

CONTENTS

Contents..... 1

Introduction 2

Submission Themes and Recommendations 2

Context for the Radioactive Waste Policy Review 3

 Canada’s Objectives of the review 3

 Current Radioactive Waste Policy Framework and Relevant Legislation 3

 The Nuclear Safety and Control Act 4

 Nuclear Fuel Waste Act 4

 Impact Assessment Act 5

 Municipality of Kincardine Context 5

 L&ILW Deep Geologic Repository 5

Analysis 7

 Interim Storage Versus Long-Term Storage 7

 Compensation for Host Jurisdictions 7

 Host Community Duties and Responsibilities 7

 Taxation/Payments In Lieu 8

 Fair and Equitable Compensation for Interim Host Communities 8

 Lack of Formal Policy for L&ILW 9

 Engagement and Consultation with Interim Host Communities 9

 Canada’s Commitment to Approving Long-Term Solutions 9

Recommendations 11

INTRODUCTION

The Municipality of Kincardine (“Kincardine”) is pleased to participate in the Government of Canada’s Radioactive Waste Policy Review (the “Policy Review”). As the municipal host to Ontario Power Generation’s (“OPG”) Western Waste Management Facility (the “WWMF”), Kincardine serves as the host community for approximately 47 percent of Canada’s total high-level nuclear waste (“Spent Fuel”) and 36 percent of Canada’s total low and intermediate level nuclear waste (“L&ILW”).

In this regard, the Municipality of Kincardine and its residents are important stakeholders in Canada’s Radioactive Waste Policy Review. Since 2001, Kincardine has been actively engaged with OPG in developing a solution for long-term disposal of L&ILW in a proposed Deep Geologic Repository located at the Bruce nuclear site. While the Municipality was disappointed with the decision to abandon the project in 2020, Kincardine continues to be supportive of efforts to develop a long-term solution for the storage of all classes of radioactive waste.

This submission provides recommendations, endorsed by the Municipality of Kincardine Council in response to the Policy Review.

SUBMISSION THEMES AND RECOMMENDATIONS

A summary of submission themes and Kincardine’s recommendations contained herein are as follows:

1. Kincardine participated in advancing a long-term solution for Low and Intermediate Level Radioactive Waste in cooperation with Ontario Power Generation for a Deep Geological Repository;
2. Kincardine supports a Deep Geological Repository as the preferred solution for long-term storage of radioactive waste.
3. Kincardine strongly urges the Federal Government to expedite the approval of a Deep Geological Repository after all regulatory requirements have been satisfied.
4. Kincardine recommends that the Radioactive Waste Policy contain provisions that;
 - i. recognize the important contribution of nuclear host communities, including the provision of funding to support host communities
 - ii. provide an integrated strategy for all waste classifications, including Low and Intermediate Level Waste.

CONTEXT FOR THE RADIOACTIVE WASTE POLICY REVIEW

The Government of Canada has described the context for its Policy Review as follows:

The Government of Canada is dedicated to ensuring the safe management of radioactive waste. We are committed to aligning with international practices, the best available science, and to having a policy that reflects the values and principles of Canadians.

In February 2020, the Government announced it would be working with stakeholders and talking to Canadians to ensure that Canada continues to have a strong policy and clear path for the safe long-term management of all of Canada's radioactive waste.

CANADA'S OBJECTIVES OF THE REVIEW

The objectives of the policy review and modernization of Canada's Radioactive Waste Policy are described as follows:

- Elaborate on the existing Radioactive Waste Policy and provide clear direction and greater leadership on radioactive waste management;
- Stimulate and facilitate progress on the safe, effective, and environmentally acceptable management of radioactive waste in Canada; and
- Continue to meet international practices for the management of Canada's radioactive waste, align with best available science, and reflect the values and principles of Canadians.

Nuclear generation has and will continue to play a critical role in Ontario's overall electricity supply mix well into the future. Nuclear generation represents approximately 60% of all electricity produced in Ontario. The significant refurbishments underway at the Bruce Power and Darlington nuclear plants, along with Canada's new focus on small modular nuclear reactors, means that the quantity of radioactive waste will continue to increase and require additional interim storage capacity until a long-term solution is found.

