

## Update on Nuclear Waste Management and Deep Geologic Repository

Darlington Community Advisory Committee

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**ONTARIO**POWER  
GENERATION



# Overview

**NUCLEAR WASTE MANAGEMENT**

**STEWARDSHIP**  
**LASTING SOLUTIONS**  
**PEACE OF MIND**

- Over 40 years of safe operation
- Knowledgeable and responsible stewards
- Responsibilities include:
  - Protection of the environment
  - Health and safety of persons
  - Maintenance of national security and safeguards

# Stewardship



Type B Transportation Package

- Stewardship means safe and careful handling of the waste
- In 40 years, OPG has *never* had a transportation accident resulting in radioactive release or serious personal injury
- Waste minimization project:
  - Sorting materials for incineration, compaction, or (if zero radioactivity) recycling



Waste Sorting and Minimization



# WWMF Licence Renewal



Aerial view of OPG's Western Waste Management Facility, and the site for the proposed DGR, at the Bruce nuclear site in Kincardine, Ontario.

- Applying to Canadian Nuclear Safety Commission to renew licence for next 10 years.
- Hearings in April 2017.
- Seeking licence to expand capacity at current site for continuing “business as usual.”
- Proposed DGR is not part of this licence process – it is a separate regulatory process.



# PWMF Licence Renewal

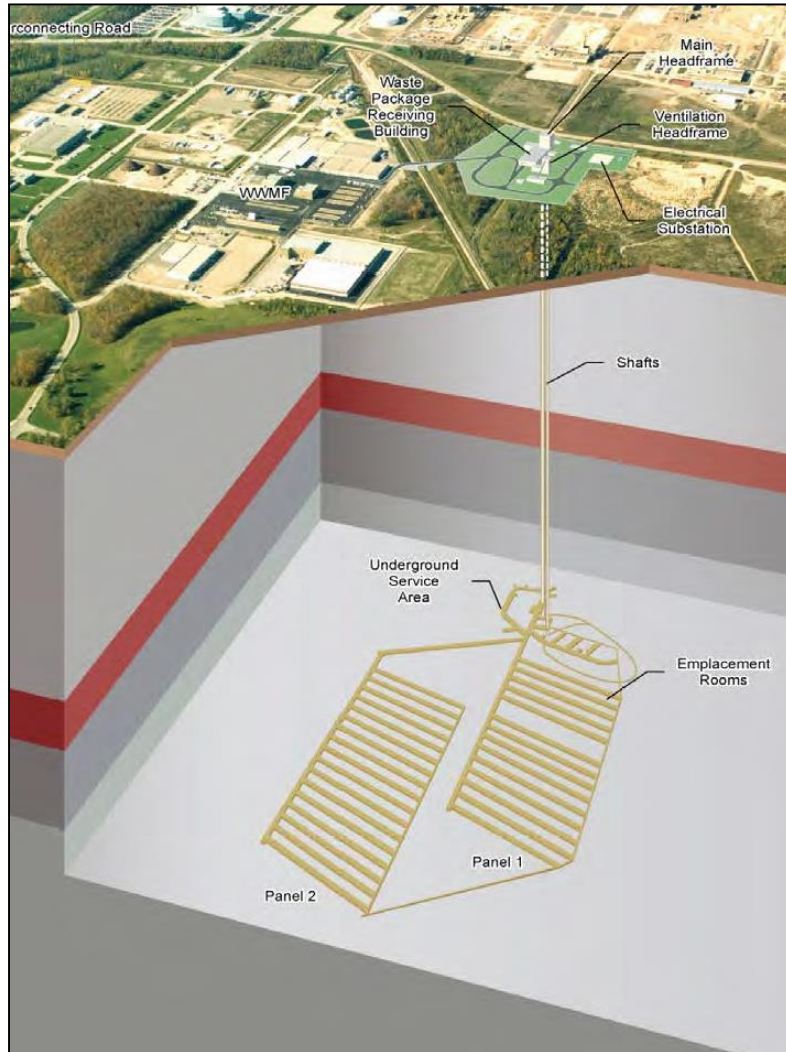


Aerial view of OPG's Pickering Waste Management Facility

- Applying to Canadian Nuclear Safety Commission to renew licence for next 11 years
- Hearings in April 2017
- Planned expansion of three additional used fuel dry storage buildings, and a new Dry Storage Container Processing Building
- To accommodate DSCs from Pickering until the end of commercial operation



# Lasting Solutions – the DGR



- Deep Geologic Repository (DGR) will safely and permanently store all low- and intermediate-level waste from OPG-owned nuclear facilities
  - 680 meters underground in ancient, impermeable geologic formations
  - At the Bruce nuclear site
- Plan is supported by fact-based science and analysis
- Validated by a rigorous federal Environmental Assessment (EA) review



# DGR – Regulatory Process



- In 2015, the federal Joint Review Panel report stated that:
  - Bruce nuclear site is appropriate for DGR
  - Public health and safety is protected
  - Lake Huron is protected
  - Project should proceed “now rather than later”
- In 2016, the federal Minister of Environment and Climate Change asked OPG for 3 additional reports – completed in December
  - Study on alternate locations found that environmental effects are greater at other locations, and costs are higher, with no additional benefits in safety to public or the environment



## DGR – Next Steps

- Canadian Environmental Assessment Agency to prepare analysis and recommendations for federal Minister
- Minister's decision on EA expected by end of 2017
- Approval of the EA would be followed by:
  - OPG application for site clearance construction licence (2018)
  - Further design work
  - Construction – earliest completion would be 2026
  - Application for operating licence





# Human Performance



- Nuclear Waste Management division aligned with wider Nuclear Fleet
- Healthy nuclear safety culture
- Continuous improvement



# Environmental Stewardship



Stack Monitoring Equipment



Snake Winter Shelters



Meadowlark Breeding Area

- Environmental Management System certified to ISO 14001
- Emissions far below limits
- Supporting biodiversity initiatives

# Public Safety



Full Response Capability



Drills and Training

- Comprehensive on-site and off-site emergency response capability
- Applying lessons learned from drills
- Fire Protection Program improvements

# Public Information & Engagement



Hundreds of Tours Conducted



24 Newsletters Issued

- Commitment to openness and transparency
- Information provided on a regular basis using a range of tools:
  - Social Media
  - Community Newsletters
  - Website
  - TV Advertising

# Indigenous Relations



On-going Support



Facility Tours to Build Understanding



On-going Engagement

- Effective Indigenous engagement program
- Committed to long-term, respectful, mutually beneficial relationships