

## Opinion

# Shouldn't a new and experimental reactor deserve a federal impact assessment?

These risks are all new to Canada. No sodium-cooled reactor has ever been built here.

M.V. Ramana  
& Susan  
O'Donnell

Opinion



Towards the end of December 2022, Environment and Climate Change Minister Steven Guilbeault chose to ignore public concerns about small modular nuclear reactors (SMRs), rejecting a request to put a project through an additional federal impact assessment, favouring the nuclear industry and weakening oversight of an untested and risky technology.

When the revised Impact Assessment Act (IAA) became law in 2019, new nuclear reactors were exempted from assessment if they met certain conditions. Those pushing the exemption aimed to open the path to building new reactors. No surprise, then, that the conditions for

exemption apply to almost all the SMR designs being considered for construction, even though Canada has no experience with them whatsoever.

The first SMR officially deemed exempt under the IAA is the ARC-100 sodium-cooled fast reactor proposed by NB Power for the Point Lepreau site on the Bay of Fundy in New Brunswick. Given the ecological sensitivity of the site and inherent problems with such reactors, the Coalition for Responsible Energy Development in New Brunswick (CRED-NB) formally requested Guilbeault to designate the project for a full impact assessment. The minister rejected the request on Dec. 22, claiming that a review by the Canadian Nuclear Safety Commission (CNSC) and the New Brunswick government would be adequate.

The federal impact assessment is the most rigorous form of public review available under law, seeking inputs from multiple stakeholders with different forms of expertise and outlooks. Ideally, the review panel would not be solely constituted by CNSC personnel and staff of the provincial government, a project funder. Indigenous nations and public interest groups had clearly stated their concerns to Guilbeault. Letters of support for CRED-NB's request

were submitted by the Wolastoq Grand Council, and Indigenous organizations representing the Peskotomuhkati Nation and the Mi'gmaq First Nations in New Brunswick, as well as more than 300 groups and individuals.

Why the public concern? Unlike the CANDU reactors operating in Ontario and New Brunswick, the ARC-100 design uses molten sodium instead of heavy water to transfer the intense heat produced by nuclear fission. Sodium reacts badly with air or water, burning or exploding upon such contact. Japan's Monju demonstration reactor was shut down in 1995 within a few months of the reactor starting to generate power because of a sodium fire; it was reactivated in 2010 but was shut down again after another accident. The total price tag for this reactor and its cleanup is upwards of \$10-billion.

Sodium also tends to leak out of pipes and vessels because of chemical interactions with the stainless steel in reactors. France's Superphénix, the world's largest sodium-cooled reactor, suffered numerous operational problems, including a major sodium leak. When put out of its misery in 1998, its load factor was under eight per cent, a fraction of the 80 to 90

per cent typical of commercial reactors.

Sodium-cooled reactors have also had numerous accidents, starting with the 1955 partial core meltdown of the EBR-1 in Idaho. A decade later, the Fermi-1 demonstration fast reactor near Detroit, Michigan, suffered a similar but more devastating accident, leading to the book *We Almost Lost Detroit* and a song by Gil Scott Heron.

Sodium-cooled reactors have never been successfully commercialized despite numerous attempts over decades. Shut-down sodium-cooled reactors have proven difficult to decommission. In the U.S., the EBR-II reactor was shut down in 1994, but to date it has been unfeasible to extract the sodium metal from the highly radioactive spent fuel. The challenge is to dispose of this material without causing underground explosions due to a sodium-water reaction, as happened with the sodium-cooled Dounreay reactor in Scotland.

Radioactive particles are still being found on the Dounreay foreshore, more than four decades after the reactor waste exploded. A similar accident with the proposed ARC-100 reactor could result in widely spread radioactive contamination next to the Bay of Fundy.

These risks are all new to Canada. No sodium-cooled reactor has ever been built here. The Canadian Nuclear Safety Commission has never evaluated such reactors, one reason why the CNSC's claim that its regulatory process provides sufficient oversight for SMR development rings hollow. What's more, the CNSC's active lobbying to speed up the regulatory process so SMRs could be more quickly brought to market suggests a fundamental conflict of interest by an "independent" regulator.

The ARC-100 project requires federal oversight and assessment. Its impacts on Indigenous rights as well as socio-economic factors and alternatives to the project will not be within the remit of either a CNSC review or a provincial assessment. The opportunities for an independent and official review of public concerns on these issues have now been significantly curtailed.

