

**Submission on Nuclear Waste Policy
Pontiac Environment Protection (PEP)
May 28 2021**

**The following general principles should apply to
Radioactive Waste Management in Canada**

1. Protection of human health and the environment shall be the first priority.
2. Apply the principles set out in the of the Canadian Environmental Protection Act (1999)¹, notably:
 - a. Pollution prevention and
 - b. The precautionary principle
3. Ensure effective public oversight and accountability of the regulator and a nuclear waste management agency, both of which must be fully independent of the nuclear industry and its proponents.
4. Eliminate any possible contributions to the proliferation of nuclear weapons through the recycling or export of nuclear waste.
5. Meet all requirements of the International Atomic Energy Agency (IAEA)
6. Respect the United Nations Declaration of the Rights of Indigenous People, Article 29, 2. "States shall take effective measures to ensure that no storage or disposal of hazardous materials shall take place in the lands or territories of indigenous peoples without their free, prior and informed consent."
7. Costs of waste management for short and long term storage ("or disposal") shall be born by the waste producer.
8. A costed plan for short long term waste storage ("or disposal") that meets IAEA requirements must be in place with secured funding from the waste generator before any new large or small reactor is approved.
9. Eliminate the use of misleading terminology, for example labelling nuclear power as "clean" or Zero-carbon".
10. Respect the following key points:
 - Canada needs an agency that reports to Parliament, and is independent of industry or any industry proponent, to manage radioactive wastes and reactor decommissioning under the supervision of relevant environmental, health and safety authorities.
 - Radioactive waste must not be abandoned; policy should direct perpetual care and monitoring.
 - Government and industry must be open and transparent in the management of radioactive waste and its transportation; Indigenous peoples and other Canadians have a right to access information, to engage in decision-making, and to know the risks.
 - No importing or exporting of radioactive waste from or to other countries.
 - No plutonium extraction (reprocessing or pyro-processing) of radioactive fuel waste.

¹ <https://www.canada.ca/en/environment-climate-change/services/canadian-environmental-protection-act-registry/publications/guide-to-understanding/chapter-3.html>

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1. The Regulator

Ten years after an earthquake and tsunami in Japan triggered the worst nuclear accident since Chernobyl, the highly respected publications *The Economist* and *Nature* set out concerns over the technology's vulnerabilities^{2, 3}. Both focused on the roles of a captured regulator supported by pro-nuclear governments, and argued for better governance of the nuclear sector in developed and developing countries. *Nature* asked: "can the sector ever overcome public disapproval? are its benefits worth the risks and costs?" *The Economist* quoted an NGO: "Trust is not a renewable resource. Once you lose it that's it."

Canada is subject to these problems as set out recently in *The Hill Times*⁴. The Canadian Nuclear Safety Commission (CNSC) is aware of the issue as evidenced by its request for interested Canadians to complete an OECD survey on trust, and has acknowledged that work is needed⁵. Results of the survey have been requested⁶.

Canada is failing to comply with its international legal obligations, including the requirement in Article 8 of the *Convention on Nuclear Safety* for the nuclear regulator to be independent of the industry and its proponents. The Canadian regulator, CNSC, currently reports to Parliament through the Minister of Natural Resources who has responsibilities for AECL and is an active promoter of the sector including controversial investments in small modular nuclear reactors.

This problem can be corrected under existing legislation which was designed to support this change. Section 2 of the *Nuclear Safety and Control Act* says "Minister means the Minister of Natural Resources or such member of the Queen's Privy Council for Canada as the Governor in Council may designate as the Minister for the purposes of this Act."

As a precedent for such action, in 2013 lead responsibilities for the Canadian Food Inspection Agency were shifted to the Minister of Health from the Minister of Agriculture⁷.

² *The Economist*:

<https://www.economist.com/asia/2021/03/06/the-fukushima-disaster-was-not-the-turning-point-many-had-hoped>

³ *Nature*:

https://www.nature.com/articles/d41586-021-00580-4?utm_source=Nature+Briefing&utm_campaign=7de7a692f7-briefing-dy-20210305&utm_medium=email&utm_term=0_c9dfd39373-7de7a692f7-43796817

⁴ Reforms needed at Canadian Nuclear Safety Commission, say activists. *The Hill Times*, April 12, 2021
<https://www.hilltimes.com/2021/04/12/reforms-needed-at-canadian-nuclear-safety-commission/292381>

⁵ ██████████ personal communication

⁶ Requested by PEP from OECD and CNSC contacts May 12/13 2021

⁷ <https://www.ctvnews.ca/politics/responsibility-for-cfia-shifting-to-health-canada-1.1492427>

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With regard to specific topics:

I. WASTE MINIMIZATION

- Ideally, we would like Canada to phase out of nuclear power as was done by Germany⁸.
- A prohibition on reprocessing irradiated fuel should continue.
- The extraction of plutonium must be explicitly prohibited.
- There should be detailed tracking of all radioactive materials, including (very) low level radioactive wastes, with public records and archives.
- Waste characterizations and inventories must be detailed, current, and peer / public reviewed and accessible.

II. WASTE STORAGE

- Design, operation and monitoring of fuel waste storage systems should be open and transparent, and include public access to information
- Storage systems should be designed with the top priority being to minimize risk and maximize protection of human health and the environment.
- Waste storage systems should be passively safe, “hardened” against extreme weather and malevolent acts.

⁸ - see: https://en.wikipedia.org/wiki/Nuclear_power_phase-out and <https://www.world-nuclear.org/information-library/country-profiles/countries-g-n/germany.aspx>

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III. WASTE DISPOSAL

- The notion of “disposal” should be replaced by an approach of long-term care and stewardship that includes retrievability.
- Transparency and independence of commercial interests should be maintained throughout the radioactive waste policy.
- Agencies responsible for radioactive waste oversight should be independent of the nuclear industry.
- Canada’s nuclear regulator should report to parliament through the Ministers of Environment and Health along the lines of the Canadian Environmental Protection Act, and be independent of any Minister or agency with a mandate to promote the nuclear industry.
- Indigenous peoples and the public must be engaged in policy and project development and review, with funded access to legal and technical advisors and all relevant documentation.

IV. DECOMMISSIONING

- Decommissioning approaches must meet requirements of the International Atomic Energy Agency.
- Decommissioning planning and implementation should be based on comprehensive information about the condition of the site (such as contamination of soil, ground or surface water) and a full inventory of radioactive wastes on site including wastes from decommissioning activities.
- Information must be publicly available and peer reviewed, including by the public and Indigenous peoples.
- All decommissioning projects must include a comprehensive strategy for the transmission of information and knowledge to future generations
- End state objectives should be based on ecological and human health and the decommissioning work must show that the site has been fully remediated and is now fully safe

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