#### DGR and EA Process

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## what is environmental assessment for?

- The "look before you leap law"
- Intended to promote sustainability

## What is supposed to be evaluated in Canadian EA?

- Is the project needed?
- What other options are there from status quo to other means of dealing with the waste to other options ranging from siting to different technologies
- What could go wrong?
- What might the adverse impacts be?
- What is the level of uncertainty around the assessment of what could go right or wrong?
- CEAA mandates precautionary approach

## Who conducts the Environmental Assessment?

- In the case of the DGR, a Panel appointed jointly by the federal Minister of the Environment and the Canadian Nuclear Safety Commission
- Their assessment includes the documentation prepared by the proponent; questions asked by interveners and themselves; information the Panel sought from third party experts (two); and information and evidence submitted by interveners ranging from funded experts to general public, aboriginal knowledge, local knowledge

## Who Participates and How, in the EA?

- The panel, appointed by the Minister and CNSC (three members)
- The proponent
- Government agencies both provincial and federal including cnsc staff
- Everyone who asked to be a participant or intervener (either with written or oral submissions)

# Who makes the decisions on this EA and the project?

- The panel will prepare a report with recommendations based on the entire assessment once they are satisfied they have all of the information they think they need
- Panel sends the report to the Minister and the responsible authorities and makes it public
- Responsible authorities prepare a "course of action" decision and seek approval of federal Governor in council (cabinet) as to that course of action

#### Who makes decisions cont'd

- The course of action decision may or may not be consistent with panel recommendations subject to provisions in the CEAA - eg adverse effects may be allowed if they are of the opinion they are "justified in the circumstances" and the RAs must still comply with the purposes of the CEAA
- Ultimately the decision to proceed is up to OPG and its shareholder, the provincial Ontario government, even if the project does get a license from the federal regulators

#### When are decisions made?

- The panel will make a decision after it has issued a notice that it has all of the information it believes it needs
- Hearing lasted through Sept and Oct; panel has just requested significant pieces of additional information; OPG normally advises as to a timeline to reply
- Panel has stated it will give oral interveners (those who prepared both written and oral submissions) a notice period of 20 days for an opportunity to make final argument based on all of the evidence.

#### When are decisions made cont'd

- Panel may take weeks or months although they are expected to decide within 60 days of the receipt of all information
- Federal government then decides how to respond
- The OPG and provincial cabinet will presumably make their decisions at any time after that if the project is approved; OPG announced just before the hearing started that they would not proceed unless they had agreement from the Saugeen Ojibway Nations

### What is this project actually for?

- Description of the project is a key starting point
- Its against that description that fundamental questions are answered like is this project needed; what are the other alternative options; what are the adverse impacts; can they be mitigated
- In this case of the DGR hearing, many of us contend that much is surprisingly unclear about the project and its description now that we have sat through 25 days of evidence

## What is low and intermediate radioactive waste?

- These terms are poorly defined in Canadian law basically comes down to everything that isn't used nuclear fuel
- The properties of the waste are in contention how much of it will be dangerously radioactive for hundreds of years, and how much of it for thousands, tens of thousands of years and beyond?

# What OPG said about the waste properties

 The majority of this waste will be LLW. About 10 to 20% is estimated to be ILW. All of the ILW contains significant amounts of radionuclides with half-lives longer than 30 years. Pressure tubes and calandria tubes contain Nb-94 (20,300 year half-life) and Zr-93 (1.5 million year half-life), while the stainless steel components contain Ni-63 (100 year half-life) which is similar to the wastes arising from refurbishment activities. [emphasis added]

## How much waste will there be in the DGR?

- There is a principle that the whole project is supposed to be assessed at the outset
- There is not supposed to be "project splitting" where the project is broken into smaller pieces for approval purposes
- the project started the hearing with a proposed volume of 135,000 cubic metres. This is still the official project number.

