program may sometimes be referred to as "BC Hydro LCE Program" to distinguish it from the programs funded by the Province.

in co-ordination with BC Hydro made a decision to direct a portion of the CleanBC funding to support the design and construction of new high-performance buildings that use high-efficiency electricity in place of fossil fuels in order to reduce GHG emissions. The introduction of the CleanBC funding prompted BC Hydro to re-consider the funding originally included within the multi-year BC Hydro LCE Program. BC Hydro was able to apply funds originally intended to support new construction opportunities to support additional energy management study and implementation opportunities for industrial and large commercial customers. As part of this multi-year program, in Fiscal 2020, BC Hydro undertook activities as prescribed undertakings falling under section 4(3)(a), section 4(3)(c), and section 4(3)(d) of the GGRR. These undertakings are discussed in section 4.2 below.

4.2 Fiscal 2020 LCE Programs

The projects and activities within the LCE Programs (i.e., classes of undertaking prescribed by subsections 4(3)(a)(i), 4(3)(a)(ii), 4(3)(b)(i), 4(3)(b)(ii), 4(3)(c) and 4(3)(d) of the GGRR) that incurred expenditures in Fiscal 2020 are listed below. Table 5 includes the LCE Program results for Fiscal 2020, and Figure 1 and Figure 2 show LCE Program activities and expenditures by geographic distribution and sector distribution, respectively.

Consistent with the reporting requirements, two larger, upstream natural gas projects have been described at a project level, while the remaining Fiscal 2020 activities are components of the BC Hydro LCE Program, and these activities have been aggregated and summarized at the program level.

(i) [redacted] **(Project 3** in Table 5): This project is interconnected to BC Hydro transmission line [redacted] in Northeastern B.C. It is an undertaking within the class of prescribed undertakings set out in section 4(3)(a) of the GGRR. There are multiple project phases. The first

two phases achieved Facility Commercial Operation Date (**Facility COD**)[7] in Fiscal 2019 and Fiscal 2020, respectively, pursuant to the terms of the LCE Incentive Agreement. Further project phases are expected to achieve Facility COD in subsequent fiscal years. The purpose of the supporting funds from BC Hydro is to assist Company X in the acquisition, installation, and use of equipment that will use BC Hydro's electricity instead of natural gas to power natural gas extraction, processing and production operations.

(ii) [redacted] (**Project 4** in Table 5): BC Hydro also has an LCE Incentive Agreement for the [redacted] site. This project is interconnected to BC Hydro transmission line [redacted] in Northeastern B.C. There are multiple project phases. Similar to Project 3, this project is an undertaking within the class of prescribed undertakings set out in section 4(3)(a) of the GGRR. Project 4 was energized in Fiscal 2019 and the first two phases achieved Facility COD in Fiscal 2020 in accordance with the LCE Incentive Agreement.

(iii) The BC Hydro LCE Program: Table 1 outlines the components of the BC Hydro LCE Program and the relevant subsections of the GGRR.

Table 1 Components of the BC Hydro LCE Program

Components	GGRR Subsection
Energy Management Studies and Incentives	4(3)(a), 4(3)(b)
Public Awareness Campaigns	4(3)(a), 4(3)(b)
Research and Pilots	4(3)(c)
Standards Enabler	4(3)(d)
Education & Training	4(3)(b)

An overview of activities in Fiscal 2020 for each of the components of the BC Hydro LCE Program is provided below.

[7] Under the Incentive Agreement, Facility COD is required before an incentive fund payment can be made to the customer.

Energy Management Studies and Incentives: BC Hydro provided supporting resources to studies of low carbon electrification opportunities in the built environment, industrial process, and transportation sectors. Table 2 provides descriptions. In Fiscal 2020, expenditures for Energy Management Studies and Incentives are reflected in the BC Hydro LCE Program, row 10 in Table 5.

Table 2 Energy Management Studies and Incentives

Sector	Description	Location	Studies Completed	GGRR Subsection
Built Environment	There were three studies in the built environment sector completed in Fiscal 2020. Two of the three studies were for large commercial re-development sites in the Lower Mainland (North Vancouver and Burnaby). Each study investigated low carbon electrification district energy options which could be used in place of fossil fuel-based systems for providing space heating and domestic hot water. The two concluded studies are with customers for their consideration on further study or investment decisions. The third study was for a post-secondary institution located in the Lower Mainland. The study examined electrification opportunities for campus building retrofits as well as future construction. Recommendations from the study will feed into the customer's plan to meet Carbon Neutral Government[8] targets for public sector GHG reduction (50 per cent reduction from the 2007 baseline by 2030), while the post-secondary institution continues to grow. The recommendations are with the customer for presentation to a committee within the institution for review and direction.	Lower Mainland	3	4(3)(a)

[8] The Carbon Neutral Government program is further described at the following link: https://www2.gov.bc.ca/gov/content/environment/climate-change/public-sector/carbon-neutral.

