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Ontario Power Generation's latest report on its proposed nuclear waste chamber near Lake Huron focuses on science and geology, which leaves a lot of issues unaddressed

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Article content

Should Ontario Power Generation be allowed to bury nuclear waste near Lake Huron? The federal government could soon decide whether to give the go-ahead to the proposal to construct an underground disposal site at the Bruce nuclear complex — just 1.6 kilometres from the lakeshore.

Last fall Environment Minister Catherine McKenna requested more information from OPG, including alternative sites. That report, issued in late December, was available for public input until March 8.

Yet next year's provincial election and possible federal cabinet changes in the summer mean there could be other opportunities to put nuclear waste back on the public radar.

OPG's plan is to transport intermediate- and low-level nuclear waste (but not fuel waste) from the 20 commercial reactors in the province by truck to the Bruce site and place it in an underground "deep geologic repository", or DGR.

The December report estimates 22,000 to 24,000 road shipments over 30 years at a cost between $400 million and $1.4 billion: "There will be incremental radiological and conventional transportation risks which are estimated to be between three and 69 road collisions," it says.

Presumably transporting nuclear waste on Ontario's highways would need to be kept secret due in part to potential terrorism. Would some roads, like Highway 401, have to be shut down entirely so that there would be no chance of a strike against the trucks?

The report does not consider whether roads and the Bruce site can be made invulnerable to attack. Soft targets are called soft for a reason.

But it's not just terrorists. No mention is made in the report of countries that have encountered strong public opposition to transporting nuclear waste. German television regularly airs scenes of protesters surrounding trains — many Germans are incensed that the use of a mine to store radiological waste backfired when it flooded and the toxic wastes leaked into groundwater.

The OPG report suggests extensive negotiations will be needed with Canada's Indigenous People about hosting the nuclear waste site, but it does not delve into the legal issues related to land ownership and sovereignty.

And there is no mention of the possibility that earthquakes, fires, tornados or human error could limit access to the underground chambers. The Japanese are using robots and drones to access the Fukishima nuclear facility that was damaged in an earthquake six years ago, but have admitted defeat at trying to clean up the site, which is leaking into the Pacific. The Bruce site is located in an area where there is little seismic activity but not infrequent tornados.

OPG's report considers a time frame of a million years. To put that in context, it explains the crystalline rock of the Canadian Shield is more than a billion years old, and the sedimentary rock of southern Ontario is 354 million to 543 million years old. But wasn't it only 10,000 years ago that retreating ice sheets carved the Great Lakes' water basin?

The report asserts no less than four times that "the proximity of a water body to the DGR is not relevant because the movement of water or gas, even if it was released from the DGR, would not reach the water body until the radioactivity of such water or gas had diminished to the levels generally found naturally occurring throughout Ontario."

While the radiological depletion rates are fairly certain, how can humans predict what could happen to a shaft hundreds of thousands of years from now — a shaft that OPG plans to abandon 30 years after it's built?

Furthermore, no containers have been invented that will with certainty last hundreds of thousands of years. Arguably they might be some time in the future, but that would place an unfair burden on future generations to clean up our generation's mess.

OPG's report seems to conclude the waste site could, technically, be situated anywhere in the province's vast crystalline rock or sedimentary rock formations so long as it is accessible by road. The fact that hundreds of local residents around the Bruce site are supportive of the site locating there is heralded as an important deciding factor.

But what about outside the Kincardine area? By last September, 187 municipal resolutions had passed motions opposing OPG's plans, and hundreds of thousands of people had signed petitions. Twenty-three members of the U.S. Congress wrote Canada's foreign affairs minister urging Canada to explore options outside of the Great Lakes basin. Twelve U.S. representatives sent a bipartisan letter asking the Trump administration to stop OPG's proposal.

While OPG's report focuses on geological and technical matters, it leaves out a lot. It says nothing about the costs of insurance and emergency planning. It doesn't consider the temptation for the debt-ridden Ontario government to agree to take other countries' waste. (The U.S. has no long-term nuclear waste repository since giving up on its Yucca Mountain site in 2011.)

Canada needs a neutral agency that helps citizens both in Canada and the U.S., understandably unfamiliar with the language of nuclear power and the concepts of geology, to analyse the OPG plan. The federal government must ensure fairness, transparency and openness in determining the plan's acceptability. Right now the federal cabinet has too much unilateral power to decide the issue.

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