

Comments to IAAC re Project 89802 - New Nuclear at Wesleyville

I'm opposed to this project for building more nuclear power plants in Ontario and Canada.

30-day Comment Period

30 days is too short a time for the public to provide comments - this is a huge project that requires research and understanding, which takes more time than was granted in this IAA process.

Alternatives don't appear to be fully explored with detailed cost estimates that review the entire life cycle of nuclear or alternative solutions:

- Canada's adoption of nuclear power is terribly wasteful. The use of uranium in our current fleet of Candu reactors is wasteful - the spent fuel is only 3% expended and has the potential to be harnessed for re-use, with the right technology. Instead of continuing this cycle of using mined uranium and "disposing" of the waste, we should be looking at recycling the waste that has been generated over the past 50 years. France has committed to recycling their nuclear waste, yet Canada has proposed plans to transport and bury and abandon our spent fuel. What have engineers and scientists in Canada's nuclear industry been focused on for the past 50 years, besides digging a big hole in the Canadian Shield, burying and abandoning? This is wasteful and demonstrates negligence and lack of accountability in this industry. How about putting some effort (say, the next 50 years), into being less wasteful and finding better solutions, such as recycling, that are less wasteful, reduces the need for mining (which is not "clean"), and is a better solution for "managing" waste, instead of "not managing" waste. The project description uses the word "disposal" of waste, like it's a normal part of the process - this approach doesn't accept responsibility and it is unacceptable to exclude waste from the scope of the project. OPG and the nuclear industry need to commit to a better way to manage / recycle the waste.
- Another consideration that would support recycling is that Canada will run out of uranium in the near future: *"Canada's current requirements for its CANDU reactors are only approximately 2,000 tonnes of natural uranium per year, suggesting well over 250 years of potential reserves. However, the continued profitable exploitation at recent levels of mining and export of almost 16,000 tonnes of uranium annually by Cameco and Orono in 2015 (15,709 tonnes), 2016 (16,541 tonnes) and 2017 (15,467 tonnes)[8], will exhaust Canada's potential uranium reserves within 33 years, or by the year 2053, while the proven and probable reserves of 228,000 tonnes would be exhausted already by 2034."* from SOVEREIGN NUCLEAR CANADA AT A CROSSROADS: RECYCLE OR DIE, by F.P. Ottensmeyer, University of Toronto, June 6, 2021.
- The project scope should include the entire life cycle of the project when measuring costs, green house gases/carbon emission, potential risks, potential harm to the environment, etc. The entire life cycle should include the costs and impacts of mining, construction, transportation, operations, waste management, decommissioning and clean-up/decontamination. Perhaps if we look at the entire cycle, we would not approve

nuclear energy projects that are extremely expensive, and the industry would be held accountable for affordable and acceptable solutions.

- We should not proceed with new nuclear plants until there is an acceptable and safe solution for handling the waste (such as recycling it to produce more power). The waste problem just gets bigger with new power plants. Review of the public comments for the DGR project, indicates that many of the communities and First Nation of Northwestern Ontario are not in support of the DGR proposal (except for those who were paid (unethically) for their support). Even Ignace had concerns about the safety, lack of socio-economic support and lack of Nuclear Safety Culture by NWMO.
- Alternative sources of electricity are renewable with endless supply - nuclear is not renewable. Alternatives need to be fully explored (wind, solar, and recycling nuclear waste for use in existing Candu reactors).
- Nuclear is not “clean” - it may have less carbon emissions, but it is NOT clean when you consider mining and processing uranium, transportation, construction and the highly-radioactive waste.
- Other countries are also looking at ways to reduce power consumption, through conservation and other creative engineering and architectural solutions. Why wouldn't we explore conserving energy before spending more on new nuclear power plants? If this was your money, wouldn't you be more careful and thoughtful about what's best for the public, for ratepayers, for the environment? Our mindset and this project for NEW nuclear needs to consider whether we can find better alternatives. Other countries like Singapore, China, Zimbabwe, the Philippines, are using more creative ways to reduce demand (necessity of the mother of invention). Architects are designing buildings that cool themselves by using new technologies including passively-cooled ventilation that is inspired by biomimicry - based on termite mounds:
 - Eastgate Centre in Harare, [Zimbabwe](#), used 35% less energy than similar building
 - Pearl River Tower in [Guangzhou, China](#) using wind turbines and photovoltaics uses about 60% less energy than ANSI/ASHRAE/IESNA Standard 90.1-2004
 - Singapore, Malaysia and Thailand are using “[District Cooling](#)” developments to reduce energy consumption and emissions.
 - Europe is using “[District Heating](#)” developments to reduce consumption and emissions.
- Nuclear power is the most expensive source of electricity per megawatt. Other sources need to be pursued. Our Ontario government and OPG are not being transparent with the public and stakeholders (rate-payers and taxpayers are all stakeholders). OPG has recently raised electric rates by 29%, and they have recently requested another rate increase of 72% to pay for nuclear development. The Ford Government has enacted policy changes that force the public to pay for nuclear development vs paying for electricity consumption. This policy change is a “shell game” that has not been explained to stakeholders, and is an example of lack of transparency, which causes a lack of trust in this industry, OPG, and the government. Another “shell game” is that the Ford government is providing a “rebate” to offset the 29% rate increase - again demonstrating lack of transparency and dishonesty with ratepayer and taxpayers.

- A very important consideration in the evaluation of this project is that the the BWRX-300 reactor is based on a US design from [General Electric Hitachi](#), and uses US-supplied enriched uranium and fuel assemblies, manufactured by [Global Nuclear Fuel \(GNF\)](#), a GE Vernova-led joint venture with Hitachi, Ltd, headquartered in Wilmington, NC. It's not clear where GNF gets their enriched uranium, but we know [countries with significant commercial uranium enrichment capabilities](#) include Russia (40%), China (17%), France (12%), the United States (11%), the Netherlands (8%), UK (7%) and Germany (6%) - Canada does not produce enriched uranium. Thus this project is overly dependent on trading partners who are not trading fairly or ethically with Canada - why would we proceed with a project that depends on a US design and US supplier of enriched uranium? This uranium could be coming from unfriendly countries like Russia or China, or the US, who is trying to destroy us through economic trade policies. The geopolitical situation that Canada faces should put stop this project - this is a show-stopper.
- The nuclear industry, as careful as it is, is bound to have an accident with a contamination event, either in operations or in transportation, or in waste management, and we continue the cycle of creating more highly radioactive waste. I think about a quote from [Mary Wooding](#), retired Ministry Liaison Officer, posted by the Lakehead Region Conservation Authority: *"It's always better to prevent contamination than to clean it up. Protecting drinking water sources means protecting people, nature, and communities"*. We don't need more new nuclear - we need less wasteful alternatives, and a way to recycle the existing waste.

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