Sector	Description	Location	Studies Completed	GGRR Subsection
Industrial Process	There were two studies in the industrial process sector completed at two separate industrial customer sites in Fiscal 2020. One of the studies examined options to utilize electric boilers to reduce or completely remove the use of natural gas-fired boilers in steam production. The study is complete and now with the customer for consideration on further study or investment decision. The other study examined options for the replacement of diesel-powered pumping systems used within mining operations with BC Hydro electricity powered pumps. This completed study enabled the customer to move forward with project implementation which is expected to be completed in Fiscal 2021.	Vancouver Island Sunshine Coast, North	2	4(3)(a)
Transportation	There was one study in the transportation sector completed in Fiscal 2020. This study provided an assessment of electric vehicle charging infrastructure that could address the charging requirements for fleet vehicle conversion as well as employee charging needs. The study is complete and with the customer for consideration on further study or investment decision.	Lower Mainland	1	4(3)(a)

Research and Pilot Projects and Studies: BC Hydro provided supporting resources to advance research and pilot projects and studies involving low carbon electrification opportunities in the built environment, industrial process, and transportation sectors. Projects and studies supported research, development, or application of a technology that was new or unique and had not been proven in or adopted in B.C., or provided information that may inform future BC Hydro programs and customer opportunities to use electricity instead of other sources of energy that produce more GHG emissions. Table 3 below provides descriptions of the research and pilot projects and studies. In

Fiscal 2020, expenditures for Research and Pilot projects and studies are reflected in the BC Hydro LCE Program, row 9 and 11 in Table 5.

Table 3 Research and Pilots

Sector	Description	Location	Studies Completed	GGRR Subsection
Built Environment	There were two projects completed in Fiscal 2020 which examined LCE technology options for the built environment. One project consisted of six individual buildings selected to represent a sampling of various building types, building code requirements, technologies, and studies the low carbon electrification opportunities that we may see come forward as implementation projects in these building types. The information gained from this project was used by BC Hydro and Province to inform the development of the CleanBC Better Buildings program. The focus of the second project was for the customer to have research completed on the potential of a five-year "building by building" retrofit approach, considering a number of technologies that could enable electrifying building systems instead of using other sources of energy that produce more greenhouse gas emissions. The project is complete and has facilitated the customer to advance a detailed feasibility study for campus wide heating system electrification.	Lower Mainland, Interior	2	4(3)(c)
Industrial Process	There was one industrial process research study completed at a customer site in Fiscal 2020. The study examined options for alternative fuel vehicles in place of diesel fueled vehicles for use in mining operations. The study provided a recommendation that the tethered electric vehicle could be feasible among the potential low carbon vehicle types analyzed and should progress to a detailed feasibility study. The recommendation is with the customer for their consideration on further study or investment decision.	Interior	1	4(3)(c)

Sector	Description	Location	Studies Completed	GGRR Subsection
Transportation	In Fiscal 2020, there were four studies which examined low carbon electrification technology options in the Tranportation sector. Two of the four studies completed were for large sea port operations, and the outcome of each was the development of low carbon electrification road maps which assessed the individual port operations and identified electrification scenarios and technologies that could be implemented in the near and long term. The third study assessed options for the installation of battery electric yard tractors and the associated electric vehicle (EV) charging equipment and supporting electrical infrastructure at a Lower Mainland sea port to replace an existing fleet of diesel-powered yard tractors. A technical trial was recommended as the next step from this study and is being considered by the customer. The forth study is a pilot project in the Lower Mainland, which studies the replacement of four diesel buses with four electric-battery buses and two charging stations. The two-year pilot was developed to evaluate the feasibility of technology using electric battery buses and charging stations on a broader basis. In September 2019, the first of four battery electric buses and two high-powered, standardized overhead charging systems began operation.	Lower Mainland, North	4	4(3)(c)

Public Awareness Campaign: In Fiscal 2020, as part of the multi-year BC Hydro LCE Program, BC Hydro continued public awareness efforts with respect to owning and using electric vehicles in B.C. The campaign ran from September 2019 to November 2019, and focused on raising awareness of electric vehicles as a clean, practical choice for British Columbians. The campaign also promoted the availablity of EV home charging solutions and charger rebates. In co-ordination with the Province, the ‘Go Electric BC’ EV charger rebate ‘Top-up’ promotion was developed, and BC Hydro supported

customers with rebate 'top-ups' directed toward the cost of purchase and installation of eligible level 2 EV charging equipment for homeowners. In Fiscal 2020, expenditures for this public awareness campaign including the 'Go Electric BC' EV charger rebate 'Top-up' promotional program are included in the BC Hydro LCE Program, row 10 in Table 5. The public awareness campaign program and 'Go Electric BC' EV charger rebate 'Top-up' promotional program are undertakings within the class of prescribed undertakings set out in section 4(3)(a) of the GGRR.

Standards Enabler: BC Hydro has been working with local governments to support the development and implementation of policies, bylaws, and strategies for energy efficient buildings and local communities.

- Targeting transportation electrification, BC Hydro supported the development of electric vehicle and low carbon mobility planning and implementation in Township of Langley, City of Surrey, City of Kamloops, Capital Regional District, City of Vancouver, District of Saanich, and the Regional District of East Kootenays. A local government EV peer network was coordinated to advance adoption and implementation of EV-ready new construction requirements for residential buildings. These requirements have now been adopted by 17 local governments. This work has provided a template for the development of similar EV-ready new construction requirements for non-residential buildings (commercial, office, and institutional).
- Targeting the built environment, BC Hydro worked on a roadmap with local, provincial, and federal governments and industry partners to understand and remove barriers for heat pump adoption. This work included identification of policy, bylaw and compliance tools available to local governments to make it easier for private building owners to install heat pump within new and

existing buildings. Tools being explored include new construction requirements, siting guidelines, and bylaw requirements.

- For new construction, five local governments (City of Richmond, City of Surrey, City of New Westminster, City of Port Moody, City of Burnaby) have taken steps to encourage low carbon electrification by implementing measures relating to the Energy Step Code in Part 3 buildings[9]. In Fiscal 2020, the District of West Vancouver implemented measures to support low carbon electrification of the new construction of residential Part 9 buildings.[10] Actions taken are shared through the BC Energy Step Code local government peer networks to encourage policy consistency.

