

Standing Committee on Science and Research
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Please accept this brief for the study on SMNRs:

We understand that a study on small modular nuclear reactors (SMNRs) by the Parliamentary committee is intended to produce a report to justify a massive infusion of federal public dollars to SMNR development from the [Net Zero Accelerator](#) Initiative, which currently has ~\$8 billion to expend.

The Sustainable Energy Group is opposed to any future public funding going to SMNR development in New Brunswick, or any other province. The following evidence will make it clear why we feel that publicly funding SMNRs is a major error if it continues.

- **SMNRs will have no beneficial effect on energy needs.** Claims by some nuclear vendors that they may be able to produce a working prototype by 2030 or 2032 is no more than wishful thinking. The history of nuclear reactors has proven repeatedly that they cannot deliver on time, or on budget. No SMNR has reached commercial operation anywhere in the world and there is no indication that this latest nuclear fantasy will be any different. The nuclear industry's desperate determination to survive can only prolong the inevitable conclusion that it is time to terminate support for nuclear power entirely.
- **SMNRs are counter-productive to mitigating the climate emergency.** The climate emergency is making clear that the Government of Canada has neither the time nor funding to squander to prevent crossing the 1.5° C line that it must not cross in the next few years. Investing in oil, gas and nuclear is counter-productive to mitigating the climate crisis; doing so will be a death sentence for our children, grandchildren and future generations that government is tasked to protect.
- a) **Renewable energy, storage and interprovincial transmission is ready today.** The David Suzuki Foundation reports that Canada can achieve 100% zero-emission electricity by 2035 with an electricity system that prioritizes renewable energy, storage, energy efficiency, and interprovincial transmission and avoids the pitfalls of nuclear generation, fossil gas, carbon capture and storage, and carbon offsets. <https://tinyurl.com/35xfakws>
- b) UN Secretary General Antonio Guterres, commenting on the World Meteorological Organization's (WMO) State of the Global Climate 2021 report said, "The global energy system is broken and closer to climate catastrophe. Fossil fuels are a dead end — environmentally and economically." <https://balkangreenenergynews.com/guterres-global-energy-system-is-broken-world-closer-to-climate-catastrophe/>
- c) The Atlantic Loop (interprovincial transmission) with federal support has the best potential to provide the base power that NB Power still insists is necessary. With the anticipated increasing demand for electricity to power EVs and infrastructure, the Atlantic Loop, along with increased onshore and offshore wind, solar, efficiency and innovation, will be able to respond to this challenge.

d) We support the Pembina Institute study – **Towards a Clean Energy Atlantic Grid** – by Jan Gorski and Binu Jeyakumar, January 2022. Their study identifies five main resources: renewable energy, battery and other energy storage methods, energy efficiency, imported hydroelectricity and smart grid demand flexibility. In concert, these resources can create a balanced and affordable clean electric grid for decades to come, complementing each other to replace reliance on polluting fossil fuels, as well as dirty and risky nuclear power. Their study advises that the old axiom still being proclaimed by the NB Power CEO – that baseload energy is a necessity – no longer is a requirement to successfully operate a reliable modern electricity grid. <https://www.pembina.org/pub/towards-clean-atlantic-grid>

- **Nuclear power is a major failure.** Since its inception, nuclear power has failed to deliver affordable and reliable electricity. Moreover, all nuclear power plants have been storing their highly radioactive waste in temporary encasements for well over six decades and continue to wait for the elusive permanent safe storage solutions for all levels of nuclear waste. As well, hundreds of reactors around the world, and several in Canada, are waiting to be decommissioned at exorbitant cost. New Brunswick and Canadian taxpayers will inherit and pay this cost for many years to come, and that will be the true legacy of nuclear power.
- **Nuclear waste reprocessing is a false premise.** Moltex Energy claims it will be able to reprocess the spent nuclear fuel from the CANDU reactor at Point Lepreau, reducing the nuclear waste stockpile by about 1 percent. What they don't say is that reprocessing a solid waste into a liquid to extract the needed plutonium will create new challenges to safely transport and permanently store this waste. Reprocessed nuclear waste will become more toxic, and may increase, rather than decrease, the amount of toxic waste. Meanwhile, the competing ARC-100 sodium-cooled reactor also under design in New Brunswick will require importing light-water radioactive waste from other countries, thereby increasing nuclear waste at Point Lepreau. Importing nuclear waste should never be permitted.

More can be said concerning safety, cost and additional risk from nuclear proliferation that SMNRs would bring if green lighted and publicly funded. But we have made our position clear that Canada must stop all funding for SMNR development. Rather, the **Net Zero Accelerator Initiative** would produce best results when invested in well-established and rapidly developing affordable and reliable renewable energy technology, combined with the proposed Atlantic Loop and existing hydro power.

Thank you for considering our submission.

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