#### How much radiocative waste?

- But very early in the hearing we brought a formal request for ruling to the Panel as to statements OPG made elsewhere that they were also planning to bring decommissioning waste to this facility - this was stated not to be part of this project as the hearing began
- With decommissioning waste it becomes 200,000 cubic meters - but this is not what is to be approved right now - OPG says it would ask for that permission later

#### How much waste cont'd

- Its highly questionable whether that later approval would be subject of an environmental assessment
- During the hearing there was even discussion for the first time of the potential to include decommissioning waste from the Douglas Point reactor. This would add another 20,000 to 80,000 cubic meters (there was contention in the numbers).
- The Panel decided not to adjourn the hearing for more information

## Where will the DGR radioactive waste come from?

- The low and intermediate level waste comes from the operating nuclear power plants in Ontario - Pickering, Darlington and Bruce.
- If decommissioning waste is eventually allowed which would include more of the reactor parts that are in close proximity to the fuel while operating – then this would include those three plants.
- There was even some discussion about possibly Douglas Point decomm waste which is located in proximity to the planned DGR - would need approval.

# Why is the DGR proposed a) at all and b) at Kincardine?

- OPG says its because Kincardine asked for it
- An MoU was signed in April 2002 and a Hosting Agreement was signed by OPG with Kincardine in October 2004
- Is Kincardine asking for the facility a good enough reason to initiate and proceed with this project??
- Legally and environmentally it is a strange justification for a project on this scale.

### Why this project?

- Other ideas should be considered in an EA such as other options to manage or deal with the waste as well as other siting options
- Because of the hosting agreement and because OPG already owns the land, OPG says, they did not consider any other ideas in their environmental assessment; no other locations; and no other options aside from burying this waste 600 metres deep, 1 km from Lake Huron.

### Who is potentially impacted?

- In the beginning of examining the impacts of a project, the proponent may select a "study area"
- The panel will have to decide if that study area was appropriate and encompassed a sufficient ... of the potential impacts adverse effects
- This was subject of much contention at the hearing so far as well, ranging from immediate neighbouring residents in adjacent municipalities and within the municipality, to the broader Great Lakes community arguing they were left out of the consultation, notice, input processes

### Area of impact cont'd

- The study area that OPG and its consultants chose was just a small area around Kincardine.
- However, a question arose during the hearing should the study area be the Great Lakes basin as a whole? Communities, representatives, residents and groups all around the lakes on both sides of the border argued that their top concern was protection of the Great Lakes as a whole

#### **Great Lakes**

 The just concluded Great Lakes Water Quality Protocol between Canada and the United States, (replaced the previous GLWQA), included a notice provision for in part because of high concern over a prior proposal from the Bruce nuclear plant to ship radioactively contaminated steam generators through the Great Lakes to Sweden for "recycling" into steel products; with only some of that contaminated steel being returned to Ontario for long term management.

# New GLWQP notification requirement:

- The Parties shall notify each other, through the Great Lakes Executive Committee, of planned activities that could lead to a pollution incident or that could have a significant cumulative impact on the Waters of the Great Lakes, such as: (i) the storage and transfer of nuclear waste or radioactive materials
- This clause in such a recent Agreement demonstrates that it is the entire Great Lakes basin, bi-nationally, which has an interest in projects of this type.

# Transportation communities and impact

 Where will the radioactive waste travel? What are the transportation risks? What quantities of waste will travel? On what routes? What safeguards? Were those communities consulted? Are the containers the waste travels in, and the means of transport adequate form the proptection of the public and the environment? This question was not included in the environmental assessment, despite the objections of many both earlier in the process and at the hearing.

### Implications and questions

- Should nuclear waste of any description be buried? Is this the best idea for dealing with the waste, existing and future?
- What about precautionary principle?
- Concepts of irretrievability is this irreversible?
- What kind of precedent does this set?
- Is the EA evaluation of this proposal sufficient to proceed with a first of its kind deep geological repository for L&I radioactive waste?

#### CELA website - www.cela.ca



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