Standards Enabler undertaking expenditures fall under section 4(3)(d) of the GGRR. In Fiscal 2020, expenditures for Standards Enabler undertakings are reflected in the BC Hydro LCE Program, row 12 in Table 5. Ratepayer impacts and estimated GHG emission reductions respecting these undertakings are also shown in Table 5 below.

4.3 Methodology and Verification Methods

Depending on individual projects or programs within the LCE Programs, there can be up to four distinct activities that BC Hydro may use to review and verify estimates of incremental electrical load and emission reductions arising from electrification. These are: (i) technical review; (ii) site inspection; (iii) measurement and verification; and (iv) evaluation. Results from each area may be used in project or program management to ensure that BC Hydro receives the expected benefits. BC Hydro will be selective in the use of these processes, and focus its efforts where warranted to improve the accuracy of estimates and reduce exposure to risk. This approach mirrors BC Hydro's current approach to demand-side management electricity

[9] As classified within the BC Building Code, these are buildings that are at least four storeys and have a building area greater than 600 square metres.

[10] As classified within the BC Building Code, these are buildings that are no more than three storeys and have a building area no more than 600 square metres.

savings, and provides estimates for both additional electricity demand and greenhouse-gas emission reductions.

The GHG emission reduction estimates are developed as part of the technical review for each project or program application and may be adjusted based on the outcome of site inspections and the electricity demand findings resulting from the measurement and verification activities.

The methodology BC Hydro has used to estimate GHG emission reductions involves developing engineering estimates of the amount of carbon-based fuel that will be offset by electricity, and quantifying the associated GHG emission reductions using the 2017 B.C. Best Practices Methodology for Quantifying Greenhouse Gas Emissions. The calculation nets out the GHG emissions associated with BC Hydro's electricity, which are also quantified using the 2017 B.C. Best Practices Methodology for Quantifying Greenhouse Gas Emissions.

BC Hydro notes that this estimate may differ from actual GHG emission reductions as determined by the customer specific to their unique electrification project(s). Where an actual value has been provided to BC Hydro by the customer, or reported by the customer to the government through an Industrial Emissions Report, BC Hydro will show the customer-reported value in Column H (i) of Table 5. BC Hydro may also conduct a technical review of baselines, calculations, and assumptions used to determine the GHG reductions in the Industrial Emissions Report. Any changes to the value reported in a previous reporting period will be reflected in the cumulative values in Column H (ii) of Table 5. The methodology used for typical electrical energy impact calculations for LCE projects is as follows:

- total annual energy consumption = facility baseline electricity consumption + incremental LCE electricity consumption +/- baseline energy adjustments; and

- total average monthly electrical demand = baseline average monthly electrical demand + incremental LCE average monthly electrical demand +/- baseline demand adjustments.

Baseline adjustments are determined based on any net baseline energy consumption impacts that may be a result of the LCE project.

The two LCE projects (Project 3 and Project 4) completed in Fiscal 2020 have gone through a technical review and had a site specific measurement and verification plan for the estimated additional electricity consumption and demand. The plan was developed and included as part of the funding agreement between BC Hydro and the recipient. The respective methodology used for these two projects generally follow 'Option B, Retrofit Isolation: All Parameter Measurement', as set out in the International Performance Measurement & Verification Protocol (IPMVP) – Core Concepts October 2016 EVO 10000 – 1:2016.

4.4 Performance Metrics

BC Hydro outlines separately the different performance metrics used for the projects, studies, public awareness campaigns, and standards enablers described in section 4.2 above.

4.4.1 LCE Projects

For the two projects (Project 3 and Project 4) completed in Fiscal 2020, using above mentioned methodologies for electricity consumption, demand and GHG emission reductions, BC Hydro will consider the following to verify project performance:

1. Project completion – has the project progressed as described in the application?;
2. Electrical energy consumption – did the project consume the amount of electrical energy as described in the LCE Agreement?; and

3. GHG emission reduction – was fossil fuel consumption replaced with BC Hydro electricity? Was an associated GHG emission reduction realized?

Measurement and verification activities for the projects are underway.

4.4.2 LCE Studies, Research and Pilots

As discussed in section 4.2 above, BC Hydro provided funding to support six studies and seven research/pilot projects. Those studies are critical in enabling customers to build the business case for project implementation as well as providing key inputs on barriers, costs, and benefits into BC Hydro program development and design.

Performance metrics for LCE studies consider whether the study/project may yield the following information, such as

1. information which could inform and improve accuracy of the project modeling assumptions;
2. information which could inform and improve understanding of market barriers and customer drivers;
3. site specific investigation and engineering analysis at a level sufficient to determine if advancing the project would provide tangible benefits that would make business sense for the customer and BC Hydro to continue supporting the project; and
4. learnings that may inform future BC Hydro programs and customer opportunities.

The six studies and seven research/pilot projects completed in Fiscal 2020 performed well against the above performance metrics.

4.4.3 Public Awareness Campaign

For public awareness campaigns, BC Hydro may track the performance of awareness activities through measures such as:

- Reach measures that are volume-based and support building awareness through impressions (TV, out of home advertising, online), video views, and media pickups;
- Traction measures that are sentiment-based and support receptiveness such as favourability, likability, changes pre to post; and
- Action measures that drive participation through clicks, sessions, contest entries, social engagement, and customer intercepts at events or program participation.

