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**Supplementary Information
Oral intervention**

**Renseignements supplémentaires
Intervention orale**

**Presentation from
Canadian Nuclear Association**

**Présentation par
Canadian Nuclear Association**

In the Matter of

À l'égard de

Ontario Power Generation Inc.

Ontario Power Generation Inc.

Proposed Environmental Impact Statement
for OPG's Deep Geological Repository
(DGR) Project for Low and Intermediate
Level Waste

Étude proposée pour l'énoncé des incidences
environnementales pour l'installation de
stockage de déchets radioactifs à faible et
moyenne activité dans des couches géologiques
profondes

Joint Review Panel

Commission d'examen conjoint


September 16 to October 12, 2013

16 septembre au 12 octobre 2013


Canadian Nuclear Association
1610 - 130 Albert St. Ottawa ON K1P 5G4

OPG's Deep Geologic Repository


September 20, 2013



Heather Kleb
Interim President and C.E.O.
Canadian Nuclear Association



Overview



- The Canadian Nuclear Association
- Objective of the presentation
- Background to the proposal
- Why the CNA supports the proposal
- What is low- and intermediate-level waste?

2



Overview

- Waste-management options
- Community support
- Short-term and long-term protection of health, safety and the environment
- International experience
- Conclusions



3




The Canadian Nuclear Association




- About 100 member organizations
- Involved in all aspects of nuclear technology
 - Uranium mining and milling
 - Fuel manufacturing
 - Power utilities
 - Engineering and consulting firms
 - R&D and academic organizations

4



Why are We Here Today?

- To explain why the CNA supports OPG's proposal
- To present a clear summary of what is, and what is not, being proposed
- To highlight the extensive work demonstrating the project's protection of health, safety and the environment
- To acknowledge the strong local support for the DGR



5



Background to the Proposal

- 1996 Government of Canada announces a policy framework for radioactive waste
 - Safe
 - Environmentally sound
 - Comprehensive & integrated
- Waste producers and owners are responsible for interim and long-term waste management facilities
 - Funding
 - Management
 - Operation

6



Background to the Proposal



- The “polluter pays” principle
- The licensees in the Canadian nuclear industry demonstrate responsible stewardship for the full life cycle of their operations

7



What is Low-Level Waste?






- Common items that have become slightly contaminated
- Safely handled using normal industrial practices
- Does not require special shielding


8

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What is Intermediate-Level Waste?



- Used reactor core components
- Spent resins used to maintain reactor chemistry
- Requires shielding while being handled



9

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Used Fuel Not Part of This DGR



- Used fuel and high-level waste will not be stored in the DGR
- Separate process exists to explore solutions for spent fuel

10

Memorandum of Understanding

**BETWEEN
KINCARDINE AND ONTARIO POWER GENERATION**
April 16, 2002

1. The purpose of this Memorandum of Understanding is to set out the terms under which Ontario Power Generation (OPG) will develop, in consultation with the Municipality of Kincardine, a long-term plan to deal with low and intermediate level waste at the Western Waste Management Facility (WWMF).
2. A meeting of the Municipality of Kincardine and OPG representatives will be held in July 2002 to review the work plan which is to be developed by OPG. The intention would be to complete the activities described in the work plan at the latest by July 2003.
3. The work plan will include:
 - a) a review of the study which has been contracted to SGN to examine technical feasibility and other related considerations of the long term management of low and intermediate level waste;
 - b) a socio-economic impact assessment in the Municipality of Kincardine of the existing operation of the WWMF and of the potential long-term plans;
 - c) a review of European and American models for the long-term management of low and intermediate level waste. This component will involve on-site visits and will look at issues such as technical infrastructure and community compensation.

The work plan will also include a review of OPG's reference plan of interim storage as well as permanent storage at the WWMF.
4. The principal contacts for the Municipality of Kincardine will be:
 - a) Mayor Larry Keesler
 - Councillor Barry Schmitt
 - Councillor Howard Ribey
 - C.O. John Dell'Acqua

OPG's principal contacts will be:

 - a) Richard Doretti
 - b) Ken Nash
 - Terry Squire
5. OPG will provide financial support to the Municipality of Kincardine to offset mutually agreed to costs including review of reports and travel.
6. OPG and the Municipality of Kincardine will develop jointly a communications plan and will address the issue of involvement of Sauguen, Shores and other stakeholders as appropriate.

