



May 15, 2020

Submitted electronically via BCHydroReview@gov.bc.ca.

Subject: Comments of Evolgen on Interim Report Phase 2 BC Hydro Review

Evolugen appreciates the opportunity to respond to the interim report from Phase 2 of the Comprehensive Review of BC Hydro.

Evolugen is Brookfield Renewable's Canadian business. Brookfield Renewable is a global developer, owner and operator of renewable energy resources. Worldwide, Brookfield Renewable businesses and affiliates have a portfolio of over 19,000 MW of installed capacity and approximately \$50 billion in assets under management. In Canada, Evolgen owns and operates 3 wind farms and 33 hydropower facilities, including 6 hydropower facilities representing 173 MW in British Columbia (BC). These projects contribute significantly to the province's economy, with much of the benefit realized in smaller, economically vulnerable communities. This includes nearly \$2 million annually in property taxes; well-paying direct and indirect employment for over 45 employees; tens of millions of capital expenditures; and, spill-over economic benefits to 180 vendors. Beyond our existing assets, we continuously evaluate opportunities to expand our role across Canada as an investor, developer and owner/operator.

Evolugen appreciates the Government of BC's efforts to better understand the impact of the evolving electricity market landscape on BC Hydro and its long-term success. This is a timely exercise given the drive for decarbonization, ongoing technological innovation, and changing consumer preferences. However, we are also concerned that significant policy changes impacting BC Hydro are being considered without a fulsome analysis of the consequences.

In our view, major policy changes should be deferred until the completion of an Integrated Resource Plan (IRP), which analyses the utility's long-term energy needs and resource options. While work is underway to complete an IRP by 2021, care is needed during the ongoing pandemic to avoid reactionary decision-making and instead look to the long-term. In



particular, we believe that changes in policy with respect to independent power producers (IPPs) and electricity imports (self-sufficiency criterion) are premature.

The body of this response focuses on these specific issues, with answers to *select* discussion questions from the interim report provided in the Appendix.

Role of Independent Power Producers

Evolugen is concerned that recent actions by the Government discount the role and value of independently owned power facilities in BC. These actions create uncertainty for investors that have invested significant resources in long-lived projects in response to prior BC Hydro Calls for Power – assets that are capable of providing cost-effective, clean electricity to the province for decades to come. IPP projects also contribute significantly to BC's economy through property taxes, well-paying and skilled employment, ongoing capital investments, and spill-over benefits to the local and provincial economy. Much of these benefits flow to smaller, economically vulnerable communities that depend heavily on the ongoing operation of these projects – and in some cases hold ownership interests in the projects.

Recent procurements in other Canadian jurisdictions have demonstrated that private-sector led renewable projects are highly cost competitive, while shifting financial risks such as cost overruns away from ratepayers to IPPs. Indeed, many jurisdictions across North America have realized benefits in terms of reduced costs and risks to ratepayers through increased private sector participation in electricity markets. Moreover, IPPs are well placed to take on the risks of investing in the emerging and innovative technologies that will be critical to achieving decarbonization in other sectors. The Government and BC Hydro should not rule out new IPP projects as a path towards meeting future electricity needs and climate objectives. BC should be encouraging greater private-sector participation in its electricity system, rather than discouraging it.

Self-Sufficiency Criterion

Evolugen is concerned that BC Hydro is prioritizing potential short-term cost savings over BC's long-term energy security by recommending that the self-sufficiency criterion be eliminated. In our view, BC Hydro and Powerex already have sufficient flexibility mechanisms in place to import energy.

Western states are undergoing rapid transformations of their own electricity grids, including significant retirements of fossil generation and the adoption of aggressive renewable and decarbonization objectives. These changes will impact the price and availability of energy that



can be imported from these markets to BC. There is no guarantee that Mid-C prices will remain low over the medium- or long-term. An overreliance on imports could expose ratepayers to market volatility, compromise reliability of the grid, jeopardize the province's decarbonization objectives depending on the location of imports, and would be difficult to undo given the lead-time required to build new electricity resources. The province would also forfeit the economic and other non-energy benefits of domestic renewable energy projects by opting to rely on imports from other markets. Any closure of operating IPP projects would also create stranded assets, the decommissioning of which would create significant costs and environmental impacts.

Thank you again for the opportunity to provide comments.

Sincerely,

A handwritten signature in blue ink, appearing to read "Roxana Lund".

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Appendix

Supporting CleanBC

1. *What factors are important to consider when looking at optional rates to support electrification?*

The existence of sound and transparent price signals is critical to the functioning of the electric system. In general, prices should reflect the true cost of generating and delivering electricity to the consumer, which can vary due to the time of day, season, and other system conditions. For example, rate structures such as Time of Use and Seasonal rates can provide a valuable incentive to consumers to shift their consumption, relieving pressure on the system when demand is typically highest/supply is scarce and costs are high.

