



## WiN Canada Submission | Natural Resources Canada (NRCAN) March 17, 2021 Radioactive Waste Framework Policy Consultation

### Introduction

WiN Canada is pleased to participate in the consultation for Canada's radioactive waste policy framework. WiN Canada appreciates the opportunity to collaborate on the framework for consideration by Natural Resources Canada (NRCAN) to modernize Canada's radioactive waste policy framework and contribute to the consultation to support a clean energy future for Canada. Canada has over 80 years of history in nuclear excellence as the second country ever to produce nuclear power. We have a strong legacy of nuclear in Canada, supporting the full fuel cycle including mining, research and development, technology, innovation and operating experience. As the sector continues to evolve to support Canada's vision of a net-zero carbon future, our policy framework on Radioactive Waste Management in Canada will be an important step towards helping Canada achieve this goal.

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### Waste Minimization

#### Consultation Areas for Discussion:

1. What are your views on waste minimization? Should Canada continue to use the concept of the waste hierarchy?
2. What should be the role of Government, the regulator and waste owners with respect to minimizing radioactive waste?
3. Are there other principles, beyond those identified by the International Atomic Energy Agency, that you believe are important to consider when designing and implementing a waste minimization program?

WiN Canada views the efforts on waste minimization as an important step to reduce environmental impacts. Efforts to establish an appropriate hierarchy which include design, operational and decommissioning activities should continue to be a key consideration for the policy framework. It is incumbent on all industry partners to take proactive steps to reduce the volume of radioactive waste in Canada, including protocols

for managing waste through a ranked or hierarchical process. It is also incumbent on the government and regulator to continue to review the programs and policies in place (segregation, decontamination, processing, etc.) to ensure the lowest possible impact to the public and the environment. WiN Canada recommends that the reduction of volume through design, operation and decommissioning and should be an overarching priority for the Government, the regulator and industry partners. Efforts to look at opportunities to innovate our waste minimization should be considered as the industry and our technology in Canada evolves. Best practices from around the world with regards to waste minimization should be evaluated for high, intermediate and low-level waste streams. It is important to consider the advancement of innovation to minimize waste in order to benefit all Canadians. It is therefore important for federal policy to ensure the right support and funding methods are in place to support appropriate research and development and should be a priority for waste minimization in Canada.

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## Waste Storage

### Consultation Areas for Discussion:

1. What are your views on how radioactive waste is currently stored in Canada?
2. What should be the role of Government, the regulator and waste owners with respect to radioactive waste storage?

WiN Canada believes the current method for radioactive waste storage in Canada is appropriate. The framework for radioactive waste policy should continue to ensure there are control measures in place to limit the exposure to workers and the environment. The role of Government and regulator should continue to review the programs and policies in place, ensure radioactive waste storage facilities are compliant with domestic and international policies to ensure that human health and the environment are protected today and into the future. It is also important to ensure that discharges to the environment should continue to be controlled in accordance with IAEA guidance and any specific conditions imposed by the CNSC to the facility. WiN Canada recommends that appropriate support and funding mechanisms be established to ensure best practices are implemented, along with the research and development and focus on storage solutions for Canada. Program review by the Government and the regulator should continue to ensure that radioactive waste storage facilities are compliant with domestic and international policies while ensuring protection of people and the environment. Finally, as the industry and technology evolve in the nuclear industry in Canada, the policy framework must consider future innovations and ensure appropriate strategies and support are in place to support a clean energy future in Canada.

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## Waste Disposal

### Consultation Areas for Discussion:

1. What do you feel are important policy considerations that should influence the choice of disposal approaches by waste owners and should be considered as part of Canada's radioactive waste policy?
2. What should be the roles and responsibilities of government, the regulator, and waste owners with regards to radioactive waste disposal facilities, including:
  - o Funding,
  - o Closure of a disposal facility and its institutional control, and
  - o Indigenous and Public Engagement and involvement in site selection and post-closure?

WiN Canada recommends that the current policy on radioactive waste disposal ensures the appropriate level of oversight to ensure radioactive waste disposal activities are executed in a safe, environmentally sound, comprehensive, cost-effective and integrated manner. Policy considerations should include federal regulation and oversight of producers and owners to ensure compliance with legal requirements and ensure the ability to meet their funding and operational responsibilities in accordance with approved waste disposal plans. Activities for public engagement, engagement with indigenous communities and other key stakeholders and should be mandated as part of the process in site selection and post-closure activities.

WiN Canada believes that the Nuclear Waste Management Organization (NWMO) is the best organization to carry out the design and implementation plan for Canada's disposal of high-level radioactive waste. Additional resources, funding and support should be considered to ensure the path to waste storage for new technology development and deployment in Canada. As the nuclear landscape in Canada changes, so must the strategy and plan for waste disposal. The framework should include measures to ensure the appropriate funding and support strategies are in place to continue research and development, along with implementation of best practices from around the world.

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## Decommissioning

### Consultation Areas for Discussion:

1. What do you feel are important policy considerations that should influence the choice of decommissioning strategies by nuclear operators and should be considered as part of Canada's radioactive waste policy?

2. In what ways should Canada's policy address the setting of end-state objectives for decommissioning?

WiN Canada recommends that radioactive policy framework, relative to decommissioning activities, should include public engagement, evaluation on impacts for indigenous and/or treaty rights, environmental impacts, end-state objectives and site redevelopment plans, evaluation of revenues, costs and funding models, the availability of waste management facilities and disposal capacity as well as any other social and economic impacts. Canada's policy on end-state objectives for decommissioning should include preserving the necessary information (records) required. Additionally, waste minimization should be considered an important element of decommissioning and should include decontamination, reuse, and recycling of materials. Further consideration to advancing technologies and innovation in the industry should be considered to ensure technical considerations for future technology deployment.

The policy should be flexible to include new opportunities such that that licensees are not restricted in technology and can develop new approaches to ensure safety and stewardship. Prompt decommissioning strategies should be considered while ensuring appropriate planning, preparation and a timeline for execution. Prompt decommissioning would enable the industry to leverage expertise in the industry, knowledgeable plant personnel and data. The modernized radioactive waste policy framework should take into consideration the complexities of decommissioning activities which could include diverse reactor designs. The framework should be flexible enough to enable industry operators to develop plans and strategies for decommissioning to ensure all activities are carried out in a safe, environmentally sound, comprehensive, cost-effective, and integrated manner.

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