The public awareness campaign completed in Fiscal 2020 performed well against the above performance metrics.

4.4.4 Standards Enabler Undertakings

BC Hydro works with standards making bodies such as various levels of government that are responsible for land use, building codes, product and equipment standards, land use policies, bylaws, and community plans, to advance standards for technologies that use electricity instead of other sources of energy that produce more GHG emissions, or technologies that affect the use of electricity by other technologies that use electricity instead of other sources of energy that produce more GHG emissions. Performance metrics for standards enabler undertakings consider whether the project/activity may yield information to or enable advancement of the government efforts in standards, policies, bylaws, and community plans, which enable electrification of new construction and retrofits within the built environment and transportation sector.

The standards enabler undertakings completed in Fiscal 2020 performed well against the above performance metrics.

4.5 Cost-Effectiveness

As required under section 4(4) of the GGRR, undertakings are in the class of undertakings prescribed by sections 4(3)(a) or 4(3)(b) of the GGRR only if they satisfy a cost-effectiveness test. That cost-effectiveness test is defined in section 4(1) of the GGRR and requires that each undertaking that is an undertaking within the class of undertakings prescribed by subsections 4(3)(a) or 4(3)(b) of the GGRR have a positive net present value (NPV), with the measure of a program's NPV being that of all of the programs that fall within the class of undertakings described in subsections 4(3)(a) and 4(3)(b) of the GGRR. The GGRR cost-effectiveness test is measured only at the time BC Hydro decides to carry out the program.

Table 5 shows the GGRR net present value (**NPV**) of the various LCE projects or programs prescribed under section 4(3)(a) and 4(3)(b) of the GGRR. The total GGRR NPV of these undertakings is $118.6 million which includes actual and committed expenditures and benefits from past, current, and future reporting periods. The GGRR NPV indicates that these undertakings are cost-effective.

4.6 Summary of Results

4.6.1 Explanation of Terms

Table 4 includes a description of the information provided in Table 5 below with regard to the LCE Programs.

Table 4 LCE Programs Results Table: Explanation of Terms

Column	Heading	Descriptions
A	GGRR	Applicable section of the GGRR.
B	Project / Program/Contract / Expenditure	Low-carbon electrification activities to encourage or enable the use of electricity in place of other sources of energy that produce more greenhouse gas emissions.
$C_{(i)}$	Actual Expenditure ($ million)	Costs incurred at the end of the current reporting fiscal year.
$C_{(ii)}$	Cumulative: Actual Expenditures ($ million)	The sum of successive costs incurred as at the end of the reporting fiscal year.
D	Cost Effectiveness ($ million): NPV to 2030 (Fiscal 2031)	The present value of the costs and benefits are determined using a discount rate equal to BC Hydro's weighted average cost of capital. The present value of the costs are subtracted from the present value of the benefits from the project start year to last year in the calculation period (Fiscal 2031) to determine the net present value for the project.
E	Cost Effectiveness ($ million): GGRR NPV to 2030 (Fiscal 2031)	The calculation of the GGRR NPV is based on costs and benefits as defined in the GGRR as of Fiscal 2018. Per that definition, benefits mean all revenues BC Hydro expects to earn as a result of implementing LCE programs falling under subsections 4(3)(a) or 4(3)(b), less revenues that would have been earned from the sale of that electricity to export markets. Costs mean all the costs BC Hydro expects to incur to implement LCE programs falling under subsections 4(3)(a) or 4(3)(b), including development and administration costs. For clarity, costs includes historic and future cost, committed expenditures and benefits from past, current and future reporting periods.
$F_{(i)}$	Actual: Additional Energy Consumption (MWh/year)	The average annual additional energy consumption estimated to be delivered from the project in the current reporting fiscal period.
$F_{(ii)}$	Cumulative: Additional Energy Consumption (MWh/year)	The sum of the successive average annual additional energy consumption estimated to be delivered from the project as at the end of the reporting fiscal period.
$G_{(i)}$	Actual: Additional Capacity Demand (MW)	The total energy demand added.

Column	Heading	Descriptions
$G_{(ii)}$	Cumulative: Additional Capacity Demand (MW)	The sum of the successive energy demand addition.
$H_{(i)}$	Actual: Estimated GHG Emission Reductions (tonnes CO_2e/year)	The average annual tonnes per year of carbon dioxide equivalent reductions from the project in the current reporting fiscal period.
$H_{(ii)}$	Cumulative: Estimated GHG Emission Reductions (tonnes CO_2e/year)	The sum of the successive additional average annual tonnes per year of carbon dioxide equivalent reductions from the project as at the end of the reporting fiscal period.

4.6.2 Results Table

Table 5 summarizes information regarding the LCE Programs that are undertakings prescribed by sections 4(3)(a)(i), 4(3)(a)(ii), 4(3)(b)(i), 4(3)(b)(ii), 4(3)(c) and 4(3)(d) of the GGRR. The indications of "n/a" in Table 5 are due to: (1) the nature of the project, study or program, such that requested information cannot be obtained; or (2) the project, study, or program are prescribed by sections 4(3)(c) and 4(3)(d) of the GGRR and thus the cost-effectiveness test does not apply. BC Hydro provides as Attachment 3 an excel spreadsheet with annual expenditures, in total and by project, study, or program, as outlined in the GGRR Reporting Requirements.