*Susan O'Donnell is an adjunct professor at the University of New Brunswick and St. Thomas University, and a member of the Coalition for Responsible Energy Development in New Brunswick. M.V. Ramana is the Simons Chair in Disarmament, Global and Human Security and professor at the School of Public Policy and Global Affairs, University of British Columbia.*

The Hill Times

# Growing discontent between feds and provinces

Passing a Meech Lake-like constitutional accord would be the only way to save the country from disintegrating.

Danny Dean  
Greer

Opinion



PORTLAND, OREGON—Recently, there has been a growing and dangerous discontent between the federal government and the provinces, including over allocating more funds to health care, which ended in a discord. The crux of the issue is Prime Minister Justin Trudeau's insistence of strings attached, whereas

the premiers were strictly asking for more funds.

The Canada Health Act (1984) was an intrusion of the federal government into a sole provincial responsibility, but that was a precedent. The governing Liberals increasingly tend to push into areas of provincial constitutional responsibility by withholding cash from provinces. Another example is Bill C-69, the Impact Assessment Act, which is now used as a sword over Ontario Premier Doug Ford's intention to build Highway 413, a strictly provincial mandate.

A pushback has started to form: building up on the Commons' historic landmark motion, to the effect of "Québécois are a nation within a united Canada," and more so recently and brazenly—the House's 2021 motion declaring that "Quebec is a nation, whose sole official language is French"—Quebec Premier François Legault has passed Bill 96, which unilaterally amended the Canadian Constitution, symbolic as it may be. The re-elected premier has now upped the ante

by removing a mandatory oath to King Charles, which used to prevent democratically elected members of the Quebec National Assembly from taking their seats.

While I strongly protest against Bill 96 and the overuse of Sec. 33 of the Charter of Rights and Freedoms' notwithstanding clause, to override potential challenges, Legault does have a point here pertaining to the oath. Polls consistently show that most Canadians (57 per cent), let alone in Quebec (87 per cent), are in favour of abolishing the monarchy and electing (or selecting) a Canadian head of state (as Barbados has just done). Legault has seized on Trudeau's hesitancy to go up against Quebec to advance his priorities; therefore, he signalled to other premiers that it's okay to push the envelope in federal-provincial relations and employ quasi-constitutional, legally dubious or murky power to fill a vacuum the federal Liberal government has shied away from; namely, not only removing the notwithstanding clause, but also moving to a more democrati-

caly balanced system of division of powers, including putting the question of the future of the monarchy to Canadians.

Ford has also sensed that something is broken, and his increasingly so-called tyrannical wielding of his power as manifested in Bill 39, "Strong Mayor Act" to advance provincial priorities with a municipal vote of one-third of the council, on top of his utilization of Sec. 33 to enact Bill 28 and others, is a showcase. While I decry his abuse of powers, he has a point here: first of all, cities in Ontario are a creation of the provinces as is the case in most Westminster-style democracies. The Constitution allows him to use the notwithstanding clause, like it or not. But a much more serious issue lurks here.

Danielle Smith's "Alberta Sovereignty Act within a United Canada" is purported to withstand a so-called intrusion into provincial jurisdiction, as in resource management; Smith is also correct in her assessment that both Ontario and Quebec have their own pro-

vincial police forces, Quebec also has its own pension plan.

These late moves by the premiers of Alberta, Quebec, and Ontario to wield a stronger hand vis-à-vis federal power is a wakeup call for Trudeau to listen more to his premiers. There is certainly a division of power which the federal government has consistently crossed. The latter nominates Supreme Court justices, lieutenant-governors and even provincial courts of appeal justices. They also have a disallowance power over provincial legislation. All this could have been changed for the better had then-prime minister Brian Mulroney's Meech Lake Accord passed. A balance—including a Triple-E Senate (equal, elected, and effective), mandatory provincial input in nominating Supreme Court justices, and other goodies contained in the Meech Lake Accord—would have guaranteed provinces have their fair shake. Just as Ford, Smith and Legault are called dictatorial, Trudeau's conduct could be considered likewise. Passing a Meech Lake-like constitutional accord would be the only way to save the country from disintegrating.

*Danny Dean Greer studied political science at Carleton University in Ottawa. He currently resides in Vancouver, Washington, and is working as a legal assistant in Portland, Oregon. He is an advocate of closer ties between Canada and the U.S.*

The Hill Times