Technical Advisory Committee
Submission on Draft IRP
Prepared on behalf of the
First Nations Energy and Mining Council
July 2021

Table of Contents

Introduction

BC Hydro is preparing its next Integrated Resource Plan (IRP) to be published late in 2021. The IRP is BC Hydro's plan for obtaining the resources necessary to meet provincial electricity requirements for the next 20 years. The IRP includes several components: A load forecast, which estimates how much electricity British Columbia will require over the next 20 years; conservation initiatives BC Hydro could pursue with its customers to reduce the amount of electricity that must be supplied; and an evaluation of generation and transmission resources that could be acquired to meet the gap between existing resources and those required to serve future load growth.

As part of the IRP process, BC Hydro established a Technical Advisory Committee (TAC). The purpose of the TAC is to provide ongoing feedback and expert advice to BC Hydro during the development of the IRP. BC Hydro has committed to considering input and advice from TAC members in developing the IRP. However, BC Hydro is not bound by recommendations or advice it receives from TAC members.

BC Hydro requested that the BC First Nations Energy and Mining Council (FNEMC) participate as a member of the Technical Advisory Committee (TAC). This report summarizes perspectives based on review of the draft IRP and TAC meetings to date. The report is organized to respond to the specific elements and actions outlined in section 7.1 of the Draft IRP.

In preparing these comments, FNEMC notes reconciliation with Indigenous Nations is a requirement under the *Declaration on the Rights of Indigenous Peoples Act*, and this must inform BC Hydro's recommended actions in the IRP. Articles 28 and 32 of the United Nations Declaration on the Rights of Indigenous Peoples (the Declaration) are particularly relevant. Article 28 states:

> 1. Indigenous peoples have the right to redress, by means that can include restitution or, when this is not possible, just, fair, and equitable compensation, for the lands, territories and resources which they have traditionally owned or otherwise occupied or used, and which have been confiscated, taken, occupied, used or damaged without their free, prior and informed consent.
>
> 2. Unless otherwise freely agreed upon by the peoples concerned, compensation shall take the form of lands, territories and resources equal in quality, size and legal status or of monetary compensation or other appropriate redress.[1]

[1] Article 28. United Nations Declaration on the Rights of Indigenous Peoples. Available: https://www.un.org/development/desa/indigenouspeoples/wp-content/uploads/sites/19/2018/11/UNDRIP_E_web.pdf Accessed: July 23, 2021.

Article 32 of the Declaration states:

> 1. Indigenous peoples have the right to determine and develop priorities and strategies for the development or use of their lands or territories and other resources.
>
> 2. States shall consult and cooperate in good faith with the indigenous peoples concerned through their own representative institutions in order to obtain their free and informed consent prior to the approval of any project affecting their lands or territories and other resources, particularly in connection with the development, utilization or exploitation of mineral, water or other resources.
>
> 3. States shall provide effective mechanisms for just and fair redress for any such activities, and appropriate measures shall be taken to mitigate adverse environmental, economic, social, cultural or spiritual impact. [2]

The FNEMC is also of the view that BC Hydro's IRP process should consider the calls to action of the Truth and Reconciliation Commission, in particular:

> 92. We call upon the corporate sector in Canada to adopt the United Nations Declaration on the Rights of Indigenous Peoples as a reconciliation framework and to apply its principles, norms, and standards to corporate policy and core operational activities involving Indigenous peoples and their lands and resources. This would include, but not be limited to, the following:
>
> > i. Commit to meaningful consultation, building respectful relationships, and obtaining the free, prior, and informed consent of Indigenous peoples before proceeding with economic development projects.
> >
> > ii. Ensure that Aboriginal peoples have equitable access to jobs, training, and education opportunities in the corporate sector, and that Aboriginal communities gain long-term sustainable benefits from economic development projects.
> >
> > iii. Provide education for management and staff on the history of Aboriginal peoples, including the history and legacy of residential schools, the United Nations Declaration on the Rights of Indigenous Peoples, Treaties and Aboriginal rights, Indigenous law, and Aboriginal–Crown relations. This will require skills-based

[2] Article 32. United Nations Declaration on the Rights of Indigenous Peoples. Available: https://www.un.org/development/desa/indigenouspeoples/wp-content/uploads/sites/19/2018/11/UNDRIP_E_web.pdf Accessed: July 23, 2021.