Table 5 LCE Programs[1] Results for Year Ending March 31, 2020

	A	B	C		D	E	F		G		H	
	GGRR	**Project/Program/Contract/Expenditure**	**Expenditure ($ million)**		**Cost Effectiveness ($ million)**		**Additional Energy Consumption[3] (MWh/year)**		**Additional Demand (MW)**		**GHG Emission Reductions (tonnes CO_2e/year)**	
			Actual (i)	**Cumulative (ii)**	**NPV to 2030 (Fiscal 2031)**	**GGRR NPV to 2030 (Fiscal 2031)[2]**	**Actual (i)**	**Cuml (ii)**	**Actual (i)**	**Cumulative (ii)**	**Actual (i)**	**Cumulative (ii)**
1	4(3)(c)	Vancouver Fraser Port Authority	0.00	0.07	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2	4(3)(c)	[redacted] (Project 1)[5]	0.00	0.01	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
3	4(3)(c)	[redacted] (Project 2)[5]	0.00	0.01	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
4	4(3)(c)	BC Hydro Program Staff Labour	0.00	0.12	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
5	4(3)(a)	[redacted] (Project 3)	1.42	7.77	64.3	64.3	26,061	130,305	3.5	17.5	15,582[4]	77,911
6	4(3)(a)	[redacted] (Project 4)	11.25	11.25	45.9	110.2	186,150	186,150	25.0	25.0	111,302[4]	111,302
7	4(3)(a)	Thompson Rivers University	0.00	0.28	0.3	110.5	0	2,737	0.0	0.0	0	562
8	4(3)(c)	Copper Mountain Mine	0.00	0.07	n/a	110.5	n/a	n/a	n/a	n/a	n/a	n/a
9	4(3)(c)	Translink	0.50	0.50	n/a	110.5	1,254	1,254	0.8	0.8	215	215
10	4(3)(a)(b)	BC Hydro LCE Program	3.17	3.57	8.2	118.6	0	0	0.0	0.0	0	0
11	4(3)(c)	BC Hydro LCE Program	0.36	0.37	n/a	118.6	0	0	0.0	0.0	0	0
12	4(3)(d)	BC Hydro LCE Program	0.23	0.26	n/a	118.6	0	0	0.0	0.0	0	0
		Total	**16.93**	**24.27**	**118.6**	**118.6**	**213,465**	**320,446**	**29.3**	**43.3**	**127,099**	**189,989**

1 LCE Programs shown in the table include both LCE Initial Projects (rows 1 to 9) and associated expenditure and the BC Hydro LCE Program (rows 10 to 12). LCE Initial Projects are reported individually, with the introduction of the BC Hydro LCE Program individual project expenditure has been aggregated.

2 Where a project/program has no actual or cumulative expenditures, but has an NPV, this means that the decision to go ahead with that project/program was made in this (or previous) reporting periods, but that the project/program is not expected to be implemented until a future year.

3 Values reported in column F represent the 'run rate' or annualized rate of additional energy consumption.

4 The GHG emission reductions shown are associated with the electrification of Project 3 and 4 and they represent estimates based on engineering calculations at the time BC Hydro made the decision to carry out offering incentive funding to the project. The GHG emission reductions associated with these projects are also referenced in section 5 of this report.

5 Project 1 and 2 were described in the Fiscal 2018 Annual Report filed in July 2018.

4.7 LCE Programs by Region and Sector

The GGRR Reporting Requirements also request graphical depictions of the distribution by region in the Province and the distribution by customer sector where possible. The sectors (built environment, industrial process, and transportation) shown in the chart below align with those reflected in the CleanBC plan and in the description in section 4.2 of this report.The requested graphical depictions are provided below. For the purpose of showing activities distributed by region and by sector we have used the term 'Project' to represent individual studies, research or pilot activites, or implementation projects where customers have acquired and installed equipment that uses electricity instead of other sources of energy that produce more GHG emissions as described in section 4.2. We did not include Public Awareness Campaigns in Figure 1 or Figure 2 as those activities were carried out Province-wide and targeted a single sector (transportation) and as such would not be meaningful in a graphical depiction.

Figure 1 highlights that the highest number of projects are in the Lower Mainland, while Figure 2 highlights that projects are equally distributed across sectors.