- Kincardine and OPG agreed to:
 - Review the technical feasibility of long-term management options
 - Assess socio-economic impact
 - Review models for long-term management from other countries

11

Waste Management Options

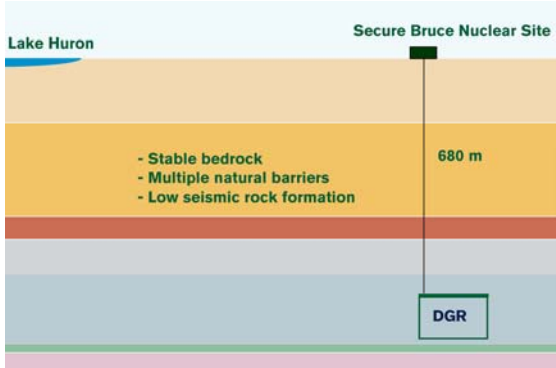


- Independent safety assessment
 - Enhanced processing and storage
 - Surface concrete vaults
 - Deep rock vaults
- All three options feasible and could be safely constructed and operated
- Significant economic benefits for Kincardine and neighbouring municipalities

12

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Kincardine Selects Preferred Option



Lake Huron

Secure Bruce Nuclear Site

680 m

DGR

- Town council passes resolution in April 2004
- Selects the deep rock vault option
- Neighbouring communities also give their support

13

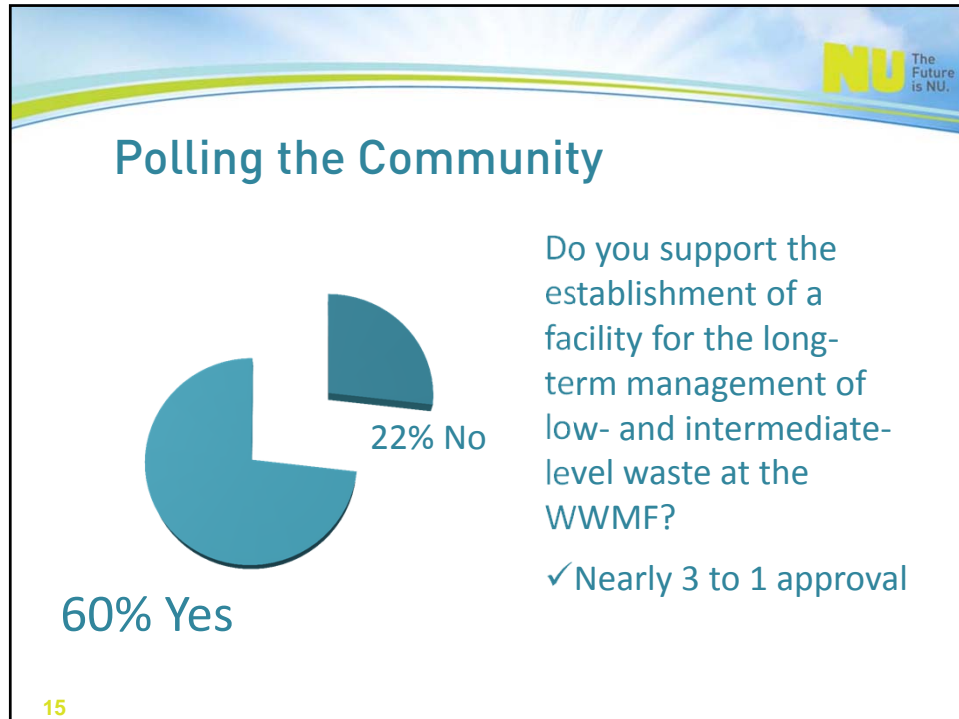
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The Hosting Agreement

- No spent fuel will be stored at the DGR
- Property value protection plan
- Kincardine council to obtain endorsement from residents



14



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Protection of Health, Safety and the Environment

- Negligible radiation
- Water quality will not be affected
- Safety analysis of broad range of abnormal events

16

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Protection of Health



The image shows two men standing in front of a display of informational panels. The panels are titled 'SAFE MANAGEMENT OF NUCLEAR WASTE' and include sections for 'Commitment', 'Transportation of Radioactive Material', 'Dry Storage of Used Fuel', 'Seaborn Panel Report', 'Fuel Bundles', 'Bruce Waste Management Facility', and 'Waterpool'. The man on the left is wearing a white polo shirt with a logo, and the man on the right is wearing a striped polo shirt and jeans.

- Negligible radiation, even if you lived directly on top of the DGR
- 1/ 20,000th (0.005%) of natural background dose

17

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Protected under Many Scenarios



The image is a composite of a globe showing the Americas and a close-up of a human eye with a blue iris. A beam of light from the eye points towards the globe.

- Protection demonstrated for broad range of abnormal events
 - Malfunctions
 - Accidents
 - Malevolent events
- Analyzed one million years into future
 - Even under extreme assumptions, DGR is safe

18



Protection of Drinking Water



- Drinking water will not be affected
- Drinking water and DGR in separate geological formations
- Stable low-permeability rock isolates DGR from drinking water

19



Protection of Great Lakes Water

- Great Lakes water quality will not be affected
- Deep groundwater system is isolated
- Geology is inherently stable and seismically quiet
- Waste will be placed in low-permeability rock



20



International Experience

- DGR designers engaged staff at existing L&ILW DGRs internationally
 - United States
 - Sweden
 - Finland
- OPG's Safety Assessment reviewed by international experts



21



Socio-Economic Benefits

- Fees payable to Kincardine and surrounding communities
- Project-related employment
- Community wellbeing




22




Conclusion

- The Deep Geologic Repository is a safe, environmentally sound, long-term solution to manage OPG's low- and intermediate-level waste responsibly



23

Canadian Nuclear Association



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