Caution should be exercised in creating rate structures specifically to incent electrification through subsidization, as rate subsidization masks the underlying cost of generating and delivering electricity at the expense of future ratepayers or taxpayers. The most effective price signal the Government of BC can provide to support electrification is through maintaining and increasing the stringency of its carbon price. Ensuring the cost of carbon emissions are reflected in building energy use, transportation and industrial activity is critical to incentivizing a switch to clean electricity.

2. *How can competitiveness for business and industry be prioritized in an electrified future?*

Competitiveness for business and industry will be best achieved by focusing on the long-term cost effectiveness of the electricity system. Caution should be exercised when considering actions that could reduce costs for business and industry in the short-term (e.g., rate subsidization) but do so at the expense of future ratepayers or taxpayers.

In certain jurisdictions, the evolving electricity market landscape provides significant opportunities for business and industry to reduce electricity costs or generate new revenue streams, for example through ownership of distributed generation, the ability to contract with independent power producers, aggregated demand response, etc. Such opportunities are currently limited in BC due to the regulated market structure.

3. *How can BC Hydro reduce barriers to electrification for existing and new customers?*

Please refer to the response under Question 1 of this section. In addition, and as noted in the interim report, BC Hydro should consider measures to streamline and clarify interconnection processes.

4. *What are key considerations for programs to reduce reliance on diesel for non-integrated communities?*

While non-integrated communities represent a small share of total electricity consumption, they contribute disproportionately to electricity costs and emissions. Significant progress can be made in the near-term to reduce diesel reliance in these communities given currently available technologies, with the potential for 100% clean electricity on the horizon as storage technologies continue to improve and decline in costs.

In addition to their clean energy benefits, renewable projects also represent a significant economic opportunity for non-integrated communities. Evolgen recommends that the Government, together with BC Hydro:

- Facilitate pathways for communities to advance, develop and/or own renewable energy projects through the removal of regulatory/policy obstacles;
- Continue programs, in partnership with other levels of government, that support capacity building, feasibility work and the deployment of renewable projects;
- Revisit the suspension of programs that have typically supported small-scale renewable projects, such as the Standing Offer Program;
- Evaluate projects against the long-term cost of continuing diesel generation in these communities (not BC Hydro's marginal cost elsewhere in the province).

5. *How should BC Hydro use a value for greenhouse gas emission reductions (for example, a carbon price) in its evaluation of investments?*

BC Hydro should value greenhouse gasses/emissions reductions in its investment decision-making. At minimum, the value ascribed should reflect the regulated price of carbon in the province. A more fulsome analysis could also include consideration of other carbon scenarios such as the Social Cost of Carbon.

Thriving in an Evolving Electricity Sector

1. *What are important considerations to empower BC Hydro to make the most cost-effective decisions on resource options, under the oversight of the BCUC, with respect to clean electricity?*

As the costs of various resource options have declined rapidly over time, it is critical that BC Hydro regularly update its resource options analysis taking into consideration input



from private sector providers with experience developing, owning and operating such assets both inside and outside of BC. In addition, the evaluation of resource options must include a comprehensive accounting of life-cycle costs and benefits associated with various options. Beyond energy and capacity benefits, this should include consideration of reliability benefits/costs, environmental benefits/costs, local economic benefits, etc.

- 2. What should BC Hydro be aware of when considering partnerships for behind the meter services?*

With respect to behind the meter services, Evolgen recommends that BC Hydro focus on establishing the associated regulatory framework and on making sufficient information available to consumers/private sector providers.

Leveraging Our Strengths

- 1. What are important considerations for a 100% clean electricity energy standard for BC Hydro's integrated system?*

Evolugen would support the adoption of a 100% clean electricity standard in BC. Given the province's current generation mix and the abundance of available renewable resources, this is an achievable objective that balances environmental objectives and ratepayer impacts. Such a standard should be coupled with a robust attribute tracking methodology to ensure that environmental attributes are properly accounted for and not double counted, for example in the case of exports to adjacent jurisdictions. Tracking will also be needed for electricity imports, given the existence of carbon-emitting generation in adjacent markets. BC will need to ensure that the carbon intensity of imported electricity is appropriately addressed through incremental purchases of environmental attributes or through payment of carbon taxes on imports.

- 2. What factors should be considered if BC Hydro looks to expand its business interests including considering new opportunities outside of B.C. via Powerex or a new subsidiary?*

Evolugen would not support the extension of BC Hydro's mandate through Powerex or a new subsidiary.