> training in intercultural competency, conflict resolution, human rights, and anti-racism.[3]

Indigenous Nations in British Columbia have a long history of experiencing the impacts of electricity development in their territories. Implementing reconciliation means acknowledging the significant impacts of BC Hydro's legacy infrastructure, compensating First Nations fairly for the effects on their territories, minimizing existing and future impacts to lands and waters, and obtaining free and informed consent for future developments. The recommended actions in the IRP need to address these reconciliation requirements.

[3] Truth and Reconciliation Commission Calls to Action. Available: http://www.trc.ca/assets/pdf/Calls_to_Action_English2.pdf Accessed July 23, 2021.

Resource Needs

The draft IRP shows BC Hydro has sufficient committed resources (including Site C) to meet its provincial base case energy requirements until 2029 and its capacity requirements until 2032.[4]

Regionally, the South Coast will require additional capacity infrastructure by 2027, largely as a result of increased use of electric vehicles.

BC Hydro notes there is considerable uncertainty about future electricity needs, and in the highest case scenarios, where population growth and fuel switching from fossil fuels to electricity for heating and transportation are highest, new energy sources could be required by 2023 and new capacity by 2025. In the lowest case scenarios (with low population growth and low electrification of energy currently supplied through fossil fuels) BC Hydro may have sufficient energy and capacity resources until beyond 2041.

Energy Efficiency

BC Hydro's draft IRP proposes to continue with a base level of energy efficiency programs and ramp up to higher levels in future years to achieve 1,700 GWh/year of energy savings and 290 MW of capacity savings at the system level by fiscal 2030.[5]

FNEMC agrees with BC Hydro's analysis that pursuing energy efficiency helps to avoid future impacts on lands and waters and this is an important consideration in developing recommended actions for the IRP.

The draft IRP describes the trade-offs between pursuing the base levels of energy efficiency and higher levels of energy efficiency. In particular BC Hydro notes that pursuing higher levels of energy efficiency can decrease overall utility costs but also lowers energy consumption and therefore can put upward pressure on rates.[6] FNEMC understands the upward pressure on rates can arise because there are fewer sales over which to recover the utility's costs. However, the FNEMC also notes that even if rates increase, customers who implement energy efficiency measures may see decreases in their total bills, as a result of buying fewer units of energy. These effects will be experienced differently for customers who can adopt energy efficiency and those who may face barriers to achieving energy efficiency savings. Customers who face barriers to adopting energy efficiency measures will see bill increases as a result of the rate increases from higher levels of energy efficiency. BC Hydro should analyze and consider the differential impacts on customer bills, in addition to the total utility costs and rate impacts currently described in the draft IRP.

[4] Section 4.4 of Draft Integrated Resource Plan.
[5] Section 7.1 of draft Integrated Resource Plan.
[6] Section 7.3.1.1 and Figure 12 of draft Integrated Resource Plan.

FNEMC agrees that maintaining some level of energy efficiency programming is necessary to provide flexibility to respond to uncertainty in BC Hydro's base load forecast. In particular, BC Hydro notes in its accelerated scenario, where energy currently supplied through fossil fuels is replaced with renewable electricity, that it could face system energy deficits in fiscal 2024 and system capacity deficits in 2028.[7]

Access to energy conservation initiatives has historically been challenging for many Indigenous communities – particularly those in rural and remote locations. The CleanBC strategy acknowledged that in the past, programs to support efficiency haven't always been available to Indigenous communities.[8] BC Hydro's Indigenous Communities Conservation Program addresses some of these barriers by providing access to training and salary support for Band staff and contractors.[9] BC Hydro should continue to support energy efficiency planning that is led by First Nations in their communities and expand the community energy specialist concept so that every First Nation community can hire or share an energy advisor..

