



May 16, 2017

Mr. Gaëtan Thomas
CEO, NB Power
515 King Street
Fredericton, NB
E3B 4X1

Re: Comments on 2017 Integrated Resource Plan

Dear Mr. Thomas:

Thank you for the opportunity to provide input on NB Power's 2017 Integrated Resource Plan (IRP). The Conservation Council believes New Brunswick, and NB Power, have an important opportunity to create a clean electricity system in line with national and international climate change commitments, that improves the health and well-being of ratepayers, and that creates long-term sustainable jobs in our province. We believe we can achieve these objectives while maintaining reliability and managing rate impacts. Before summarizing the menu of options to consider, let's set the table by summarizing the context within which IRP planning is taking place.

Since the 2014 IRP, significant changes have occurred in the policy landscape with the 2016 national Pan-Canadian Framework resulting from the 2015 United Nations Paris Agreement being one of the most significant. NB Power must now explicitly plan for an electricity system operating under a nationally coordinated carbon price, as well as regulations aimed at significantly reducing greenhouse gas emissions intensity of coal-fired power plants. While questions remain with respect to how carbon pricing and coal-fired power plant regulations will be fully implemented, we know enough now to say that NB Power and the Province of New Brunswick should plan for a fossil-fuel free electricity system by 2030.

We also know from the response of New Brunswickers to the proposed sale of NB Power to Hydro Québec that ratepayers/citizens want their electricity produced in New Brunswick by New Brunswickers for New Brunswickers. Ratepayers/citizens also want reasonable power rates and electricity that is reliable. We know clearly from the 2017 ice storm on the Acadian Peninsula, as well as post-tropical storm Arthur, that reliability is not a certainty



with increasing exposure to extreme events and that power outages of a week or more is dangerous to public health.

NB Power argues that it is changing its culture to adapt to changing electricity market conditions, including the transition to significantly more electricity generated from smaller-scale, distributed renewable energy. Its commitment to Smart Grid technologies and to reduce and shift demand initiatives are positioned as evidence of cultural change within NB Power and an openness to developing a new business model. The Conservation Council is concerned that NB Power is not adapting quickly enough to changing conditions. We recommend an offensive, rather than defensive IRP, setting a clear direction toward a fossil-free electricity system by 2030.

Such a commitment would, for example, direct attention away from weakening proposed implementation of federal regulations affecting Belledune, and instead, would focus on transitioning the plant off coal by 2030 and the region toward a renewable, distributed and resilient electricity system in the Acadian Peninsula. Such an approach could ensure a just transition for Belledune workers, create jobs in Northern NB, and allow for federal-provincial partnerships that position our province, in the longer-term, to provide power in NB, for NB, produced by New Brunswickers.

We recommend that the IRP, should be positioned as an electrification strategy for the province, and include commitments to:

1. An economy-wide investment in energy efficiency through building retrofits in social housing, the residential, commercial/institutional/government (including municipal), and industrial sectors; and equipment and appliances. The goal would be to **advance NB Power's Reduce and Shift Demand objective of 609 MW by 2038 to between 2020 and 2025¹**.
2. **Accelerate investments in the Smart Grid** (the Energy Internet) to give the electricity system the capacity it needs to significantly increase the supply of renewable energy (aiming for 100% renewable). The Smart Grid is central to managing a more distributed energy system, as well as providing load balancing services to Nova Scotia, PEI and New England. The electrification strategy, or roadmap, can build on work completed under the Atlantic Energy Gateway Initiative and take advantage of new federal support aimed at identifying opportunities for regional electricity cooperation². Our electrification roadmap needs to be regionally focused, particularly because Nova Scotia will also need to reduce and then phase out the use of coal, and include a regional and long-term system investment plan (i.e. modernizing and

¹ <https://www.nbpower.com/media/102794/irpjuly2014-english.pdf>, p.128

² <http://www.acoa-apeca.gc.ca/eng/publications/ResearchStudies/Pages/Home.aspx#aeg>; Federal budget 2016 provided \$5 million over two years to engage provinces and utilities in assessing regional electricity cooperation opportunities

integrating regional transmission networks, as well as regional targets for renewable energy to replace the loss of coal-fired generation. Acceleration of Smart Grid investments could advance installation of additional renewable energy technologies along with installation of next generation meters, hot water heaters and storage devices using telecommunications systems to manage a distributed load (including micro-grids; beyond what is already currently funded).

