

RATIONING SCARCE CLEAN ELECTRICITY: WHO DECIDES?

Currently it appears that British Columbia is well positioned in the race to develop a low or zero carbon electricity grid. Some 98% of our electricity is currently generated from hydro generation, biomass or wind power.¹ Government-directed emission targets for the next 10 and 25 years are driving a demand for a major expansion in the amount of electricity generated from renewable sources. Yet expanding the renewable electricity generating capacity is neither simple nor inexpensive.

There are clear signs that the domestic demand for clean electricity will exceed the current and planned supply over the next 10 to 15 years. This may result in a system of rationing where choices will need to be made between competing demands for the power. Who will make the decision on the allocation of the available power, and what criteria will be used to weigh the alternatives? Will the decision-making be transparent, or will the allocation decisions be made in the shadows out of the public's view?

The Demand Forecast

In June 2023, BC Hydro revised its 2021 demand and supply forecast (the Integrated Resource Plan or IRP). The new forecast was for the period 2023/24 to 2040/41, and included a Base demand forecast and an Accelerated forecast.² For many years BC Hydro's domestic demand had been relatively constant, with enough supply to allow for significant export revenue. However, the new IRP now forecasts a 3,700 GWh net shortfall by 2028/29 and a 4,900 GWh net shortfall by 2039/40. Under the Accelerated scenario the 2039/40 net shortfall jumps to 16,500 GWh,³ which is a 32% increase over BC Hydro's owned generation including Site C.

The most recent IRP does not explicitly include a demand forecast for major new developments.⁴ These include the proposed Cedar LNG project (approximately 1,500 GWh and 3.3 million LNG tonnes/annum) and the proposed Kis Lisims LNG project (approximately 5,800 GWh and 12 million LNG tonnes/annum) on the north coast, are being co-owned and sponsored by the Haisla and Nisga'a Indigenous governments

1

https://www.bcpolicyperspectives.com/media/attachments/view/doc/commentary_drought_impacts_on_bc_hydro_28_december_2023/pdf/commentary_drought_impacts_on_bc_hydro_28_december_2023.pdf Table 4.

² https://docs.bccuc.com/documents/proceedings/2023/doc_71932_b-39-bch-signposts-update.pdf The forecast makes no allowance for the current drought conditions.

³ Ibid., Appendix B1 p. 14 and p. 22.

⁴ <https://justandreasonable.com/?p=1925>

respectively.⁵ Nor does the IRP include the two clean Hydrogen gas production facilities proposed for the Prince George area. Despite the poor economics, Premier David Eby is on record as supporting the massive Fortescue project which would require some 7,300 GWh to produce clean hydrogen and ammonia for export.⁶

These three projects alone would increase the net 2040 shortfall to approximately 31,000 GWh, or almost 60% of BC Hydro's owned generation including Site C.

Balancing Economic Growth and Reduced Emissions

To date the government has suggested that there will be sufficient clean and affordable electricity available to meet the needs produced by its CleanBC emission reduction targets, as well as those produced by economic growth and new industry. BC Hydro's Chris O'Riley stated that the public utility has unprecedented potential industrial demand across the province.⁷ Yet BC Hydro has yet to issue contracts for only 3,000 GWh of new clean power from private developers (which must include at least 25% Indigenous ownership).

The LNG projects under development plan to use electricity to power the condensers, but BC Hydro has yet to commit to supplying the necessary power. Cedar LNG plans to begin shipments by late 2028, while Kis Lisims plans to begin shipping by 2029. The natural gas for Kis Lisims will be delivered by a new pipeline owned by Prince Rupert Gas Transmission (PRGT), which just announced that the laying of pipe will begin shortly.⁸

It is clear that the electricity required for these LNG projects far exceeds the power currently available (excluding the current drought caused shortfall in domestic supply). This may force the proponents to use natural gas to power the gas condensers until the electricity is available, resulting in a significant increase in CO₂ emissions. Are the goals of net zero CO₂ emissions, affordable rates and economic growth incompatible?

⁵ In addition, the Woodfibre LNG proposal is for a 3.8 million tonnes per year using plant using approximately 2,100 GWh of electricity. The Tilbury/FortisBC expansion proposal is for 2.1 million tonnes per year using approximately 1,200 GWh of electricity.

⁶

https://www.bcpolicyperspectives.com/media/attachments/view/doc/K05W_commentary_hydrogen_25_may_2024_1/pdf/K05W_commentary_hydrogen_25_may_2024_1.pdf

⁷ <https://www.biv.com/news/resources-agriculture/christmas-lights-to-be-lit-this-year-by-site-c-hydro-electric-dam-8753088>

⁸ <https://www.theglobeandmail.com/business/article-fight-brewing-as-construction-looms-for-natural-gas-pipeline-in/>

Who Decides How Electricity is Rationed?