Figure 1 Projects by Geographic Region

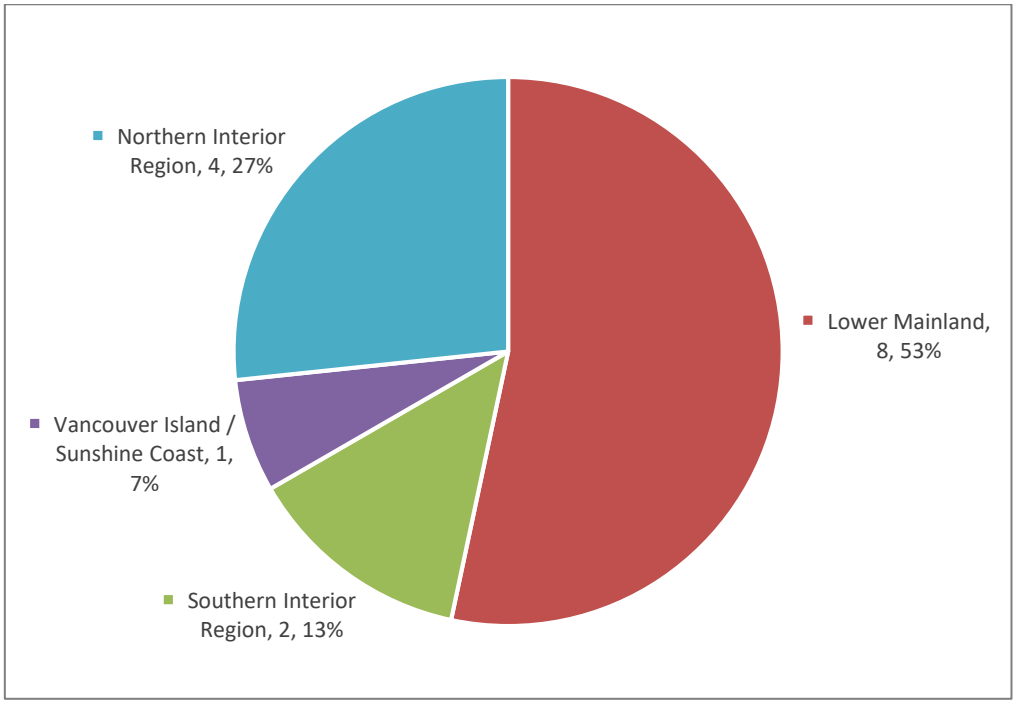
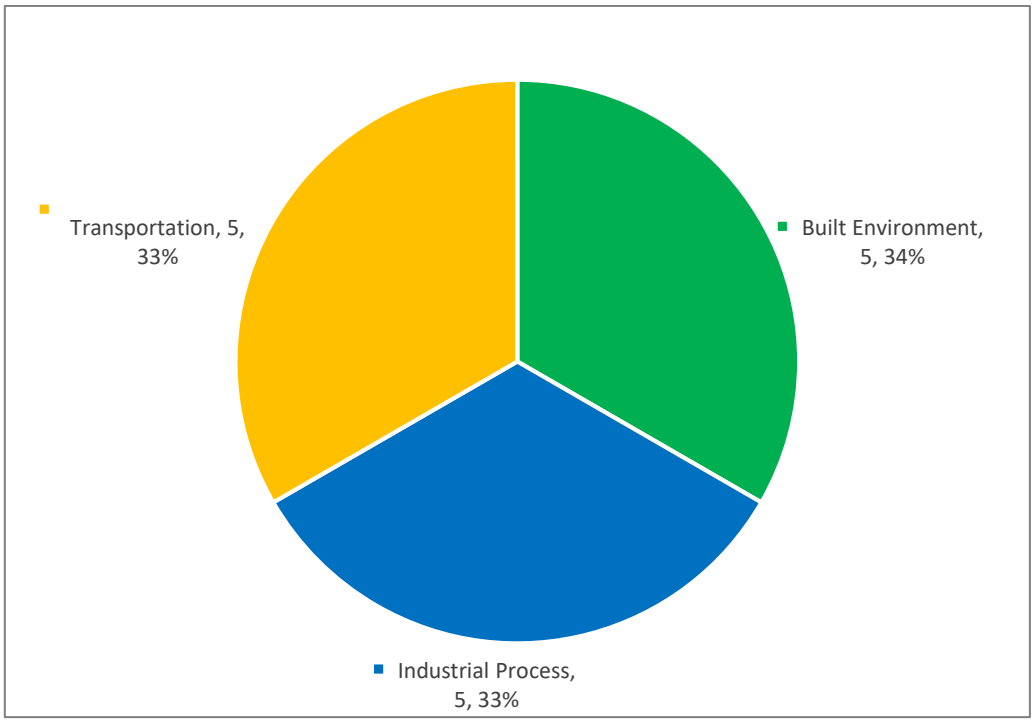


Figure 2 Projects by Sector



5 LCE Infrastructure Projects

5.1 Overview

In this section, we describe the LCE Infrastructure Projects (i.e., being projects within the classes of undertaking prescribed by subsections 4(2) or 4(3)(e) of the GGRR) and available evaluation results.

Northeast British Columbia is forecasted to experience a significant increase in natural gas production and processing capacity, primarily in the Montney region. In the absence of adequate electricity supply, much of this development will be powered by natural-gas fired production processes. Meanwhile, BC Hydro's transmission system in this region is constrained. Further, the transmission system's ability to supply new loads in the South Peace region at all, even with a reduced level of reliability, is expected to be exceeded in summer 2021. Accordingly, BC Hydro will construct and operate new transmission and distribution facilities, and/or provide for [redacted] generation until such system upgrades are completed. These LCE Infrastructure Projects will enable the provision of reliable electricity service as a power supply alternative to carbon-based fuels, which will enable the reduction of existing GHG emissions or avoidance of future incremental GHG emissions.

5.2 Fiscal 2020 LCE Infrastructure Projects

In Fiscal 2020, BC Hydro incurred expenditures of $84.7 million in regard to two LCE Infrastructure Projects. Expenditures incurred and recorded in future fiscal years will be included in the applicable future GGRR annual report.

5.2.1 Peace Region Electricity Supply (PRES) Project

The PRES Project was introduced in the Fiscal 2018 GGRR Annual Report. As explained in the Fiscal 2018 report, the PRES Project will enable natural gas producers and processors to electrify their existing and new operations, rather than self-supplying with natural gas. This includes natural gas producers and processors

as defined in GGRR sections 4(2)(a)(i) and (ii). The PRES Project is expected to reduce GHG emissions in B.C. from any existing plant or from any prospective new plant that elects to take supply from BC Hydro rather than self-supply using natural gas.

