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The Honourable Seamus O'Regan
Minister of Natural Resources
House of Commons
Ottawa, Ontario, K1A 0A6

March 31, 2021

Dear Minister O'Regan,

I am submitting these comments for your departmental consultation regarding modernizing Canada's radioactive waste policy. Thank you for the opportunity. This submission comments on recent misguided decisions to support small modular reactors (SMRs), in general, and the recent federal funding to Moltex Energy in New Brunswick, in particular.

Let me begin by addressing your claim that nuclear energy is an essential part of our response to the climate emergency. The reality is to the contrary. Investments in the nuclear option represent an unacceptable opportunity cost – delaying the transition to renewable energy.

Climate concerns

In calling for Canada to adopt the target required for us to deliver our fair share to the global imperative of holding to no more than a 1.5 degrees C global average temperature increase (as compared to that before the Industrial Revolution), the Green Party of Canada ran the numbers to ensure the challenge could be met. In [Mission Possible](#), we laid out one plausible scenario for cutting GHG emissions by 60% below 2005 levels by 2030. It is achieved without any new nuclear, nor new mega-dams. The existing and known technologies, with rapidly falling prices for solar photovoltaic, wind, geo-thermal, and run-of-the-river hydro, can meet our needs for a decarbonized electricity grid.

Significant investments are needed to enhance and connect our electricity grid. More investment will be needed in energy storage – most evolved and low costs are options in pumped storage. No new nuclear is required. The problem with the mania for SMRs is that they do not yet exist. Money will be wasted in developing an unproven technology.

At this stage, SMRs are only conceptual. There are several ideas being pursued for SMRs. The most dangerous of these is the proposed "molten salt" approach, requiring repurposing the spent fuel of reactors. Any technology involving extracting plutonium for high-level nuclear waste raises environmental concerns, safety risks and the threat of nuclear proliferation.



The New Brunswick plutonium plan

We firmly oppose the dangerous and risky experiment supported by Natural Resources Canada and the federal government, of extracting plutonium from the high-level waste of the New Brunswick nuclear reactor at Point Lepreau on the Bay of Fundy.

Plutonium is the primary nuclear explosive material in the world's arsenal of nuclear weapons, but it can also fuel nuclear reactors. One proposed approach called "fast breeder reactors" has been largely rejected. The use of plutonium in the core to create more fissile material in the production of electricity, created the risk of an actual nuclear detonation.

The SMR approach is also a "breeder" conceptually, but with less plutonium. All the current reactor proposals seem to stem from an Oak Ridge National Laboratory experiment, abandoned decades ago.

The New Brunswick experiment with the UK private sector company, Moltex Energy, aims to build the world's first Stable Salt Reactor (Wasteburner) using plutonium as fuel. It should give any government pause to be experimenting with unproven technology that involves one of the planet's most dangerous elements - plutonium.

Decades ago, former Prime Minister Pierre Elliot Trudeau banned extracting plutonium, otherwise known as "reprocessing", from used nuclear fuel.

Now, two nuclear reactor designs are being developed and executed in New Brunswick by Moltex Energy, a UK start-up company and ARC Nuclear, an American company.

Meanwhile, experts in spent nuclear waste have raised the alarm. Professor Allison Macfarlane, the former chairperson of the U.S. Nuclear Regulatory Commission, director of the School of Public Policy and Global Affairs at the University of British Columbia, and a specialist in the storage of nuclear waste, doubts the viability of the entire scheme. She told [CBC News](#):

"Nobody knows what the numbers are, and anybody who gives you numbers is selling you a bridge to nowhere because they don't know...Nobody's really doing this right now. ... Nobody has ever set up a molten salt reactor and used it to produce electricity."

We do know that extracting plutonium from spent fuel will create significant risks of nuclear proliferation. Even minute amounts of stolen plutonium could be used by terrorists in a dirty bomb. The links between some of SNC Lavalin's partners, another consortium pursuing SMRs, and the nuclear weapons industry are [well established](#).

Lifting the ban on plutonium extraction is high risk and is being accomplished without adequate public consultation. And, as noted in more detail below, in direct violation of UNDRIP and Indigenous rights. This departure from current practice in Canada is happening without any public consultation or Parliamentary debate.

The Wolastoq Grand Council Resolution

We support the Wolastoq Grand Council and their [objections](#) to the Point Lepreau proposal. Providing prior, informed consent was missing in both the development of the original Point Lepreau nuclear plant, the refurbishment of the Point Lepreau reactor, and the two new nuclear projects planned for Point Lepreau. The Wolastoq Grand Council also demands a halt to further funding, support for First Nation alternative energy



solutions, the importation of surplus power from Hydro Quebec, investments into renewable energy, as well as investments in energy efficiency and conservation.

Treaty on the Prohibition of Nuclear Weapons

We call on Canada to sign and ratify the Treaty on the Prohibition of Nuclear Weapons. Canada led the way on the Ottawa Process to ban land mines – even though we do not manufacture or use land mines. In the same way, as a non-nuclear weapons state, Canada must work to eliminate nuclear weapons.

The role of the Nuclear Waste Management Organization

The federal government has failed to fulfill the oversight role that the Nuclear Fuel Waste Act set out. The Nuclear Waste Management Organization (NWMO) is an industrial association of the generators and owners of nuclear fuel waste, namely Hydro Quebec, New Brunswick Power and Ontario Power Generation. The role of the NWMO contradicts the recommendations that an “arm’s length” agency be formed, that is independent from the nuclear industry, to investigate approaches for managing Canada’s used nuclear fuel.

As a result of the NWMO’s direct involvement with the nuclear industry, this organization is neither seen as trustworthy or credible in defending the public interest, even when operating within their mandate, as delineated in the Nuclear Fuel Waste Act. Resulting strategies must be the product of the federal government’s engagement with Indigenous peoples, the Canadian public, and civil society. Strategies should not be formulated by the NWMO.

Trusting nuclear regulators

A trusted nuclear regulator must be independent of the industry and determined to defend the public interest aggressively. To complement the work of engineers, physical scientists, statisticians, and health physicists, many of whom are committed to the technology, regulators must employ biomedical and ecological experts. Regulators must hold themselves and their licensees accountable for mistakes.

The industry and the federal government both have such an enormous stake in promoting nuclear energy, that even a dedicated regulator requires courage to challenge the status quo. This leads to regulators who are not being held accountable for errors. The federal government must ensure that Canadians can trust nuclear regulators.

Many thanks for your consideration.

Sincerely,



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Member of Parliament
Saanich-Gulf Islands
Parliamentary Leader of the Green Party of Canada