The decision on the priority between emission targets and economic growth is at the centre of the province's energy future. Who is to decide on what projects will gain access to the limited clean electricity and which projects will be denied? In a candid statement BC Hydro's president Chris O'Riley said that BC Hydro was not accustomed to having to make choices between competing demands for electricity. He said that this is a public policy issue that must be decided by the government.⁹

The BC Utilities Commission (BCUC) is the regulator of monopoly utilities such as BC Hydro and FortisBC, but its mandate is focussed on economic regulation. Its perspective is much more narrow than determining the energy policy for the province. The former chair of the BCUC stated that "I think a regulator is well-positioned to make certain decisions, but only within a fairly narrow mandate. ...we're not elected and decisions about broader societal trade-offs should be made by politicians."¹⁰

The provincial government must be responsible and held accountable for developing the energy plan for the future. But what information is available to policymakers, and how open is the decision-making process? Ian Mondrow, an energy policy lawyer, summarized the issue:

Public policy objectives like decarbonizing our economy and promoting clean energy growth may sound simple, but getting from here to there will not be. The costs — new and stranded — are potentially huge. There will be winners and losers. Navigating this transition will not be easy and probably won't be cheap....

At the same time, broader public policy trade-offs are not always dependent on facts. It is the job of elected officials to consider and direct these broader public policy trade-offs.... Though they should ideally be informed by fact, sometimes political trade-offs and judgements are required. Reasonable people may, of course, disagree on such trade-offs. Our government and its appointed Ministers are elected to make those decisions in a manner that they determine the general public wants. There is an open and generally balanced legislative process through which they do that.¹¹

⁹ <https://podcasts.apple.com/ca/podcast/our-energy-future-the-future-of-b-c-hydro/id1135887105?i=1000650671453>

¹⁰ <https://energyregulationquarterly.ca/written-interview/building-and-governing-the-canadian-energy-sector-learning-from-canadas-energy-leaders-an-interview-with-david-morton-and-anna-fung-of-the-british-columbia-utilities-commission#sthash.hlotAssi.dpbs>

¹¹ <https://energyregulationquarterly.ca/articles/why-bother-with-an-independent-energy-regulator#sthash.5O4Gyl8C.dpbs>

In July 2023, the government created a task force comprised of senior government personnel, senior BC Hydro members, and outside academics and advocates to help guide cabinet decisions on:

- “Improving the speed of permitting and delivery of required infrastructure
- Modernizing regulatory framework to better align with government priorities while protecting ratepayers [aligning BCUC’s priorities?]
- Identifying, enabling and accelerating economic opportunities in clean energy”¹²

In announcing the task force, Premier Eby criticized current laws, policies and processes “established generations ago restrict the ability of B.C. Hydro, governments, Indigenous communities, and businesses to take advantage of these economic opportunities fully.”¹³ The focus of the Task Force is to bring new clean electricity to the market more quickly, but at what cost? This is a critical objective missing from the task force’s list.

The province and the federal government are funding a variety of projects through a variety of agencies, such as the Climate Action Secretariat, aimed at reducing emissions.¹⁴ But these initiatives are designed to increase the demand for renewable electricity to replace power generated by fossil fuels. No committee or task force is advising government on which proposals should receive the limited electricity and which must wait for supply to balance demand.

One hopes that the government will establish a clear process for determining whether its ambitious greenhouse emission targets will be relaxed sufficiently to encourage new industry, or whether economic development proposals will be deferred due to lack of clean electricity. What is becoming increasingly clear is the inherent conflict between the government’s objectives of lower emissions, affordable rates and economic growth.

©Richard McCandless June 16, 2024. <http://www.bcpolicyperspectives.com/>

The writer is a retired senior BC government public servant whose paper describing the BC government’s manipulation of the finances of BC Hydro from 2008 to 2014 was published by BC Studies in November 2016. BC Studies published his paper on the 40-year financial history of ICBC in 2013. He is an intervener in the BC Utilities Commission’s reviews of ICBC’s and BC Hydro’s rate requests.

¹² <https://www2.gov.bc.ca/gov/content/governments/organizational-structure/ministries-organizations/crown-corporations/bc-hydro-and-power-authority/bchydrotaskforce#about>

¹³ <https://vancouver.sun.com/news/vaughn-palmer-can-bc-hydro-get-up-to-speed>

¹⁴ For example, <https://energi.media/news/canada-b-c-support-first-nations-to-power-up-new-clean-energy-projects/>

