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Standing Committee on Science and Research

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2022-08-23

Re: Study on small modular nuclear reactors (SMNRs) - submitted brief

INTRODUCTION

The Passamaquoddy Recognition Group Inc (PRGI) is a not-for-profit Indigenous-led organization representing the Peskotomuhkati Nation in Canada. We represent the interests of rights holders and the Peskotomuhkatik ecosystem. Our duty is to protect our lands, waters, and environment for all present and future generations.

Since time immemorial, the Peskotomuhkati people have lived and thrived on the shores of the bountiful Bay of Fundy, including the current site of the Point Lepreau Nuclear Generating Station (PLNGS). For generations, medicines, foods, and teachings coming from these lands and waters were available to our people until they were given the sole purpose of facilitating the PLNGS. Now, our homeland is also the proposed location for two SMNR technologies. The proposed technologies include a molten salt SMR and spent fuel reprocessing unit (Moltex Energy) and a sodium-cooled SMNR (Advanced Reactor Concepts–ARC).

Consent was never sought, nor granted from our people, for the development of the Point Lepreau nuclear reactor facility on the shores of the Bay of Fundy. Refurbishment of the station was completed in 2012 against our will. Most recently, in opposition to our stated needs and offers to work together during a 3-year operating licence, (a period longer than NB Power's average licence length of 2.44 years) - Point Lepreau was instead given a 10-year operating license by the CNSC. We believe, in part, the extended licence length was requested and authorized to enable an efficient co-siting of proposed SMNRs. Though we have been told time and time again that these projects and licences are separate, we have decades of experience with nuclear proponents and understand that the co-siting of these projects – at this point in their development – is essential.

We struggle with the piecemeal approach utilized by nuclear proponents and government. Instead of participating in a holistic conversation about nuclear, we are asked to respond to specific projects and are forbidden to draw links between projects because of either the project scope, or the limited mandate of the host of the conversation.

Before the committee makes its own recommendations, we recommend that the committee heavily considers that by law any SMNR developments at this site will require the free and prior consent of the Peskotomuhkati Nation. We remain opposed to any nuclear processes, experiments, or waste within Peskotomuhkatihkuk, our homeland. As the PLNGS approaches its end-of-life operational stage, the people of the Peskotomuhkati Nation want to lead the efforts to repair our ecosystem, and this cannot be accomplished with SMNRs on site.

OUR CONCERNS

SMNRs and the Climate Crisis

Understanding that some people believe SMNRs are necessary to meet our climate challenges, we have met with the New Brunswick SMNR proponents ARC and Moltex, we have attended SMNR supply chain events and proponent-sponsored open houses, we have engaged in the learning process. We therefore believe we are informed to the best of the proponents' ability; but we remain seeking answers regarding both the government and proponents' plans. Currently, we believe SMNRs are a false climate solution. They are re-directing financial and intellectual investment as well as precious time away from climate-focused efforts that could be implemented today.

Nuclear projects of all sizes are notoriously plagued by repeated delays and massive cost overruns - IF projects are ever completed. In our territory alone, the Point Lepreau refurbishment took three years longer than expected and ran \$1 billion over budget. Spending massive resources pursuing speculative SMNR technology during the climate emergency is irresponsible, a death sentence. The nuclear strategy is another way of "kicking the can down the road" since these plants are not likely to materialize for more than a decade, if ever. SMNR development should not be supported by federal funds earmarked for climate action. Instead, we need to be spending on solutions that can be deployed today.

There is also a false narrative that SMNRs will be useful in getting remote communities, especially Indigenous communities, off diesel. However, our understanding is that instead of SMNRs, they want energy systems they can implement themselves, that can employ their people to run. They want systems with proven technologies available now.

Impact Assessment

In your study sessions to date, the industry is asking not only for taxpayer money but also relaxed regulatory oversight, including an exemption from a federal impact assessment for all future SMNRs built anywhere in Canada.

ARC and Moltex SMNRs are proposed to be located in our beautiful, coastal rural region with locally important fishing, tourism, wild blueberry farming, and many other rural enterprises. As a first of its kind experimental nuclear project near to the Musquash Estuary Nature Reserve and the globally significant UNESCO Biosphere Reserve on the Bay of Fundy, the SMR demonstration project at Point Lepreau ought to attract the most rigorous form of public engagement and planning, through the federal Impact Assessment Act (IAA). However currently the SMNR projects planned for New Brunswick are exempt from the IAA.

As was stated in our intervention to the Canadian Nuclear safety Commission (CMD22-H2.244 and CMD22-H2.244A) earlier this year, “we must ensure that the small modular nuclear reactors (SMNRs) proposed in Canada are fully subject to the federal *Impact Assessment Act*.” We recommend that the Science and Research Committee members strongly and consistently support requests for Impact Assessment (IA) designation so we all may increase our understanding of the social and natural science implications, and so that the need and purpose of the project, as well as alternatives, can be assessed against a range of factors including accidents and malfunctions, cumulative effects, sustainability, identity factors and Indigenous knowledge and culture. We understand that provincial and CNSC assessments will instead be invoked but on a bespoke basis, dependent on the SMNR proposal – this is inappropriate as provinces do not have the expertise to lead these exercises and the CNSC reviews do not include socio-economic concerns such as Indigenous cultural practices, the cost of the project, and a review of the alternatives.

