

## **CRED-NB Letter of Comment on NB Power's rate increase request**

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Dear members of the New Brunswick Energy & Utilities Board:

My name is Sam Arnold. I'm a member of the Coalition for Responsible Energy Development in New Brunswick (CRED-NB), a grassroots alliance of 169 businesses, Indigenous and non-governmental organizations, and individuals fighting for a nuclear-free renewable-energy future for New Brunswick. Our mission is to advocate for responsible energy development in our province to address the climate crisis using four guidelines: reduce the demand for energy, increase the amount of low-cost electricity generated from renewable sources with storage, eliminate the development of fossil fuel energy and phase out nuclear energy, and support solidarity actions with communities experiencing the harmful impacts of our energy choices.

CRED-NB urges the EUB to require that NB Power validates its demand for higher power rates by taking proactive, economically and environmentally responsible action to improve its overall performance while reducing greenhouse gas emissions to address the climate emergency in the years leading to 2030.

On February 17, 2024, Lori Clark, CEO of NB Power in her commentary published in Brunswick News argues that the rate increases being demanded by the utility will provide better energy security. "[The rate increase] will allow us to make stronger investments in energy efficiency and make needed improvements at the Point Lepreau Nuclear and Mactaquac Hydro generating stations to improve reliability. And we're planning to make needed improvements to our customer care services." Clark continued, "While change can be overwhelming, it can also yield tremendous reward if implemented carefully, and we're continuing to make advancements to not only improve our operations and our financial position but also contribute to a brighter, more secure and prosperous future for all New Brunswickers."

We agree that creating a brighter and more secure and prosperous future for New Brunswickers is an essential priority for the utility. But sadly, NB Power has failed to accomplish this. We find little evidence that the funding requested by the utility will produce such results. Meeting net-zero

emissions must be attained far sooner than 2050, if we are to avoid the worst impacts of the climate emergency. We submit the following improvement strategies that can help the utility achieve its prime requirements and advancements at the lowest cost, in the least time, and with greatest benefit:

- **Build out more renewable power.** Wind, solar, geothermal, and storage can provide the best and least expensive prospect for electricity generation, particularly wind in the Bay of Chaleur region near the Belledune power plant and powerlines. A modern offshore wind turbine can produce 15 megawatts of power. Wind farms off the coast of Scotland are producing a total of 10 gigawatts. Paired with solar and storage, offshore wind in the Bay of Chaleur could produce enough power to replace the Belledune coal thermal generating plant that will end production in 2030. Renewable power can create many local jobs province-wide. Wind energy can also provide power for electrolysis to create [green hydrogen](#) for energy storage at Belledune which would be economically and environmentally feasible (p 54). (See more in *sharing energy regionally* below.)
- **Stop plans for biomass generation at Belledune.** Biomass is a poor substitute for coal as it produces CO<sub>2</sub> emissions and particulates damaging to the environment and human health. Biomass provides heat to many homes in New Brunswick, but makes no sense for electricity generation as it is a very inefficient electricity generator. A Belledune plant burning biomass will produce a CO<sub>2</sub> debt that will build up during the decades it takes new trees to grow. It also encourages unsustainable logging that damages the forests and biosphere.
- **Decentralize generation.** NB Power continues to insist that large and expensive-to-run baseload power coming from Point Lepreau, Bayside and Belledune is required, but this model is out of step with global developments. An electricity system founded on renewable energy replaces large, centralized plants, with distributed energy sources firmed by short- and long-duration storage, demand management and interties with neighbouring jurisdictions for sharing variable energy sources. Surplus wind energy can be used to produce green hydrogen which can safely and inexpensively be stored in underground salt caverns. Green hydrogen provides a clean source of dispatchable energy to further backstop variable generating sources.
- **Replace large, centralized plants with distributed energy, storage, efficiency, and a modernized grid.** NB Power's announced improvements to the grid and transmission lines are needed but must be planned in conjunction with a distributed decentralized power grid that is efficient, secure, fiscally sustainable, and a positive force for economic and social development. Construction of new buildings must require electricity and/or heating to meet high energy efficiency standards by 2030, with no exceptions. All new buildings must strive to take advantage of the capture of passive solar energy to achieve a reasonable percentage of their heating requirements. Deep retrofits of existing commercial, industrial and residential buildings province-wide will reduce electricity consumption and costs to ratepayers while providing jobs and economic benefits to all regions of New Brunswick. A distributed energy system will improve power reliability and will reduce the cost of generating electricity.