The PRES Project was approved by BC Hydro's Board of Directors for implementation in June 2018. When BC Hydro's Board of Directors approved the PRES project, BC Hydro reasonably expected that the PRES project would have an in-service date no later than December 31, 2022. Therefore, the PRES Project is a prescribed undertaking pursuant to GGRR section 4(2). As of this report, the PRES Project has an expected in-service date of October 2021.

The PRES Project is currently in the Implementation Phase and has an estimated total capital cost of $285 million. As of the end of Fiscal 2020, BC Hydro has incurred $152.9 million in total capital expenditures on developing the PRES Project, of which $83.0 million was incurred in Fiscal 2020.

During Fiscal 2020, BC Hydro completed the detailed design work for the PRES Project, and completed clearing and access road construction for the new transmission line right-of-way. BC Hydro also started construction work on the transmission line, continued work at South Bank Substation and completed construction work at Shell Groundbirch Substation.

BC Hydro will report on performance metrics and environmental benefits of undertaking the PRES Project when it is in-service, and existing and new natural gas producing or processing plant operations are connected to the BC Hydro's system.

5.2.2 [redacted] Generation Agreement

As reported in the Fiscal 2018 GGRR Annual Report, BC Hydro entered into a Generation Agreement with Company X to provide [redacted] generation as a [redacted]

During periods of actual or anticipated system constraint, under the Generation Agreement, BC Hydro has the right to direct Company X to [redacted] island its facilities in Northeast B.C. [redacted] from the grid and self-supply with electricity produced by Company X's on-site generating units. BC Hydro treats Company X's generation as a system resource, such that any self-generated electricity [redacted] replaces electricity that would otherwise be provided from the BC Hydro transmission system. The Generation Agreement achieves the purpose of providing reliable electricity supply to electrified Company X's facilities during events of system constraint [redacted].

The total forecast nominal value of the Generation Agreement is $12.0 million. Total expenditures incurred in Fiscal 2020 with respect to this [redacted] agreement are $1.7 million.

5.3 Quantitative Data – Methodology & Assumptions

BC Hydro has developed criteria to qualify customer loads for inclusion in its estimates for GHG emissions reduced or avoided due to the PRES Project.

The customer load to be included:

- Must be a new natural gas processing plant (including associated gas gathering and wellpad facilities) or existing plant converting to take grid service which takes, or commits to take, electricity service from BC Hydro in Fiscal 2018 or later;
- Would have used natural gas for power supply in the absence of BC Hydro's commitment to construct and operate new facilities; and
- Will be served by the PRES Project once it is placed in service.

  These criteria thus include: (i) existing "brownfield" loads which fuel-switch from carbon-based fuel to grid electricity; and (ii) new "greenfield" loads that make

the investment decision to take grid electricity as an alternative to carbon-based fuels for power supply.

BC Hydro notes that these criteria differ from the current British Columbia Greenhouse Gas Offset Protocol (*Fuel Switch Version 1.0, dated August 16, 2018*) which is specific to the replacement of existing gas-powered turbines with electrical grid power. Under the current protocol, GHG emission reductions would only arise where an existing customer facility fuel switches from a carbon-based fuel (such as natural gas) to low-carbon grid electricity and would not apply to any new plant that elects to be served with grid electricity in the first instance.

5.4 Performance Metrics

The GGRR performance metrics for the PRES Project are listed in Table 6 below.

Table 6 PRES Project: GGRR Performance Metrics

Type of Facility	Project(s)	Performance Metrics
Transmission & Distribution	PRES Project	New load served GHG emissions reduction
[redacted] Generation	[redacted]Generation Agreement	New load served Mitigation of system constraints GHG emissions reduction

A key purpose of the PRES Project is to enable a clean, reliable source of electrical power supply to existing and new natural gas processing operations. In the absence of the PRES Project, there would be no grid service alternative. These plant operations would otherwise need to use natural gas (or other fossil fuels) for power supply. Since greenhouse gases are emitted when fossil fuels are burned to create power, the PRES Project will reduce GHG emissions in British Columbia for any existing plant that elects to take grid service rather than self-supply using natural gas.

GHG Emission Reduction Methodology

BC Hydro will estimate the impact the PRES Project will have on GHG emission reductions in British Columbia based on the assumptions and methodology set out in section 4.3 of this report. BC Hydro will apply these same assumptions and methodology to estimate the impact that [redacted] generation will have on GHG emission reductions in British Columbia until the PRES Project is in-service. For Fiscal 2020, the GHG emissions intensity factors determined in accordance with this methodology are listed below for convenience:

- Average emissions intensity factor for natural gas turbine [redacted].[11]
- Less emissions intensity factor for BC Hydro grid electricity: [redacted].[12]
- Net emissions intensity factor for electrified loads: [redacted].

Determination of Eligible Loads for GHG Emission Reduction

In Fiscal 2020, certain Company X facilities were electrified with the support provided through the Generation Agreement (to ensure reliable electricity supply) and the Incentive Agreement (to provide supporting funds for investment in electrical infrastructure) described in the previous sections. Absent these agreements, BC Hydro considers that the Company X loads would not have connected to the BC Hydro transmission system and taken grid service.

As discussed in section 4.2 above, Company X has two sites which are relevant to the prescribed undertakings, the [redacted] (Project 3) and the [redacted] (Project 4) sites.

[11] The efficiency assumption of 29.5 per cent for gas turbines was developed by calculating the weighted average efficiency from metered data of two customer operated gas turbine electrical generation units.

[12] Source: British Columbia Government: 2017 B.C. Best Practices Methodology for Quantifying Greenhouse Gas Emissions, page 17.