Culture of High Risk/Ill-Informed Decision-Making

During the presentations to committee thus far, we have heard SMNR proponents speak of ‘de-risking’, ‘financial guarantees’, and ‘financial backstops’. Novel technologies being developed and promoted by start-up companies combined with entities such as NB Power, have not earned these requests to be fulfilled.

In recent decades, New Brunswickers have been scandalized by NB Power's heavy investment and subsequent failures of high-risk projects. Additionally, NB Power's debt load is of such concern that the provincial government has recently ordered the Crown corporation to reduce its debt to 80 per cent of equity by 2027. Concurrently, NB Power and the NB Provincial government still have no proposal for storage of past and future decommissioning waste. None of these actions indicate a stable or responsible environment for the safe development of novel technology.

Novel waste and nonproliferation concerns

SMNR processes will create new toxic waste streams never dealt with in Canada before and we must not use the Bay of Fundy, our home and supplier of life, as the location for the SMNR experiment.

One of the nuclear companies in New Brunswick, ARC, has applied for and is awaiting word on millions of dollars in federal funds to develop its sodium-cooled reactor on the Bay of Fundy. This technology has been tried several times in past decades to commercialize, without success because of technical problems that have left serious environmental problems to clean up.

As was mentioned by committee member and honorable MP Richard Canning during the hearings earlier this year, experts are urging that before Canada makes any further commitments in support of reprocessing, they convene high-level reviews of both the non-proliferation and environmental implications of the Moltex reprocessing proposal. Mr. Canning referenced that the experts believe that such reviews will find reprocessing to be counterproductive on both fronts. We recommend that such a high-level review takes place.

Treaty Relationship

The Peskotomuhkati territory extends eastward as far as the Lepreau watershed and includes Point Lepreau. Peskotomuhkati's interests are rooted in the Peace and Friendship Treaties, as confirmed by Canada's judiciary. The Peskotomuhkati did not surrender land or rights by way of the Peace and Friendship Treaties nor by any other means since. None of the Peskotomuhkati's rights has been extinguished. The Treaties require a sharing of territory and resources – the Treaties respect access to the land and its resources; the Treaties recognize and respect the pre-existing and continuing reality of Aboriginal existence in this part of the world, and its inherent connection with the land.

Members of the Peskotomuhkati Nation continue to honour and respect the Peace and Friendship Treaties, and work to ensure future generations can access their traditional territories and practice their teachings. Each member of the Standing Committee on Science and Research is also responsible for Treaty commitments. We recommend that the committee addresses how their recommendations will be based in their own treaty responsibilities and how these responsibilities will be applied.

UN Declaration

Canada recently embraced the UN Declaration on the Rights of Indigenous Peoples, by way of the Act of this same name. The Act adopts the Declaration into Canadian law and underscores the fundamental importance of a robust interpretation of Aboriginal rights and of the Crown's duty to consult First Nations.

Article 18 of the Declaration draws attention to Indigenous peoples' right to participate in decision-making matters that affect their rights.

Article 19 of the Declaration requires the Crown to consult and cooperation in good faith with Indigenous people to obtain their free, prior, and informed consent before adopting and implementing legislative or administrative measures that may affect them.

Article 29 requires States to take effective measures to ensure that no storage or disposal of hazardous materials takes place in the lands or territories of Indigenous peoples without their free, prior, and informed consent.

The Nation has on several occasions let our concerns be known about the storage of nuclear wastes on the territory, yet neither NB Power, nor the CNSC, nor the government of Canada, has undertaken to seek consent from us to store hazardous wastes on our land, nor to negotiate an agreement concerning the storage of hazardous wastes on our land. We therefore recommend that the committee addresses how their recommendations will be aligned with the UN Declaration.

Reconciliation

In the words of CNSC Commissioner Kaghee during the Point Lepreau Nuclear Generating Station re-licencing hearings in May of 2022, "...we often talk about engagement, consultation, but we miss the objective, and that's to reconcile."

Further, he brought attention to Section 35 of the Constitution, which, both recognizes and protects the rights of indigenous peoples. He described extensive caselaw setting out what is required to ensure the protection of these rights, including the requirement for consultation and accommodation, which is meant to promote reconciliation and serve as a strong check on Crown decision-making on matters impacting indigenous rights and interests. Commissioner Kaghee also discussed that Canada has moved forward to pass the UN Declaration into law, is now embarking on a process for implementation, which not only recognizes indigenous peoples' right to self-determination, but also provides additional checks on Crown decision-making. He specifically referred to Articles 8, 18, 25, 26, and 29.