3. Expand regional investment in renewable energy, including accelerated solar rooftop targets. **A stretch target for New Brunswick could be 200,000 kilowatts (kW) of cumulative installed commercial and residential solar power by 2025 (100,000 kW each for residential and commercial, grid connected and off-grid), with NB Power working with suppliers to develop home equity loan and/or leasing programs, and power purchase agreements aimed at lowering payback periods from the current 13 to 15 years to between 5 and 10 years.**³
4. Accelerated scale-up of electricity transportation infrastructure and incentives to increase the sale of electric plug-in and low-emission hybrid vehicles. Québec has a legislated target of putting 100,000 electric vehicles on the road by 2020: that's about 1.2% of the total fleet of over 8 million vehicles registered or about 16% of new car sales in 2020.⁴ A similar scheme for New Brunswick would **set a goal of 10,000 electric vehicles on the road by 2020, with the number of electric car sales increasing each year so that by 2030 there would be 140,000 to 150,000 electric vehicles on the road.**⁵ A fossil-fuel vehicle driven 20,000 kilometres a year generates about 5 tons of greenhouse gases. A rough estimate of the emissions reduction potential is at least 500,000 tonnes.⁶
5. Community economic development and worker transition investments to maximize job creation from energy efficiency and renewable electricity investments.

Electricity-related investments would be complemented by a provincial investment plan. To see the Conservation Council's full climate action plan, go to: <http://www.conservationcouncil.ca/our-programs/climate-and-energy/>.

³ <https://www.nbpower.com/media/169863/dsm-plan-2016-18.pdf>; represents stretch target for achievable potential

⁴ <http://www.statcan.gc.ca/tables-tableaux/sum-som/l01/cst01/econ58a-eng.htm>; assuming at 50,000 new car sales a month = 600,000 a year so 100,000 electric vehicles in 2020 would be equivalent to at least 16% of all new sales

⁵ Assuming at 5,000 new car sales a month or 60,000 a year that 16% would be 9600 vehicles so rounding to 10,000

⁶ Assuming 2017: 1k, 2018: 2k, 2019: 3k, 2020: 4k (cumulative = 10k), 2021: 6k, 2022-2030: 8k rising to 20k/year for a total of 140,000 to 150,000 electric vehicles on the road and declining greenhouse gas reductions from fleet fuel economy standards.

We also strongly encourage NB Power to more actively consider risks from climate change impacts in its IRP. Our infrastructure and our capacity to respond to these events has not kept pace with the changes in our climate. Individual extreme events need to be understood in the context of a rapidly changing climate. Scientists working on climate change adaptation increasingly urge a move from short-term emergency response to extreme events. Instead, we are being encouraged to move toward long-term risk reduction and preparedness. This change in focus opens the door to considering and planning for the long-term resiliency of New Brunswick communities and families. Solutions with the longer-term lens in focus encourage us to integrate climate change mitigation and climate change adaptation approaches.

The recent ice storm provides an opportunity think about how we can integrate mitigation and adaptation to climate change into electricity planning. We can develop a regional energy plan for the Acadian Peninsula that brings low to non-emitting sources (from wind, solar, hydro, biomass, if sustainably produced) of electricity and Smart Grid/micro-grid infrastructure into the system that also improves resiliency to extreme events. Priority for installation of new energy resilient technologies could be First Responder buildings like fire halls, city halls, and community centres used as warming centres. The shift to energy resiliency would also involve job-creating retrofits of homes in the region (and throughout the province) to improve energy efficiency and to install renewable energy and other modern technologies. A system-based assessment of options would ensure a sustainable energy system for, in the case of this example, the North that situates solutions within our climate change mitigation, as well as adaptation objectives.

The Conservation Council urges NB Power to advance an electrification strategy in its 2017 IRP that would form the basis of federal-provincial negotiations on how carbon pricing revenue and infrastructure dollars could be allocated within the electricity sector. A progressive and forward-looking IRP has the potential to satisfy the requirements for a reliable, cost-effective and sustainable electricity system based on a new model of delivery and financial operations.

We look forward to collaborating with you to make this vision a reality.

Sincerely,

A handwritten signature in black ink, reading "Lois Corbett". The signature is written in a cursive, flowing style.

Lois Corbett
Executive Director