While Ontarians have enjoyed the benefits of electricity produced from largely carbon-free nuclear generation over many decades, the ultimate disposition of nuclear waste remains unresolved. This situation underscores the important ongoing contribution that interim hosts make until a permanent solution is found. Kincardine has and continues to be supportive of electricity produced by nuclear generation.

CURRENT RADIOACTIVE WASTE POLICY FRAMEWORK AND RELEVANT LEGISLATION

Canada's Radioactive Waste Policy Framework (1996) consists of a set of principles governing the institutional and financial arrangements for disposal of radioactive waste by waste producers and owners. It outlines that:

1. The Federal Government will ensure that radioactive waste disposal is carried out in a safe, environmentally sound, comprehensive, cost-effective, and integrated manner.

2. the Federal Government has the responsibility to develop policy, to regulate, and to oversee producers and owners to ensure that they comply with legal requirements and meet their funding and operational responsibilities in accordance with approved waste disposal plans.
3. The waste producers and owners are responsible, in accordance with the principle of “polluter pays,” for the funding, organization, management, and operation of disposal and other facilities required for their wastes. This recognizes that arrangements may be different for nuclear fuel waste, low-level radioactive waste, and uranium mine and mill tailings.

The policy describes four categories of radioactive waste:

1. High level waste (used nuclear fuel)
2. Intermediate level waste (ILW)
3. Low level waste (LLW)
4. Uranium mine and mill tailings.

Canada's Radioactive Waste Policy Framework provides the overall principles for radioactive waste management and is supported by three primary pieces of legislation that govern the management of radioactive waste in Canada:

- *Nuclear Safety and Control Act*
- *Nuclear Fuel Waste Act*
- *Impact Assessment Act*

THE NUCLEAR SAFETY AND CONTROL ACT

The *Nuclear Safety and Control Act* sets out the Canadian Nuclear Safety Commission's mandate, responsibilities, and powers.

NUCLEAR FUEL WASTE ACT

The *Nuclear Fuel Waste Act*, (NFWA) provides the framework for a long-term strategy for the management of nuclear fuel waste. The NFWA mandated that nuclear energy operators establish a not-for-profit corporation, the Nuclear Waste Management Organization (NWMO). The founding members of the NWMO are Ontario Power Generation (OPG), New Brunswick Power Corporation, and Hydro-Québec (HQ). These organizations, along with Atomic Energy of Canada Limited (AECL), are mandated to fund NWMO's operations.

NWMO is responsible for designing and implementing Canada's plan for the safe, long-term management of Canada's used Nuclear Fuel. The plan, Adaptive Phased Management (APM) established a Deep Geological Repository as the preferred solution.

IMPACT ASSESSMENT ACT

The *Impact Assessment Act* (previously, the *Canadian Environmental Assessment Act, 2012*), is not specific to radioactive waste management, however it establishes the legislative basis for the federal impact assessment process.

An impact assessment is a planning and decision-making tool used to:

- assess the environmental, health, social and economic effects of a designated project and the positive and negative consequences of these effects;
- assess impacts on Indigenous peoples and their rights; and
- inform decision-making.

Federal impact assessments are required for designated projects, which include the construction, operation and decommissioning of nuclear facilities, as well as certain storage and long-term management or disposal facilities. Funding programs are available through the Impact Assessment Agency of Canada to groups, members of the public, scientists, and Indigenous people to support their participation in assessments and policy development. Municipalities are not eligible for participant funding.

MUNICIPALITY OF KINCARDINE CONTEXT

The Municipality of Kincardine's experience as a host community for a portion of Canada's nuclear waste spans over 50 years. During this period, the quantity of stored L&ILW and Spent Fuel has grown significantly within Kincardine since nuclear waste was first generated at the Douglas Point nuclear reactor in the 1960s (located in the northwest region of the Municipality.) Current estimates indicate that the WWMF contains approximately 47% of Canada's used nuclear fuel and 36% of low and intermediate level radioactive waste.