Time-varying rates

BC Hydro's draft IRP proposes to pursue voluntary time-varying rates supported by demand response programs to achieve 220 MW of capacity savings at the system level by 2030 and advance the Industrial Load Curtailment Program to achieve 100 MW of incremental capacity savings by the 2027 to 2030 period. The draft IRP also proposes to pursue a combination of marketing and education to support voluntary time-of-use rate uptake by 50 per cent of residential electric vehicle to achieve 100 MW of capacity savings at the system level by fiscal 2030. [10]

FNEMC understands the time-varying rates operate mainly to shift power consumption from peak demand periods to lower demand periods. These programs do not eliminate energy consumption, they simply shift it to different times of the day. As a result, these programs can help address capacity deficits and defer the need to build new transmission infrastructure, but do not materially contribute to bridging any energy deficits.

BC Hydro notes the trade-offs in considering different options for time-varying rates relate to the characteristics of the rate structures that would be required to achieve different levels of capacity savings. BC Hydro notes higher levels of capacity savings

[7] Section 8.2 of draft Integrated Resource Plan.
[8] CleanBC. Page 17. Available: https://blog.gov.bc.ca/app/uploads/sites/436/2019/02/CleanBC_Full_Report_Updated_Mar2019.pdf. Accessed July 24, 2021.
[9] Indigenous Communities Conservation Program Description. BC Hydro website. Available: https://www.bchydro.com/content/dam/BCHydro/customer-portal/documents/power-smart/residential/programs/indigenous-communities-conservation-program-info.pdf. Accessed July 23, 2021.
[10] Section 7.1. Draft Integrated Resource Plan.

and cost benefits could be achieved but would likely require time-varying rates to be the default rate structure.[11]

The FNEMC supports time-varying rate structures that are opt-in, where customers have a clear decision point to choose to subscribe to time-varying rates. Default rate structures (where customers are transitioned to a time-varying rate and need to actively opt-out) or mandatory time-varying rate structures require more consideration of their impacts on Indigenous communities. Ontario has recently allowed customers to opt out of the time of use rate option and subscribed to a tiered rate option instead, noting that power consumption patterns are influenced by many factors. Some customers may prefer a time of use options while others prefer a tiered rate option.[12]

In the FNEMC's view, starting with voluntary rate programs is consistent with the rate design principle of gradualism. It will provide customers and BC Hydro the opportunity to understand how the rate structures perform without adversely affecting customers who may not have the ability to shift energy consumption to off-peak periods. Prior to implementing any default or mandatory time-varying rate structures, BC Hydro should undertake engagement with Indigenous Nations to ensure they are designed and implemented in a transparent way that considers the unique energy needs of Indigenous people and communities.

Renewing electricity purchase agreements

BC Hydro's draft IRP proposes to offer a market-price based renewal option to existing clean or renewable independent power producers with electricity purchase agreements expiring in the next five years. BC Hydro indicates there are approximately 20 of its existing EPAs set to expire before April 1, 2026, that produce a total of approximately 900 GWh.[13]

The draft IRP provides no specific details on how the market pricing provision would work. However, in broad terms, FNEMC understands the average value of energy at the Mid-C market ranged between 2.8 cents/kWh and 5.6 cents/kWh for fiscal years ending 2016 through 2020.[14] This is lower than the average adjusted bid prices reported in BC Hydro's report on the F2006 call for tender process of 8.75 cents/kWh for large projects and 7.58 cents/kWh for small projects (ignoring any escalation provisions that have