Finally, he pointed to the Truth and Reconciliation Commission's 10 principles for reconciliation, one of which is the reaffirmation of the treaty relationship, and the first principle, which states:

"The United Nations Declarations on the Rights of Indigenous Peoples is the framework for reconciliation at all levels and across all sectors of Canadian society."

In light of all of this, his question in reference to the Point Lepreau re-licensing and now ours in reference to SMNRs, is: how will supporting, allowing and advancing SMNRs on Indigenous territory promote and facilitate reconciliation with indigenous peoples?

We recommend that the committee answers this question before releasing their own recommendations and findings.

Role of Science

As we have watched the Science and Research Committee process thus far, we are alarmed by the lack of data produced by SMNR proponents (even when directly asked) as well as the number of questions posed by committee members which were left unanswered due to the respondents' default to key SMNR promotional and sales messaging. This leaves us with the feeling that much of the content delivered to the committee has been promotions-based, not science-based.

As part of its mandate, we understand that the Standing Committee on Science and Research has made a commitment to science, research and evidence-informed decision-making. We currently believe that SMNR funding applications do not receive adequate scientific review, or that the scientific review is not appropriately considered by the funders, and recommend that the committee seeks to confirm this statement.

At this point, all rightsholders and stakeholders do not agree on which SMNR 'expertise' and sources are valid – this is an important role for the Science and Research Committee – to seek, identify and promote the science. This is essential for any SMNR development – credible and trusted resources so that we may compare the cumulative effects or timelines-to-implementation, for instance, of pumped hydro developments, to SMNRs.

When meeting with SMNR proponents in our territory, they have not provided us any peer-reviewed science. However, one item they have provided is circular references – directing us to their own point of view on record, as if it were a scientific record. This is an abuse of science. The Science and Research committee must ensure accountability to science. We recommend that the peer-reviewed

science of pyroprocessing, of SMNR waste, and of experience to date with sodium-cooled reactors - must be a fulsome part of the committee's considerations.

CONCLUSION

In conclusion, we are concerned with the recommendations by many of the presenters to the Standing Committee asking for explicit, continued and consistent support of SMNRs and nuclear energy in clean energy initiatives and policies, when this recommendation has not been based in science, nor evidence. The ask by proponents for 'consistent' messaging is an insult to science and to the committee, as they are asking for political favours instead of a scientific judgement.

If there indeed is a leadership role for Canada in nuclear power development, we propose it may be to conduct assessments in line with the Treaties, the UN Declaration, and the Truth and Reconciliation recommendations as well as with the best climate and social science. We have already seen what we consider to be excessive support for specific SMNR technologies come from the federal government through the Strategic Innovation Fund, as well as from provincial governments while concurrently understanding that we do not have science-based evidence to continue to support the nuclear industry. We recommend the committee disallows any further financial or policy support until SMNR proponents provide scientific evidence for their proposals.

Confirming that this committee is a science and research committee - we recommend that the science committee should not be concerned with the request of the nuclear proponents for a 'consistent message' but instead worry about collecting, sharing and advocating for the best science.

SUMMARY OF RECOMMENDATIONS

1. We recommend that the committee heavily considers the context of its recommendations which include - that by law - any SMNR developments at this site will require the free and prior consent of the Peskotomuhkati Nation.
2. We desire and recommend for the committee to look at nuclear power in a much more connected manner (cumulative impacts as well as cradle-to-grave impacts).
3. We recommend that the Science and Research Committee members should strongly and consistently support requests for IA designation for controversial projects so the committee and Canadians can further understand the social and natural science implications.
4. We recommend that all SMNR deployments be subject to IA, and if approved, that the Canadian formula for financial guarantees associated with decommissioning plans, be increased now - many fold, to match international evidence that such a requirement is necessary. (2016. NEA No. 7201)
5. We recommend a high-level international review of both the non-proliferation and environmental implications of the Moltex reprocessing proposal
6. We recommend that the committee addresses how their recommendations will be based in their own treaty responsibilities and how these responsibilities will be applied.
7. We recommend that the committee addresses how their recommendations will be aligned with the UN Declaration on the Rights of Indigenous Peoples.
8. We recommend that the committee answers the question, "how will supporting, allowing and advancing SMNRs on Indigenous territory promote and facilitate reconciliation with Indigenous peoples?" before releasing their own recommendations and findings.

9. We currently believe that SMNR funding applications do not receive adequate scientific review, or that the scientific review is not appropriately considered by the funders, and recommend that the committee seeks to confirm this statement.
10. We recommend that the peer-reviewed science—conducted by independent experts not funded by or beholden to the nuclear industry—of pyroprocessing, of SMNR waste, of experience to date with sodium-cooled reactors must be a fulsome part of the committee’s considerations.
11. We recommend the committee disallows any further federal government financial or policy support until SMNR proponents provide a scientific basis for their proposals.

All my relations

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Chief of Passamaquoddy Peoples

SUGGESTED READING

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