In 1974 OPG began storing Spent Fuel and L&ILW produced at the Bruce Nuclear Generating Stations A and B, Pickering Nuclear Generating Stations A and B and the Darlington Nuclear Generating Station plants at the WWMF. OPG has maintained a record of safely storing waste from the Pickering, Darlington, and Bruce nuclear stations at the WWMF.

L&ILW DEEP GEOLOGIC REPOSITORY

In 2001, the Municipality of Kincardine approached OPG to jointly develop a long-term disposal facility for low and intermediate level waste at the Bruce nuclear site.

In 2002, Kincardine and OPG signed a Memorandum of Understanding which set out the terms under which OPG, in consultation with the Municipality of Kincardine would develop a plan for the long-term management of low and intermediate level waste at the Western Waste Management Facility (WWMF). As part of the MOU, an independent assessment of the possible long-term management options was

conducted. The Independent Assessment Study (IAS) conducted by Golder Associates examined the costs, impacts and benefits of constructing each of three long-term management concepts at the WWMF. Ultimately, a Deep Geologic Repository (DGR) was chosen as the preferred alternative, endorsed by a resolution (#2004-232) of Kincardine Council on April 21, 2004.

Kincardine Council indicated they preferred the Deep Geologic Repository because:

- It provides the highest level of safety of any option.
- There will be a rigorous environmental assessment and Canadian Nuclear Safety Commission regulatory process.
- The DGR will permanently isolate the low and intermediate level waste stream, much of which is already stored on site.
- No high-level waste or used nuclear fuel would be allowed.

On October 13, 2004, the Municipality of Kincardine and OPG ratified a Hosting Agreement which included the following provisions;

- OPG would design, license, construct and operate a deep geologic repository for low and intermediate level waste streams currently stored at the WWMF.
- Kincardine, Saugeen Shores, Huron-Kinloss, Arran-Elderslie and Brockton would be paid over 30 years subject to achieving key milestones.
- No used fuel would be stored in the DGR.
- Kincardine Council would obtain endorsement from Kincardine residents.

The hosting agreement set out the expectations for a reasonable timeframe for the achievement of project milestones, ending with the approval of a licence to operate in 2017. Kincardine received payments under the agreement in recognition of the Municipality's efforts to advance a long-term solution for L&ILW. The Hosting Agreement also contained a requirement for Kincardine to act in good faith and exercise best efforts to achieve the milestones.

Kincardine acted in good faith throughout the course of the proposed DGR project, however, the project was abandoned by OPG in January of 2020 after Saugeen Ojibway Nations (SON) members voted not to support the L&ILW DGR project.

Following the decision to not to move forward with the DGR project, OPG expressed their continued commitment to seeking a safe and permanent disposal of radioactive waste. They stated that they will explore other options and engage key stakeholders to develop an alternate site selection process, which will include engagement with Indigenous peoples as well as interested municipalities. After more than 18 years of participation in the process to develop the L&ILW DGR and considering their continued role in hosting a large percentage of Canada's radioactive waste, Kincardine is a key stakeholder in the development of a permanent solution. Interim host communities play an important role in the development of long-term solutions for radioactive waste storage, which should be recognized within the Radioactive Waste Policy Framework.

ANALYSIS

INTERIM STORAGE VERSUS LONG-TERM STORAGE

The circumstances surrounding the storage of L&ILW in Kincardine has substantially changed due to the termination of OPG’s L&ILW DGR project in 2020. Subsequently, there is no policy framework or known plan to advance a long-term solution for L&ILW.

