

## Clean Growth and a Robust Economy – It is Possible

**By Colleen d’Entremont**  
**Commentary**

Federal Minister of Natural Resources Seamus O’Regan refers to the goal of “net-zero” carbon emissions by 2050 as Canada’s “moonshot.” O’Regan says the federal government is looking at all potential solutions to reduce carbon emissions, including carbon capture, storage, hydrogen, geothermal and small modular nuclear reactors as clean sources of energy. It has become clear that to achieve the necessary reductions in carbon emissions that nuclear must be part of our energy mix.

This is where New Brunswick comes in. There is great interest in advanced small modular reactors (SMRs) – the next generation of nuclear technology with potential to generate low-carbon electricity safely, reliably, and inexpensively. SMRs offer great flexibility for New Brunswick’s future power grid.

And there are good reasons for New Brunswick to be the place for this development. It’s not just about generating electricity – it’s about developing a whole new economic cluster.

Let’s start with the University of New Brunswick’s Centre for Nuclear Research, and add the applied training taking place at the New Brunswick Community College in programs like power engineering.

Then add the fact that the existing Point Lepreau nuclear generating site has an established, well-trained workforce in nuclear operations, plus a tremendous operating record of producing a base load of consistent 24/7 clean energy.

From a political standpoint, the SMR program in New Brunswick was first introduced by a Liberal government and has been equally embraced by the current Conservative government, which is in alignment with the federal government’s Pan-Canadian SMR Roadmap.

The provincial utility, NB Power, has also remained steadfast in its support and need for clean nuclear energy to support the increased intermittent renewables the grid has taken on, and will continue to use going forward.

Even project proponents for wind and solar energy are supportive of SMR development to supplement their energy generation when the wind isn’t blowing and the sun isn’t shining. Let’s not be blind to the fact that the largest draw on the electrical grid is in the early morning before the sun even rises.

Community support is also strong. Independent, third-party polling has shown that the highest support for nuclear energy is closest to the site where it is, and will continue to be, generated.

The supplier network of existing New Brunswick organizations that will gain access to the nuclear sector can not be understated. This is an opportunity for established companies to supply their current products and services to an entirely new sector.

A recently completed independent economic impact analysis by the Université de Moncton considered successful deployment of New Brunswick SMR technologies in Canada and internationally. The study states commercialization of SMRs in New Brunswick could translate into 11,000 person years of employment, \$1 billion in provincial gross domestic product (GDP) and \$120 million in provincial government revenue.

Once commercialized, an SMR production program brings additional benefits to New Brunswick as part of the pan-Canadian program to grow the low-carbon economy of the future. SMR rollout across Canada and internationally is forecast to grow at a rapid pace creating jobs, spin off new businesses, and government revenues to invest in New Brunswick public services.

The Government of New Brunswick is participating in the Canadian strategy for the development of small modular reactor technology. New Brunswick, Ontario and Saskatchewan are part of a Memorandum of Understanding to work cooperatively for the development and deployment of SMRs in Canada, and Alberta has indicated it will soon join in.

Locally, a consortium of project proponents in nuclear and renewable energy and others representing the community, academia, the private and public sector, joined together to seize the opportunities and benefits of SMR development in New Brunswick. The Atlantic Clean Energy Alliance (ACEA) works in collaboration to advance long-term Generation-4 SMR and associated clean energy technology opportunities.

Research around small modular reactor technology will provide valuable information as we continue to work toward developing a resilient, low-carbon economy. New Brunswick will be the centre of activity for the development of the advanced fourth-generation SMR technology in the 2020 to 2035 time period. The technology developed here can also lead to future opportunities, including replacement of carbon generation methods.

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With SMRs as part of a low-carbon mix, New Brunswick can scale up to electrify additional infrastructure such as its transportation network, and meet future demand increases and the retirement of other generating assets.

There are many challenges in the energy sector and pressures to reduce our carbon footprint. It is imperative that New Brunswick show leadership and innovation in finding new sources of energy for our future needs. New energy development takes decades. This development needs to start now to enable the reduction in emissions to reach net-zero by 2050.

This window of opportunity comes at a time of unprecedented alignment. There is a full spectrum of support for this to take place. We sincerely hope we can collectively seize this moment before the window of opportunity closes.

*Colleen d'Entremont is President of the [Atlantica Centre for Energy](#), a think tank examining energy issues in the region.*