Letters

Feds should divert SMNR funding to renewable energy, says New Brunswick reader

Tom Reid's commentary,"We need nuclear power to meet our climate goals," (*The Hill Times*, Oct. 20) rehashes energy myths promoted by the nuclear industry that have been repeatedly discredited. Let's unpack each one.

At the online launch of the 2021 World Nuclear Industry Status Report (WNISR 2021) hosted by UBC recently, Dr. Ahmed Ali, research fellow at the Harvard Kennedy School, challenged the need to increase power supply in countries like Canada with high per capita energy use. Instead, he recommended research into how supply and demand interactions can be managed to use energy more efficiently, and warned that government funding of small modular nuclear reactors (SMNRs) would divert money from such initiatives.

Not once does Mr. Reid mention energy efficiency, the fastest and cheapest way to reduce energy demand and carbon emissions. A nationwide building retrofit program would put thousands of tradespeople to work all over Canada instead of at only a few nuclear centres while lowering carbon emissions, bringing down energy costs, alleviating energy poverty, and injecting money into local economies. In Saint John, N.B., for example, people living in old, energy-leaking housing would save money on their heating bills and live more comfortably while emitting less carbon.

Secondly, is baseload power really necessary and do we need nuclear reactors to supply it? A nationwide smart grid with regional interconnections could distribute hydro power from the main producing provinces to jurisdictions without it. Surplus wind and solar energy could be transmitted from locations where the sun is shining and the wind blowing to places where for the moment, they're not. In the renewable energy world, distributed energy sources, shared regionally, replace baseload from large, centralized generating stations like nuclear power plants.

Finally, SMNRs are unlikely to live up to the economic benefits claimed by the nuclear industry. S. Froese, N. Kunz, and M.V. Ramana of UBC conclude in their study that the total energy demand of all Canada's remote mining sites and northern communities is insufficient to make even one manufacturing facility profitable. As for international markets, in an online webinar from UBC entitled "Nuclear power and climate change: can SMRs deliver," Dr. Ramana noted that while countries like Ghana, Jordan, and Indonesia "talk interest" in SMNRs, they prefer large projects like hydro because their higher energy output yields a greater return on their investments of money and political capital. Barriers to SMNRs are likely financial and regulatory: Jordan, for example, can't afford the $1-billion price tag, and lacks robust regulations.

Despite the promises of the nuclear industry and apostles like Mr. Reid, SMNRS will not be a solution to climate change because they will be too expensive and come too late to help us avoid its worst impacts. In New Brunswick, ARC Energy has set the aggressive goal of a 2029-2030 construction start for its liquid sodium-cooled fast reactor, but no delays from regulatory and technical challenges appear to have been factored in, despite the nuclear industry's history of time extensions and cost overruns. Assuming no setbacks, 2029 is still too late for New Brunswick to start decarbonizing. By then, it and the rest of Canada must be well down the road to 50 per cent to 60 per cent greenhouse gas reductions over 2005 levels. In contrast, renewable energy technologies such as wind, solar and geothermal are mature, immediately available, cheaper even with storage, and could start reducing carbon emissions in one or two building seasons, not eight years from now.

The federal government should divert its SMNR (small modular nuclear reactors) funding to the renewable energy sector and enable Mr. Reid to secure its opportunities for his union members.

Ann McAllister
Rothesay, N.B.

Anand will have to decide on 88 fighter jets too, massive contract, says reader

The recent appointment of Anita Anand as minister of national defence is welcomed. While much as been made of her mandate to detox the CF top brass culture, one of her most pressing tasks has fallen under the media radar.

In the first quarter of next year, the winner of the Future Fighter Capability Project (FFCP) competition for the replacement of the RCAF CF-18 is to be announced. Three candidates are under evaluation: Boeing F-18E Super Hornet (SH); Lockheed Martin F-35A Joint Strike Fighter (JSF); and Saab Gripen E.

Technical criteria account for 60 per cent of the evaluation, industrial benefits 20 per cent, and cost 20 per cent. The results will lead to a multi-billion-dollar contract to acquire a fleet of 88 new fighter jets to last 35 years or so. Often overlooked, are the costs to fly and sustain the aircraft over their useful service life. Those are much greater than the purchase price and account for most of the total ownership or service life cost of the fleet.

It is noteworthy that the JSF cost per flight hour is the highest at $48,000, or nearly twice that of SH and 3.5 times that of Gripen. We can therefore estimate that the JSF would cost us $40-billion more than the SH, or $60-billion more than the Gripen over the upcoming decades. Furthermore, the JSF is designed primarily for strikes.