The federal government selected Adapted Phase Management (APM) as Canada’s plan for long-term storage of Spent Fuel in June 2007. APM is both a technical method and a management system. The end point of the technical method is the centralized containment and isolation of Canada's used fuel in a DGR repository in an area with suitable geology and an informed and willing host. The Nuclear Waste Management Organization (“NWMO”) is now responsible for implementing APM, subject to all necessary regulatory approvals, for Spent Fuel. The NWMO began its siting process for the DGR in 2010. A host community expected to be selected in 2023. The expected timeline for transportation of spent fuel from interim storage to the DGR would begin in 2040, based on the assumption that all regulatory approvals would be received within that timeframe.

Consistent with their approach for L&ILW, Kincardine is supportive of a DGR as the preferred solution for the long-term storage of used nuclear fuel. Based on Kincardine’s experience with respect to the long and sometimes uncertain regulatory process associated with siting a DGR, Kincardine recognizes that they will continue to serve as an interim host for an undefined period, and at a minimum, decades into the future. Kincardine continues to urge the Federal Government to expedite the development of a Deep Geologic Repository for both L&ILW and used nuclear fuel. In the meantime, Kincardine recommends that the Radioactive Waste Policy clearly define interim storage and long-term storage. For greater clarity, interim storage should be defined in the policy in terms of duration in years.

COMPENSATION FOR HOST JURISDICTIONS

HOST COMMUNITY DUTIES AND RESPONSIBILITIES

Both the interim and long-term storage of radioactive waste in Canada is a matter of national significance and importance to all Canadians. Communities that host nuclear facilities and radioactive waste storage facilities bear responsibilities and engage in activities that are beyond the normal scope of affairs with which Canadian municipalities must contend and require specific expertise which is outside the normal scope of municipal operations. Existing legislation does not recognize interim host communities or provide financial support to assist them in this work.

While nuclear host communities enjoy an economic benefit associated with having a nuclear facility located within their geographical area, they also experience demands that most municipalities in Canada do not face.

The *Municipal Act, 2001* legislates that municipalities have responsibility for the economic, social, and environmental wellbeing of the municipality and the health, safety, and well-being of persons. In fulfilling

these duties, nuclear host communities engage in activities that are outside the normal scope of municipal business, which require specific knowledge and expertise. Such activities include providing comment related to regulatory processes and licensing hearings, as well as assessing socio-economic impacts and social license through education and public engagement. The Canadian Nuclear Safety Commission (CNSC) and Impact Assessment Agency of Canada (IAAC) provide participant funding to support public participation in regulatory processes, however municipalities are not eligible for funding. Municipalities represent the interests of their citizens when participating in regulatory processes and funding should be available to secure the necessary expertise to support these activities.

TAXATION/PAYMENTS IN LIEU

PROPERTY TAXES:

Nuclear facilities are classed as taxable properties in that they must pay their taxes in the same manner as other properties, however the education portion is retained by the Municipality. A portion of the assessment (buildings that could be located on any industrial or commercial site) is based on Fair Market Value, similar to other properties. The generating buildings and water intakes are assessed using regulated rates.

PIL EDUCATION RETAINED:

As Kincardine is host to a nuclear facility, under property tax regulations the education share of these PIL properties is retained by the municipality. The Provincial government policy has historically been to lower education tax rates, which has had a negative impact on tax revenue for nuclear host communities.

This policy should be further reviewed together with the support of other nuclear host communities in order to mitigate against future revenue losses. In 2021, the Provincial government reduced all high Business Education Tax (BET) rates to 0.88%, however BET rates for PIL properties retained by municipalities were maintained at 2020 levels. Nuclear facilities do not pay municipal property taxes based on Current Value Assessment. Instead, they pay a “regulated rate” which has been frozen for many years (decades). The design of this regulated rate is such that it embeds below market unit values (referred to as Unit Value Assessments). This artificially low rate means that Kincardine and other host communities continue to experience lost revenue opportunities associated with nuclear facilities that otherwise would have been realized from market value increases. This situation represents an unjustified cross subsidy where residential homeowners, farms and small businesses pay higher property taxes to recoup the long-term assessment shortfalls.

FAIR AND EQUITABLE COMPENSATION FOR INTERIM HOST COMMUNITIES

The NFWA provides a framework for advancing a long-term strategy for the management of used nuclear fuel, carried out by the NWMO. The implementation plan is based on international best practices and was developed through an extensive public consultation process which identified thirteen guiding principles for the work.