- **End excessive debt.** Recently, New Brunswick's government [changed](#) the Electricity Act forcing NB Power to buy electricity, regardless of the price, from the first two SMRs proposed to be constructed here. This has increased the probability of perpetual debt for NB Power and the province. In addition, the likelihood of success for either ARC or Moltex to each build and bring their unit into service is highly doubtful, while the exorbitant cost, in either success or failure, will largely be passed on to New Brunswickers to pay off for decades to come. This economic and ethical blunder was made by Liberal and Progressive Conservative governments. They should be held accountable.

- **Prioritize domestic power needs, not exports.** Exporting power abroad has not been profitable and Point Lepreau is proof of this. But the obsession continues for exporting LNG, hydrogen, and now SMNRs. New nuclear will not be available for more than a decade, if ever, and hydrogen or natural gas will never be economical to export. The likely prospect of losing out will yet again go to NB taxpayers, who are never asked to approve such contracts. NB politicians need to focus on meeting local energy needs, not making financially risky ventures with foreign governments. Exporting power should occur only after local needs have been met, and through power-sharing agreements made with neighbouring provinces and Maine.

- **Share energy regionally.** Any agreements made by NB Power with utilities in neighbouring provinces and Maine to improve power distribution would be advantageous to all parties involved. This is particularly true with variable wind generation, which when wind speed is insufficient locally, is likely producing energy elsewhere. Hydro-electric power, geothermal energy, battery storage and various long-duration storage technologies including hydrogen are effective load-following sources for filling [gaps](#) in production from wind and solar (p 54). Developing more onshore, near-shore and offshore wind farms regionally will improve and increase available power.

The three Maritime provinces enjoy an abundance of [wind](#) that can be harnessed to provide sufficient wind-farmed energy. New Brunswick forms the hub of the electrical system in the Maritimes by virtue of its geographic location [and](#) yet NB is proportionally less invested in wind than either NS or PEI, having only 294 MW of installed capacity, or roughly 10% of peak loads. Linked to wind energy is the incorporation of grid-tied energy storage. Grid scale storage is here now, being incorporated economically and profitably into electric grids the world over. The price of energy storage is continuously dropping as supply chains develop and technology improves. The future is in wind energy with storage and interties with our Maritime neighbours.

- **Phase out Point Lepreau before its current operating license expires to eliminate downtime costs.** N.B. Power's annual reports have proven that the aging reactor is a high-cost liability, when not operating, at between \$684,000 and \$1.2 million per day for maintenance, repairs, and firing up carbon-producing backup generators, or purchasing replacement power. This does not include the cost of replacement parts. The result is the monthly 3% rate increase demanded by NB Power that the EUB has tentatively approved for the Variance Account Recovery Filing to pay for the maintenance shutdown of the PLNGS lasting about 100 days. This will result in an increase

for the average residential customer of approximately \$5.81/month over 12 months. More costly maintenance shutdowns are a certainty with the aging reactor in the years ahead.

• **Abandon all plans to develop small modular nuclear reactors.** NB Power must be held responsible for promoting much of the nuclear hype that has resulted in the two SMNR vendors receiving millions in provincial and federal taxpayer dollars to date. Billions of public funds will be required if plans go ahead to design and build these proposed nuclear reactors. SMNRs are an unproven technology. The two kinds of SMNR designs planned for New Brunswick have never operated successfully and profitably on an electric grid anywhere. Private investors are not interested in SMNRs because they are a high risk and an unprofitable bet, resulting in taxpayers being consigned that cost, provincially and federally. The flagship nuclear SMNR project in the U.S., the NuScale reactor, collapsed last year when the project costs sky-rocketed and the municipal utility investors finally pulled out. The nuclear scheme in New Brunswick is destined for failure as well, with growing debt a certainty.

