Opinion

Who should lead Canada's public consultation on federal radioactive waste policy?

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Gordon Edwards & Susan O'Donnell

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Two weeks ago, Blaine Higgs revealed that, if re-elected as the premier of New Brunswick, he would announce a multimillion-dollar grant secured from the federal government to back new nuclear reactor development in the province.

Two companies, Moltex Energy and ARC Nuclear, from the U.S. and the U.K., now based in Saint John, have asked for a combined $70-million from the Strategic Innovation Fund to prepare to test their prototype reactors at the site of the Point Lepreau nuclear power plant. The New Brunswick government and provincial utility NB Power have already given $5-million each to the companies.

If built, these new reactors will generate radioactive wastes of all existing categories—low-level, high-level, and intermediate-level—along with new types of radioactive waste materials for which Canada has no experience and no specific provisions for dealing with in the very long term.

Last November, a multinational team of experts from the International Atomic Energy Agency recommended that Canada beef up its antiquated and very brief (143-word) radioactive waste policy framework, and to formulate a national strategy for the long-term management of radioactive wastes. In February, Canada accepted the IAEA recommendation and agreed to act.

But before Natural Resources Canada has even begun to engage in the radioactive waste file, it is eagerly promoting the development of a fleet of small modular nuclear reactors (SMRs) in Canada. Indeed, NRCAN has prepared an "SMR Action Plan" that anticipates "civil society consultation and engagement" from July to September 2020, and promises to "finalize and print" its action plan for new reactors in October. All of this with no explicit mention of the existing "policy vacuum" on radioactive wastes.

It makes sense that Natural Resources Canada identifies strongly with the needs of resource industries—oil and gas, pipelines, oil sands, uranium, and other resource extraction enterprises. But the long-term management of radioactive waste is more of a societal problem than an industry problem. Nuclear wastes will long outlive the nuclear industry that created it and the nuclear regulator that licensed its production.

Because radioactivity cannot be shut off or rendered harmless, these wastes will pose a potential danger to the health and safety of future generations and the environment with no discernible finite time horizon. Even low- and intermediate-level wastes remain hazardous for hundreds of thousands of years, and high-level wastes are known to be radiotoxic for millions of years.

There is a real conflict of interest in entrusting Canada's policy on radioactive waste to the industry that created the waste, or the department that champions that industry, both of whom are inclined to regard the matter as a "public relations" problem for the industry, rather than a safety concern for future generations.

In May, 100 public interest groups across Canada, including nine in New Brunswick, wrote to Natural Resources Minister Seamus O'Regan asking him to initiate a broad public process of consultation to involve Canadians directly in the formulation of a socially acceptable radioactive waste policy and associated strategy. The letter also asked the minister to suspend three controversial radioactive waste "disposal" projects, all of them appear to be in violation of existing IAEA guidelines, until Canada has an acceptable policy in place.

In the month leading up to New Brunswick's snap election last week, NGOs wrote to Minister O'Regan offering to host public consultative sessions in New Brunswick on Canada's yet-to-be-determined radioactive waste policy. The groups were responding to the minister's promise in July to "consult and engage with all Canadians" to develop a socially acceptable policy and to formulate a national strategy for the long-term management of all categories of radioactive waste.

The situation is even more urgent when promoters plan to "recycle" high-level radioactive waste—used CANDU fuel. The two new reactors proposed for New Brunswick intend to access the plutonium contained in the solid used fuel bundles already stored at NB Power's Point Lepreau Nuclear Generating Station, the only operating CANDU reactor in Canada located outside of Ontario.

Extracting plutonium from used nuclear fuel is dangerous and highly controversial, raising international concerns about nuclear weapons proliferation, since plutonium is the primary nuclear explosive in the world's nuclear arsenals.

After India exploded its first atomic bomb in 1974 using plutonium extracted from a Canadian reactor, "recycling" used fuel in this way was banned in the U.S. even for civilian purposes because of proliferation concerns. South Korea was prevented from acquiring plutonium-extraction technology by its American ally, and to this day, has been prevented from using the extraction technology now planned for New Brunswick. This raises global concerns affecting not only Canada's reputation, but the grim prospect of an increasingly nuclear-armed world.

Extracting plutonium also requires converting solid fuel bundles into a highly corrosive liquid form, complicating the handling and long-term management of the resulting waste. Less than one percent of the used fuel is recuperated for useful purposes.

Evidently, Canada's revised radioactive waste policy and associated strategy will have to address these thorny questions of safety and security, and NRCAN alone is not well equipped to negotiate such a tricky political obstacle course.

To avoid a conflict of interest between the waste producers, and those in charge of safeguarding the public and the environment from the toxic byproducts, several countries have established independent agencies for the long-term management of radioactive waste and the decommissioning of nuclear facilities—agencies that have no direct ties to the nuclear industry or to the nuclear regulator. Some examples include: ANDRA in France, NDA in the UK, and BGE in Germany.

In 1998, following a 10-year environmental assessment process with public hearings in five provinces, the Seaborn Panel unanimously recommended that Canada create such an independent radioactive waste agency, but the government of the day chose otherwise.

In the intervening years, it has become abundantly clear that public confidence in the field of radioactive waste management cannot be secured unless there is a scrupulous avoidance of conflict of interest. If safety and environmental protection are to be paramount, those supervising the long-term management of the wastes must be seen to be immune from undue influence from the industry and its promoters and enablers: AECL, CNL, CNSC, and NRCAN.

Minister O'Regan, by virtue of the position he occupies, appears to be in a conflict of interest. Other federal ministers from Environment, Health, Global Affairs, the Treasury Board, and even the Prime Minister's Office, in addition to Natural Resources, must be involved. We suggest that a multi-departmental oversight committee of cabinet would be appropriate to ensure Canada meets its treaty obligations to have a policy and strategy on the long-term management of radioactive wastes in Canada.

For pragmatic reasons, the Government of Canada is normally reluctant to involve more than one department in the execution of any particular program. However, we face an unprecedented situation: a hitherto unsolved problem of the human race, with multidimensional aspects.

The policy objectives are manifold, ranging from protecting the environment and safeguarding public health, to reinforcing non-proliferation objectives and bolstering Canada's reputation as a trend setter in state-of-the-art waste management, while ensuring that the best value is obtained in exchange for the expenditure of billions of dollars of public money.

According to recent thinking from UNESCO, it will also be necessary to carefully archive all necessary information in imaginative ways, so that future generations can understand the nature of the radioactive legacy we are leaving them, and how they might best deal with it if things go wrong. Our descendants must be given the tools needed to cope with any eventuality.

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