MUNICIPALITY OF KINCARDINE SUBMISSION

In carrying out their duties under the NFWA, the NWMO supports potential host communities through various resource and funding programs to facilitate participation in the process and enhance community well-being. The NFWA established a trust fund through contributions from nuclear energy corporations and Atomic Energy of Canada Limited to fund NWMO's implementation activities.

Interim host communities such as Kincardine have carried the responsibility for hosting radioactive waste for many decades. As illustrated by Kincardine's experience and involvement in the proposed L&ILW DGR that did not ultimately come to fruition, there is no guarantee that proposed timelines for long-term solutions will be met. In the meantime, Kincardine and other nuclear host communities will continue to serve as interim hosts until a long-term solution is approved, implemented and waste can be transported to the waste disposal facility. In acknowledgement of their ongoing contribution to the development of long-term storage solutions, it is recommended that Canada's Radioactive Waste Policy provide a framework for L&ILW, and include fair and equitable compensation for interim host communities.

LACK OF FORMAL POLICY FOR L&ILW

There is currently no formal Federal Policy pertaining to the long-term management of L&ILW. In the absence of a formal framework, waste owners have the responsibility for developing their own ad hoc waste management solutions. This leaves L&ILW host communities to negotiate agreements with waste owners on how they will be engaged in the process and how they will be compensated for their participation.

ENGAGEMENT AND CONSULTATION WITH INTERIM HOST COMMUNITIES

In carrying out the implementation of Adaptive Phased Management, the NWMO undertakes extensive engagement and provides funding and other resources to potential host communities to support their activities and to recognize their important role in advancing Canada's plan for the long-term storage of radioactive waste. There is no parallel process to support interim host communities in a similar manner.

Since the abandonment of the L&ILW DGR project and subsequent termination of the hosting agreement between Kincardine and OPG, Kincardine has sought to further discussions with OPG respecting an agreement which would include financial compensation in recognition of Kincardine's continued role in hosting both spent fuel and L&ILW until a long-term solution is found, and the waste can be transported to the repository. In the absence of a legislated requirement for owners to engage and support interim host communities, OPG's position remains firm that they will not provide funding/compensation to interim host communities for radioactive waste storage.

CANADA'S COMMITMENT TO APPROVING LONG-TERM SOLUTIONS

Best practices for the long-term management of radioactive waste require years of local, regional, and national engagement toward obtaining social licence within a willing host community. This is achieved through engagement of citizens, host communities and Indigenous people, and will require national acceptance before a long-term solution can be advanced. In addition, the solution will be vetted through a rigorous regulatory process before it is approved and implemented.

Many years of work by owners, host communities, potential host communities, the NWMO and countless stakeholders have gone into the development of a DGR as a safe solution for the long-term storage of radioactive waste for all Canadians. Much work still lies ahead. Kincardine strongly encourages the Federal government to expedite approval of a DGR once all of the regulatory requirements have been met.

RECOMMENDATIONS

Kincardine is pleased to offer the following recommendations in response to the Radioactive Waste Policy Review;

1. That the Federal Government expedite the approval of a Deep Geological Repository after all regulatory requirements have been satisfied.
2. That the Radioactive Waste Policy contain provisions that;
 - i. Recognize the important contribution of nuclear host communities toward delivering solutions for radioactive waste and decommissioning of nuclear facilities;
 - ii. Provide an integrated strategy for all waste classifications, including Low and Intermediate Level Waste.
 - iii. Provide guidance to owners and operators on how and when they must engage and consult with host communities;
 - iv. Provide funding/compensation to nuclear host communities for;
 1. Activities such as providing comment related to regulatory processes, licensing hearings, and assessing socioeconomic impacts and social license through education and public engagement;
 2. Community well-being
 3. Interim storage and long-term storage of radioactive waste
 4. Provide clear definitions of interim storage and long-term storage;