Nuclear proponents and stakeholders repeat the fallacy that carbon neutrality can't be achieved without nuclear, but the opposite is true. Progress is rapidly being made with renewable energy, efficiency, and storage, while nuclear power in NB and Canada is declining now to about 10% nationally. Funding new nuclear reactors will undoubtedly delay needed climate action by diverting money from renewable energy projects.

• **Stop producing radioactive waste and intensifying the risk of nuclear weapons proliferation.** Critically, nuclear power promoters intentionally avoid mentioning the unsolved conundrum of nuclear waste, and the need to store it safely forever. They ignore the fact that Canada has produced 3.1 million bundles of high-level nuclear fuel waste to date weighing nearly 60,000 tonnes, and this volume is expected to double over the next 30 years. It is incomprehensible that successive governments of most countries producing nuclear power — and radioactive waste — for over 70 years continue to advocate for this dirty, dangerous, and uneconomical energy source. The apparent solution by the nuclear industry is to leave it to our children and grandchildren to solve. But the unstated justification for the current push for SMNRs and new large nuclear reactors is about keeping nuclear jobs in Canada, maintaining the dying nuclear industry and, in the case of the SMNRs, using plutonium as fuel by extracting it from waste nuclear fuel.

Despite claims by the SMNR vendor, Moltex, plutonium extraction is hardly “recycling”. In fact, the Moltex [process](#) would extract less than 1% as plutonium fuel and leave behind over 99% as multiple streams of highly radioactive, difficult-to-manage wastes (p 22). Contrary to Moltex's claims that its extracted plutonium isn't suitable for use in nuclear weapons, in 2022 an authoritative [study](#) by the US National Academy of Sciences, Engineering and Medicine concluded that “[w]hile these technologies may provide some benefit in delaying direct use of the materials, there was consensus among the committee members that none provided significant proliferation resistance at this time” (p 211). Alarming, the business model for SMNRs and plutonium extraction requires the sale of these technologies to international markets, heightening

the risk that client countries with weak or non-existent regulatory safeguards would divert this material for use in nuclear weapons.

NB Power CEO Lori Clark talks about “...continuing to make advancements to ...contribute to a brighter, more secure and prosperous future for all New Brunswickers”. Using revenues from a rate increase to develop “advancements” such as SMNR and plutonium extraction technologies which would be marketed globally despite the financial, environmental and security hazards is unjustifiable – and unethical.

• **Addressing the climate emergency with logical authority.** *“The New Brunswick Energy and Utilities Board is an independent quasi-judicial tribunal established by the Legislature to regulate the electricity, natural gas, pipeline and motor carrier industries and set maximum gasoline prices for the province.”* The duty of the EUB is to ensure that the government protects the wellbeing of New Brunswickers who must pay for these ongoing expenses. NB Power’s duty is to provide safe, reliable and affordable power now and in the years ahead. This must be considered in conjunction with the costs that come with climate-caused natural disasters, including wildfires and hurricanes that destroy homes, properties, businesses, and grid infrastructure. The EUB should play a leading role in the transition from the current carbon economy to the much-needed low and no carbon-producing economy. The EUB has a responsibility to declare with the knowledge and wisdom it has what is in the best interest of those still too young to understand, and for future generations.

We strongly encourage the Board to consider the concerns of independent citizen coalitions such as CRED-NB and the many other non-government groups working for sustainable livelihoods and for the well-being of everyone in the province. Surely the role of the EUB is to advocate for a healthier future – not simply to maintain the status quo.

CRED-NB is confident that the suggestions made above are in the interest of the public and NB Power, and are the responsible approach to effectively address the climate emergency.

Respectfully submitted,



Samuel Arnold,  
on behalf of CRED-NB