[11] Section 7.3.2.1 of Draft Integrated Resource Plan.
[12] Ontario Energy Board website. Available: https://www.oeb.ca/rates-and-your-bill/electricity-rates/choosing-your-electricity-price-plan#switch. Accessed July 23, 2021.
[13] Section 7.3.4 of Draft Integrated Resource Plan.
[14] As reported in section 6. 2 of BC Hydro's Net Metering Evaluation Report #5 dated October 2020. Available: https://www.bchydro.com/content/dam/BCHydro/customer-portal/documents/corporate/regulatory-planning-documents/regulatory-filings/reports/2020-10-30-compliance-g-168-20-rs1289-nm-evaluation-report.pdf . Accessed July 22, 2021.

applied in the interim).[15] BC Hydro states most of these projects are expected to have a low cost of service because they have had time to pay off their fixed investments and have low operating costs and therefore BC Hydro expects IPPs may be willing to accept market-based prices in contracts to provide operational certainty.[16]

Participation in EPAs has been the primary mechanism available to First Nations to participate in revenue sharing in the provincial electricity sector. FNEMC firmly believes these opportunities should be maintained. FNEMC agrees with BC Hydro that renewing agreements for existing IPP projects can help with planning for uncertainty by ensuring these energy sources remain available in the event future load growth exceeds current base forecasts. However, the FNEMC also believes work needs to be done to confirm BC Hydro's assumptions that the market-based pricing offer would be sufficient to allow existing IPPs to continue to operate. It will also be necessary to consider how pricing structures would be changed in the event BC Hydro requires the additional energy from IPPs to meet its planning criteria and self-sufficiency requirements.

BC Hydro's draft IRP indicates it has not completed the structured decision-making framework for options after demand-side measures.[17] FNEMC recommends BC Hydro consider the following in developing the IPP renewal framework:

1. Priority should be given to renewing existing EPAs with Indigenous ownership.

2. BC Hydro should work with IPPs with Indigenous ownership to evaluate whether or not the proposed market-based pricing structure will be sufficient to recover the capital and ongoing operating costs incurred by the IPPs. This evaluation should consider whether a price floor or price averaging would assist these IPPs to continue operating so that they are available as resources in the event future loads exceed the base load forecast. It may also be reasonable to consider a premium for IPPs with Indigenous ownership as part of the price structure.

3. BC Hydro should work with IPPs with Indigenous ownership to consider how pricing structures would be changed when BC Hydro requires the additional energy from IPPs to meet its planning criteria and self-sufficiency requirements.

For existing EPAs without Indigenous ownership, BC Hydro should require the owners to obtain consent from the Indigenous Nations whose territories are affected by the development. BC Hydro should not renew EPAs where the owners cannot demonstrate

[15] Pages 26 and 29 of BC Hydro's report on the F2006 call for tender process. Dated August 2006. Available: https://www.bchydro.com/content/dam/hydro/medialib/internet/documents/info/pdf/info_open_cft_report_on_cft_process.pdf. Accessed July 22, 2021.

[16] Section 7.3.4 of Draft Integrated Resource Plan.

[17] Section 7.3.4 of Draft Integrated Resource Plan

consent from the relevant Indigenous Nations. This consent would facilitate agreements between the operators and the Indigenous title holders.

South coast transmission

BC Hydro's draft IRP proposes to advance the first sequential step of upgrades to transmission infrastructure into the South Coast region to prepare to achieve an additional 700 MW of capacity for the south coast region by fiscal 2029.[18] BC Hydro notes most of its customer load is located in the South Coast region while most of the energy need to serve these customers is transmitted from the Interior of the province along five existing transmission lines.[19] Transmission projects typically have long lead times to develop. They also have large footprints that affect lands and waters.

BC Hydro states it will be engaging early with Indigenous Nations that may be potentially affected by these upgrades.[20] FNEMC agrees it is imperative to engage with potentially affected Indigenous Nations and obtain their informed consent. BC Hydro and the provincial government should also use these opportunities to explore revenue and other benefit sharing whenever new electricity infrastructure is needed.