The Project 3 site was energized from the BC Hydro transmission system in Fiscal 2019. This site comprises three discrete load centres: three gas processing plants and one field/gathering system.

Of the three gas processing plants: one gas processing plant's (Gas Plant 1) load is not eligible for GHG emission calculation because it was previously served from the BC Hydro distribution system; one gas processing plant's (Gas Plant 2) load was new to the BC Hydro system in Fiscal 2019; and the final gas processing plant has not yet been constructed.

The load associated with the field/gathering system is being phased into the BC Hydro system. One phase of the field/gathering system load was introduced to the BC Hydro system in Fiscal 2019. Another phase of the field/gathering system load is new to the BC Hydro system in Fiscal 2020. Further phases of the field/gathering system are expected to join the system in future fiscal years.

For Fiscal 2020, total new load served by BC Hydro was 120,156 MWh, with an estimated GHG emission reduction of 71,853 tonnes CO_2e.

The Project 4 site was energized from the BC Hydro transmission system in Fiscal 2019. This site comprises two gas processing plants, one of which was operational in Fiscal 2019 (Gas Plant 1), while the other was under construction (Gas Plant 2). Project 4's Gas Plant 2 is joining the BC Hydro system in phases. The first phase connected to the grid in Fiscal 2020. For Fiscal 2020, total new load

served by BC Hydro was 148,668 MWh, with an estimated GHG emission reduction of 88,903 tonnes CO_2e.

BC Hydro notes that for each site, electrical energy consumption arising from the electrification of new loads is used to determine associated GHG emission reductions pursuant to the methodology described in section 4.3. These values have been incorporated into Summary of Results

5.4.1 Explanation of Terms

Table 7 includes a description of the information provided in the results table for LCE Infrastructure Projects. The reason for the indications of "n/a's" is due to the nature of the PRES Project as of March 31, 2020, as described above.

Table 7 LCE Infrastructure Projects Results Table: Explanation of Terms

Column	Heading	Descriptions
A	Prescribed Undertaking	Type of prescribed undertaking.
B	Name	Project, program, or customer name.
C (i)	Actual ($ million)	Actual costs in millions incurred at the end of the current reporting fiscal.
C (ii)	Cumulative Costs ($ million)	Cumulative actual costs in millions incurred from first year of expenditure to the end of the current reporting fiscal.
C (iii)	Forecast Total ($ million)	Approved Anticipated Total Capital Cost of Project.
D	Capacity of Facility (MW)	Planned facility capacity in megawatts at N-1 and N-0.
E	Total Capacity Committed/Secured (MW)	Cumulative total capacity committed and secured until the end of the current fiscal year in megawatts.
F	Total Customer Load(s) Served (MW)	Cumulative total customer loads served as at the end of the current fiscal year in megawatts.

Column	Heading	Descriptions
G	Total Energy Provided to Customers (MW/h)	Cumulative total energy provided to customers as at the end of the current fiscal year in megawatts per hour.
H (i)	Actual: GHG Emissions Reduction Estimates (tonnes CO_2e/year)	Actual GHG Emissions Reduction at the end of the current fiscal period in tonnes of carbon dioxide equivalent per year.
H (ii)	Cumulative: GHG Emissions Reduction Estimates (tonnes CO_2e/year)	Cumulative GHG Emissions Reduction as at the end of the current fiscal period in tonnes of carbon dioxide equivalent per year.
I (i)	Type: Fossil Fuel(s) Avoided Or Displaced	Type of fossil fuels avoided or displaced or likely to be avoided or displaced.
I (ii)	Amount: Fossil Fuel(s) Avoided Or Displaced	Amount of fossil fuels avoided or displaced or likely to be avoided or displaced.

5.4.2 Results Table

Table 8 provides the results for LCE Infrastructure Projects with expenditures in Fiscal 2020.

Table 8 LCE Infrastructure Projects Results for Year Ending March 31, 2020

	A	B	C			D	E	F	G	H		I	
	Prescribed Undertaking	**Name**	**Cost**			**Capacity of Facility (MW)**	**Total Capacity Committed/ Secured (MW)**	**Total Customer Load(s) Served (MW)**	**Total Energy[1] Provided to Customers (MW/h)**	**GHG Emissions Reduction Estimates[2] (tonnes CO_2e/ year)**		**Fossil Fuel(s) Avoided or Displaced**	
			Actual ($ million) (i)	**Cumulative ($ million) (ii)[3]**	**Forecast Total ($ million) (iii)**					**Actual (i)**	**Cumulative (ii)**	**Type (i)**	**Amount (ii)**
1	T&D	PRES Project	83.0	152.9	285	800 - 950	24	n/a	n/a	n/a	n/a	n/a	n/a
2	[redacted] Generation	[redacted] (Company X)	1.7	3.3	12	24	24	38	268,824	160,756	238,568	n/a	n/a

1 Reflects total new facility load served from the BC Hydro transmission system in F2020. 169,636 MWh of load is from existing brownfield facilities that fuel-switched to grid power. 99,188 MWh of load is from new greenfield facilities that electrified.

2 The GHG Emissions Reduction Estimates are specific to eligible Project 3 and Project 4 plant loads that were served by BC Hydro in Fiscal 2020 in place of natural gas-fired supply.

3. An additional expenditure of $0.3 million was incurred for [redacted] generation dispatched as an energy resource over 11 days in March 2019. BC Hydro does not consider the associated dispatch costs to be reportable GGRR costs because they were incurred for a purpose ancillary to proving reliable network service.

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