



BRIEFING NOTE: Affordable, Reliable and Sustainable Electricity System in Nova Scotia

Environmental Goals and Climate Change Reduction Act June 2022

GOAL IN EGCCRA:

#7 (l) to have 80% of electricity in the province supplied by renewable energy by 2030; and (m) to phase out coal-fired electricity generation in the province by the year 2030.

OUR ANALYSIS OF THE GOALS

(l) This is an achievable target. In fact, combining with deep energy retrofits, 90% is possible as shown in the [Electricity Report](#) commissioned by the EAC in 2019. In order to make this target robust, just and future ready, the province needs to focus on increasing supply for wind, solar and energy storage; phasing out natural gas and biomass energy, increasing regional integration amongst the Atlantic provinces and Quebec through interties, and enhancing energy efficiency programming with target to reach 3% efficiency per year by 2030. (m) We must ensure that coal phase out is in sync with development of renewable energy and regional integration to balance out the supply using cheap renewables. This would ensure reliability and also affordability.

ACHIEVING THE GOAL:

There are many steps involved in achieving the recommended goals. Below are some of the initial recommendations:

1. Establish a legislated sustainability mandate for the Utilities and Review Board (UARB) to govern Nova Scotia Power (NSPI) with the lens of sustainability, and enable the Board to look beyond merely rate fixing, call centre, outage and storm-response stats and establish ambitious, firm timelines and track NSP's progress towards renewable targets, with less leeway in altering plans and penalties should targets not be met.

2. The key barriers in the uptake of renewables are largely political. This report identifies jurisdictions that Nova Scotia must look toward modelling. It includes:

- Massachusetts: As a model for rate accommodations for low-income ratepayers and improves standards regimes.
- Québec: As an example of a regulator mandate that expressly includes sustainability and equity concerns.
- Vermont: As a a model of more progressively empowered public-interest advocacy in regulatory proceedings.

3. The four Atlantic Provinces must collaborate on clean energy. The Atlantic Loop is a system of interconnected transmission infrastructure within the four Atlantic provinces and Quebec to enable rapid decarbonization of the region through clean energy import and exchange, and increase reliable, affordable and clean electricity for consumers. Modeling of various scenarios can be found in [this report](#).



ACHIEVING THE GOAL CONTINUED:

4. Increase the supply of renewable energy: Every effort must be made to increase wind, and solar along with battery storage. No new large scale hydro dams, such as Gull Island, should be built. Detailed recommendations for increasing renewable energy in Nova Scotia can be found in this comprehensive report. It details:

- Substantial increases in energy efficiency programming.
- The addition of about 120 MW / 480 MWh of energy storage.
- A generation mix of about 43 per cent wind, 5 per cent solar, 43 per cent hydro and 9 per cent (existing) natural gas by 2030.
- A doubling of wind power in Nova Scotia, with the addition of 600 to 800 MW.
- Significantly increasing solar power in Nova Scotia, with the addition of about 480 MW.
- Building a second transmission link to New Brunswick and importing about 200MW of existing hydroelectricity capacity from Quebec.

5. Green Hydrogen produced using surplus renewables is one of the cleanest fuels that can help decarbonize sectors like aviation, marine and road transport. Sufficient research needs to be conducted to enable production of Green Hydrogen at scale within the next decade. Blue and Grey Hydrogen (produced using natural gas and carbon capture) do not fully mitigate the emissions associated with its production, and therefore, all efforts should be directed towards producing Green Hydrogen.

ACHIEVING THE GOAL CONTINUED:

6. Remove forest biomass from the definition of “renewable” in the Renewable Electricity standards. Forest biomass is not carbon neutral. It produces GHGs faster than forests can grow. Therefore, it is not renewable.

7. Stop investment in new natural gas plants. Natural gas infrastructure has methane and other emissions associated with it. Methane is 84 times as powerful a greenhouse gas than carbon dioxide measured on a 20 year timeline.

8. Energy efficiency is one of the best ways to reduce GHG emissions, and therefore, must be given more priority and investment. Residential deep energy retrofits can take us on the decarbonization path rapidly.

9. Put dates on decommissioning coal plants in the province. At the same time, in the federal context, the equivalency agreement should be dissolved and made null and void. Nova Scotia should stand as an example for New Brunswick, and collaborate with NB to decarbonize the Atlantic region.

ADDITIONAL INFORMATION:

- Nova Scotia still derives more than half of its electricity needs from coal making it one of the dirtiest electricity grids in Canada.
- Dramatically decarbonizing Nova Scotia's electricity grid is technically and economically possible by displacing coal, oil, gas and largescale biomass with increased levels of domestic wind, imported hydro, solar, energy storage and community-scale projects.

ADDITIONAL INFORMATION CONTINUED:

- Reaching a target of 90% of our electricity needs coming from renewable sources would create more than 35,000 job years in Nova Scotia between now and 2030. More on this statistic can be found in [Nova Scotia Environmental Goals and Sustainable Prosperity Act Economic Costs and Benefits for Proposed Goals.](#)
- Hydrogen development is an important piece, where we need to avoid of “Blue Hydrogen” which is based on fracked gas, and instead focus on development of “Green Hydrogen” produced from surplus renewable energy. It’s important to define what qualifies as a clean energy source – biomass is not a clean source of electricity and causes more emissions than it mitigates; carbon capture storage (CCS) is very expensive, largely unproven technology. Money would be better spent in developing wind, solar and energy storage

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