As such, it is unsuitable for the RCAF because the main role of our fighter aircraft is the defence of the Canadian airspace. Given Prime Minister Justin Trudeau's promise not to buy the F-35 JSF, plus ministers Chrystia Freeland's and Harjit Sajjan's comments about Boeing not being a trusted partner in reference to the Bombardier C-Series saga, Gripen remains the smarter option with better performance than its two rivals, and, even more so since it would be the only one built in Canada.

It should be noted that I do not work for Saab. My interest is as a Canadian taxpayer and retired aeronautical engineer.

Michel Fortier
Québec City, Que.

Opinion

Public interests must trump nuclear industry and union interests

The public interest requires reliable, affordable, and truly clean energy.

Gail Wylie

Opinion

Re:"We need nuclear power to meet our goals," (*The Hill Times*, Oct. 20). Tom Reid's opinion column claiming that Canada needs nuclear power as fossil fuel is phased out, reflects an outdated and misleading understanding of the transition we need. It represents the interests of his union and the nuclear industry rather than the interests of the public. The public interest requires reliable, affordable, and truly clean energy.

The most questionable of Reid's claims focuses on the requirement for "baseload" power which he cites five times in his column, harkening to the existing aging CANDU reactors operating in Ontario and New Brunswick.

Mycle Schneider, lead author of the October 2021 World Nuclear Industry Status Report (WNISR), explained in a UBC school of public policy webinar, that "solar and wind alone cover a lot of what was called baseload in the past" and hence, "the baseload concept has flown out the window." He stated that "nuclear does not have that space, but is in direct competition." He suggests instead, that the best system is one with multiple sources and a shift in system design to make the best use of them all. The use of multiple sources, with increasingly innovative forms of storage and smart-grid technology to draw on each source—where and when needed—is the modern approach to truly reliable and affordable electricity.

Perhaps more telling is Mr. Reid's omission of any reference to the cost of nuclear power. This is particularly misleading in light of international reporting by Lazard for 2020, on levelized costs of power from various sources. In U.S. dollars, per megawatt, costs range as follows: wind from $26 to $54; utility scale solar from $29 to $42; geothermal from $59 to $101; large scale nuclear from $129 to $198. If an expensive 24/7 nuclear power source is allowed to crowd out maximum use of cheaper, renewable power, affordability will not be achieved.

Mycle Schneider, a Paris-based energy consultant and anti-nuclear activist and lead author of the October 2021 World Nuclear Industry Status Report (WNISR), explained in a UBC school of public policy webinar, that 'solar and wind alone cover a lot of what was called 'baseload' in the past' and hence, 'the baseload concept has flown out the window,' writes Gail Wylie. *Photograph courtesy of Commons Wikimedia*

Similarly, there is no mention of the existence and costs of radioactive nuclear waste storage and disposal. Such wastes surely do not qualify nuclear power as 'clean'! Further, there is no mention of the costs of decommissioning aged and highly radioactive reactors. The recent estimates of unfunded decommissioning costs for Ontario alone, amounted to $19.3-billion for a century-long process, based on the experience of other countries. This additional burden will fall on the taxpayer.

Reid's nuclear pitch relies heavily on claims for the 'new generation' of small modular nuclear reactors, which do not yet exist. The World Nuclear Industry Status Report makes it clear that these are unlikely to be part of the urgent transition to address climate targets. The pilot projects in China, Argentina, and Russia have been disappointing. In Canada, where five competing technologies are being considered, two models have completed the earliest phase 1 design reviews, revealing a number of areas of concern to be addressed. Importantly, in spite of significant government investments in small modular reactors (SMR) development in New Brunswick, neither NB Power's 10-year-plan 2021-2030, nor its strategic plan for 2011-2040 include nuclear power coming on line from SMRs. An earlier cost analysis by M.V. Ramana concludes that SMRs are unlikely to be economically viable. The cost of electricity production is expected to be high, given the loss of economies of scale.

The World Nuclear Industry Status Report also flags strong concerns over nuclear power's experience of criminal activity and its particular challenges as to resilience when facing conditions of climate change and pandemics.

Perhaps most disappointing, is that Reid continues to promote this nuclear industry 'happy talk,' disregarding the documented critiques and experience to the contrary. The real interests of an electrical workers union may actually be more aligned with the public interest, by adapting and enhancing their skills and knowledge, as the world shifts to a modern electrical system design. The electrical workers are, after all, ratepayers benefiting from reliable, affordable and truly clean electricity.

Gail Wylie is a climate activist and a member of the Coalition for Responsible Energy Development New Brunswick.

The Hill Times