

Coalition for Responsible Energy Development in New Brunswick

July 9, 2020

The Hon. Blaine Higgs, Premier of New Brunswick
Blaine.Higgs@gnb.ca

Dear Premier Higgs:

Thank you for your informative letter (dated June 19) on electricity production in New Brunswick.

We were pleased to note in your second paragraph that you support improvements in energy efficiency and in reducing emissions from the electricity sector. Also, that you agree that expanding energy efficiency programmes would create needed economic activity in New Brunswick. We would like to see you act on this right now by restoring and expanding on the successful home energy retrofit programmes and the renewable energy subsidies programmes previously provided by Efficiency NB and the federal government. Many New Brunswickers are anxious to help reduce climate change by making their homes more energy efficient, and reducing emissions and damage to the environment by using clean, renewable energy from sources like solar, wind, geothermal, and small hydro.

We were unclear whether you meant there was little economic development value to NB from large wind developments greater than 300MW, or whether there has been little development of large wind projects over 300MW since 2008. In either case, we favour smaller, locally distributed, (even community-owned) wind and solar developments serving the local area, reducing transmission losses, and providing cheaper power. However, we find that NB Power and the province have put obstacles in place, and are not willing to see changes to the Electricity Act that would enable these developments.

As you noted in your third paragraph, electrical resistance heating of homes in winter is very inefficient and costly, especially when many homes in NB are older and need retrofits to make them more energy efficient. This is why energy retrofits, and net zero homes, are needed right now, as well as for the future. It should be pointed out that it was NB Power and the provincial government that originally encouraged the public to switch to electrical resistance home heating.

You expressed concern about the reliability of renewable energy. Perhaps you did not know that many technologies exist for storage of solar and wind power, including batteries and dams, that provide reliable, consistent power when needed. Storage systems are not all temporary. Using excess wind-generated power to pump water up behind a dam to be used when needed to provide electric power, is one simple example.

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As you noted, different sources need to be part of the smart grid for maximum efficiency and reliability. Chris Rouse of New Clear Free Solutions has previously pointed out to NB Power the complementary potential of the different clean, renewable sources of energy in NB.

It does not make any sense to try to use a small modular nuclear reactors (SMNRs) for either base load or backup. When Lepreau was used for base load, it was not always available, having outages and accidents, and requiring prolonged shutdowns, especially noticeable during the refurbishment. Its efficiency while operating was not as high as predicted. It is currently operating without having some of its serious safety problems dealt with. It is not sensible to use a nuclear reactor for backup because the radioactive material in the reactor continues to release gamma rays and radioactive particles, even when the reactor is shut down, and requires cooling water (or other substances) to keep the radioactive material from overheating.

Your solution for reliable power, the nuclear reactor, has already been proven to be not only unreliable, but also unsafe, and extremely costly, in both the short-term and long term. It has already saddled New Brunswickers with a monstrous debt and hampered our potential for economic success for many years. It is unfortunate that NB Power has closed hydro facilities that supplied us with cheap reliable electric power for nearly a century, rather than upgrading them, and instead spent so much of our money to refurbish the defective, unreliable nuclear power plant, although advised against it by the provincial Energy and Utilities Board.

The superior reliability of renewable energy sources like wind power is demonstrated by the fact that after the earthquake and tsunami that destroyed the Fukushima nuclear power plant in Japan, the lights in Tokyo were kept on by an offshore wind farm that continued to provide electricity in spite of the earthquake and tsunami.¹

Your claim that SMNRs would reduce the nuclear waste left by the operating reactor has been shown to be incorrect. The premise that SMNRs could be used to fission the long-lasting actinides or to produce more plutonium for use as nuclear fuel (or nuclear bombs) has flaws. In 2018 Dr. Lindsay Krall of Stanford University and Dr. Allison Macfarlane of George Washington University published an article in the Bulletin of the Atomic Scientists² outlining these flaws. Dr. Krall's critical analysis of SMNRs found that their development will not reduce the mass and radiotoxicity of commercially generated nuclear waste.

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¹ <http://w3.windfair.net/wind-energy/news/8957-japan-wind-turbines-survive-both-tsunami-and-earthquake>

² “ Burning waste or playing with fire? Waste management considerations for non-traditional reactors”, Bulletin of the Atomic Scientists 2018. Vol. 74, NO. 5 326-334. <https://doi.org/10.1080/00963402.2018.1507791>

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Please stop relying on NB Power and foreign lobbyists for information and ideas. NB Power's track record from promoting electrical resistance space heating, to the financial disaster of Pt. Lepreau, including its "refurbishment", to Joi Scientific, and now SMNRs has been abysmal when compared to the ideas and advice of ordinary New Brunswickers on the direction we should go in providing electric power.

Making venture-capital-like investments in ten to fifteen-year SMNR projects with uncertain outcomes, thereby diverting funding from implementing known renewable energy sources with early paybacks in both reduced emissions and lower cost power, seems financially irresponsible for a small province like our own. The potential economic benefits from provincially-owned renewable power and related storage can include attraction of industry with low NB electricity rates.

In short, our Coalition would be interested to promote your government's efforts to press the federal government for alternative funding toward non-nuclear renewable energy and efficiency solutions, explaining to them how their current SMNR program threatens to distort provincial efforts toward financially responsible investment in reducing emissions. Provincial universities could, for example, be key sites for civil and chemical engineering research/design of further energy storage enhancements for the New Brunswick environment.

We invite you and your government colleagues to visit our website: <https://crednb.ca> to learn more about our ideas and sign up as champions of responsible energy development in New Brunswick.

Sincerely,
Paula Tippet, Gail Wylie, Sam Arnold
for the Coalition for Responsible Energy Development in New Brunswick

cc Right Honourable Justin Trudeau, Prime Minister of Canada
Honourable Seamus O'Regan, Minister of Natural Resources Canada
Jenica Atwin, Green Party of Canada Caucus
Paul Manley, Green Party of Canada Caucus
Elizabeth May, Green Party of Canada Caucus
Richard Cannings, New Democratic Party of Canada Critic for Natural Resources
David Coon, Leader of the Green Party of New Brunswick
Kevin Vickers, Leader of the Liberal Party of New Brunswick
Kris Austin, Leader of the People's Alliance Party of New Brunswick
Mackenzie Thomason, Leader of the New Democratic Party of New Brunswick