Future resources

BC Hydro's draft IRP proposes to plan to acquire new energy and capacity resources starting with 580 GWh of energy in fiscal 2031 then shifting to primarily capacity resources starting with 110 MW in fiscal 2038. These future resources would be selected from amongst expiring electricity purchase agreements, new clean and renewable energy resources and upgrades to BC Hydro facilities.[21] FNEMC believes BC Hydro should prioritize future projects that provide ownership and revenue sharing opportunities for Indigenous Nations and limit the potential for new impacts on lands and waters.

Small BC Hydro plants reaching end of life

BC Hydro's draft IRP proposes to undertake a structured decision-making approach to evaluate small hydro plants that are at or near end-of-life including Shuswap, Elko, Spillimacheen, Alouette, Falls River and Walter Hardman.[22] BC Hydro indicates redeveloping or upgrading these facilities could be more expensive than developing new resources.

FNEMC believes BC Hydro's structured decision-making process must include engagement with the Indigenous Nations specifically affected by each facility. Nations

[18] Section 7.1 of Draft Integrated Resource Plan.
[19] Section 5.4.1 of Draft Integrated Resource Plan.
[20] Section 7.3.5 of draft Integrated Resource Plan.
[21] Section 5.4.1 of Draft Integrated Resource Plan.
[22] Section 7.1 of Draft Integrated Resource Plan.

should have input into decisions and different options should be explored, including economic development and ownership opportunities in redevelopments as well as decommissioning and rehabilitation of the sites.

Preparing for the unexpected

BC Hydro's draft IRP considers a number of scenarios, including lower load growth and increased electrification. The FNEMC understands increased electrification could include switching heating and transportation from fossil fuels to renewable electricity.

The wildfires of the summer of 2021 have highlighted the seriousness of the current climate emergency. All levels of government and government agencies should be cooperating to accelerate reduction of greenhouse gas emissions. Material presented by BC Hydro during TAC sessions suggested strong policies and electrification measures will be required to achieve provincial greenhouse gas targets.[23] Electrification opportunities vary by region, but it appears there is high potential for electrification in the North Coast (mining and LNG electrification) and Peace Region (upstream gas processing electrification).[24] BC Hydro and the provincial government should work jointly with First Nations to identify the highest value opportunities for electrification and develop options to transition these energy requirements to renewable energy sources. This would also provide opportunities to expand First Nation participation in the energy sector.

Closing

The BC provincial government has made a number of legal and policy commitments to implementing reconciliation with Indigenous Nations. This includes the requirements of the *Declaration on the Rights of Indigenous Peoples Act* and provincial policy documents such as the CleanBC commitment to work in collaboration with Indigenous peoples to seize clean economy opportunities and help adapt to the impacts of climate change.

In particular, the following actions should be implemented in collaboration with Indigenous Nations:

1. Continue to support energy efficiency planning that is led by First Nations in their communities and expand the community energy specialist concept so that every First Nation has access to a community-based energy advisor.

2. Expand opportunities for Indigenous ownership, revenue and benefit sharing across all BC Hydro infrastructure and operations.

[23] Slide 12 from July 22, 2020, TAC meeting presentation.
[24] Slides 18 to 20 from July 22, 2020 TAC meeting presentation.

3. Require informed consent from affected Indigenous Nations for all future developments, including redevelopments of existing infrastructure and renewal of existing EPAs.

4. Work with IPPs with Indigenous ownership to develop fair pricing structures both during periods when BC Hydro has excess domestic energy resources and, in the future, when IPP energy is required to planning criteria and self-sufficiency requirements.

5. Work at a regional level with First Nations to identify and advance opportunities for electrification to achieve provincial greenhouse gas targets and increase First Nations participation in the energy sector.

BC Hydro's IRP provides an important opportunity to further the commitments made to Indigenous Nations in planning for the next several decades of provincial electricity needs.