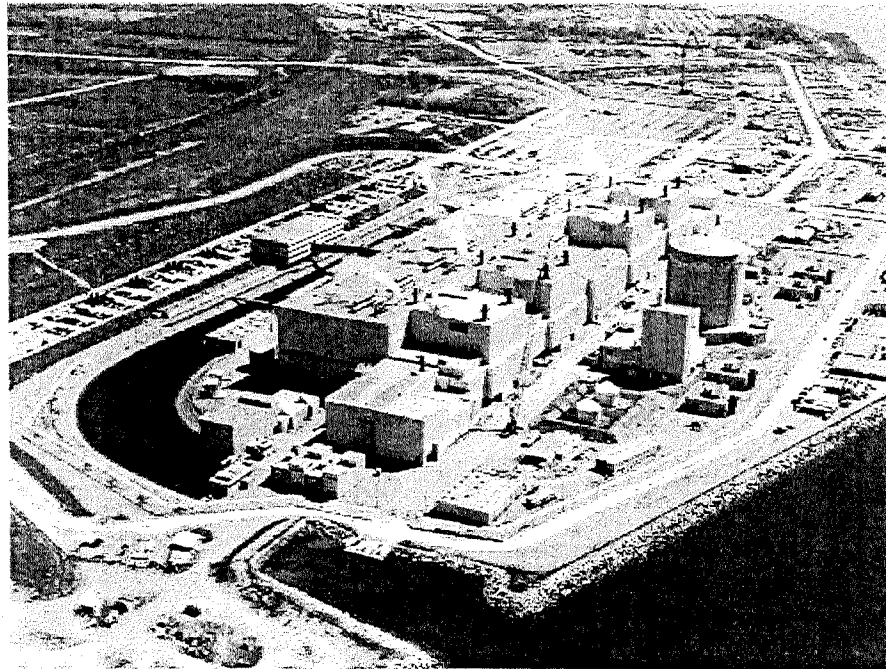


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PERMITTING NEW NUCLEAR STATIONS IN ONTARIO



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Context

- Provincial Government / Ontario Power Authority (OPA) considering options for how to rebuild, conserve or replace 25,000 MW of electricity over next 20 years
- Government has indicated that if OPA recommends new nuclear power, province will proceed with it



Issues

- Are provincial environmental assessment approvals required?
- What is the likely federal environmental assessment and licensing requirements?
 - Timeline
 - Scope: accidents and waste
 - Alternatives to and alternative means
 - Public consultation

Provincial Environmental Assessment

- Provincial EA required if:
 - Project undertaken by Province, a public body or a municipality
 - Project undertaken on behalf of Province or public body
 - Project prescribed by regulation
 - Proponent agrees that a provincial EA should be done
- Project unlikely to fall under any of the above categories
 - Therefore, provincial EA may not be required
- Related transmission facilities MAY be subject to a class screening provincial EA
 - Unlikely to engage significant review at provincial level
 - May not be required at all as could be considered entirely part of the project covered under CEAA EA
- Plan being prepared by OPA May be subject to EA

Whether a Public Body

- Potential proponents include Ontario Power Generation Inc. (OPG), Atomic Energy of Canada Limited (AECL), Bruce Power LP and perhaps other private corporations/LPs
- Likely that OPG would be a proponent or party to consortium
 - Tax and waste management issues drive this
- None of the above are public bodies as defined under the Act
 - OPG is a provincially owned corporation but is not a Crown agent (s. 53.1(2) of *Electricity Act, 1998* (Ontario))
 - AECL is federally owned
 - All others are privately owned
 - None are prescribed under the Act as public bodies (General R.R.O. 1990 Regulation 334, s. 3)

Whether on behalf of Public Body

- OPA likely to provide some form of financial support for project
 - Project likely to be in accordance with OPA's supply management plan
 - However, OPA not a Crown agent (s. 25.3 of *Electricity Act*, 1998 (Ontario))
- Could argue that OPA's integrated power system plan being undertaken on behalf of Province
 - Policy sense to include strategic plan
- Limited case to argue that nuclear power project carried out on behalf of Province
 - Province has no statutory duty to provide power

Whether Prescribed by Regulations

- Most electricity projects are subject to provincial EA as a result of regulation (O. Reg. 116/01)
 - EA rules apply equally to Province, public bodies, municipalities and private sector proponents
- Nuclear power projects not included under the regulation
 - Issue whether related transmission facilities would be subject to provincial EA
 - If transmission lines subject to provincial EA, no separate approval required under *Environmental Assessment Act* (Ontario) if meets planning process for class EA met
- Question whether plan prepared by OPA subject to regulation
 - Whether constitutes “planning” of a generation facility captured under the regulation

Federal Licensing Approvals

- Project can only proceed if licensed by federal regulator, the Canadian Nuclear Safety Commission (CNSC), under the *Nuclear Safety and Control Act* (Canada)
- Separate licences required for each stage of the project
 - Site preparation
 - Construction
 - Operation
 - Decommissioning
 - Abandonment
- Licensing process involves hearings open to the public and where intervenors can make submissions
 - Licences are generally for limited periods (5 years) and must be renewed periodically through public hearing process

Federal Environmental Assessment

- Before CNSC can issue licence, environmental assessment required under *Canadian Environmental Assessment Act* (CEAA)
 - By regulation, project prescribed to be subject to comprehensive review
 - Given likely public concerns, at least the first project could be upgraded to panel review
- Scope of review set by responsible authority (CNSC) if it is a comprehensive study, by Minister if upgraded to review panel (s. 15(1) of *CEAA*)
- Review likely to be guided by environmental assessments carried out for nuclear projects
 - Restarts of Pickering A, Bruce A (screening review)
 - Construction of Dry Storage Facility at Bruce (comprehensive study)

Assessment Timeline

- AECL estimates EA and licensing process would take 3 – 4 years
- Engineering work could be done during the EA review period
 - Thus, if project is licensed, construction could begin almost immediately upon approval
 - Concern that this might pre-suppose approval of project and that the actual project may differ from what is reviewed during EA
- EA and licensing process could be significantly longer
 - Use of unfamiliar technology (non-CANDU reactors)
 - Panel review may add time
- Proponent may wish to request panel review from the outset in order to avoid risk of delays if project is referred to panel review after EA commences

Responsible Authority

- CNSC would be lead responsible authority
 - Other agencies would have role, including Department of Fisheries and Oceans
 - Canadian Environmental Assessment Agency (Agency) would be the federal environmental assessment coordinator

- CNSC can delegate much of the preparation work and consultations to the proponent

Alternatives To / Alternative Means

- Alternatives to the project likely to include other forms of generation and/or conservation
 - Conservation likely to be found to be inadequate
 - Alternatives likely to be considered too costly/too dependent on uncertain (and arguably not clean) natural gas or unable to provide reliable “baseload” generation
 - Recent successes internationally (better operating performance, on-time and on-budget construction) could support case for nuclear power

- Alternative means likely limited
 - Different construction methods
 - Adaptation of safer technology
 - Alternative locations likely quite limited

- Trade-off between different/newer (and perhaps better) technology and proven existing (CANDU) technology

Scope: Nuclear Waste

- EA likely to consider consequences of decommissioning station
 - Preliminary decommissioning plans in place for all existing nuclear power stations
 - International experience suggests nuclear stations can be safely decommissioned

- Limited consideration likely for nuclear waste management
 - No permanent waste disposal facility exists in Canada
 - Proposal exists for low and intermediate level waste disposal facility; expected in-service date 2017

- Nuclear Waste Management Organization has studied options for long-term used nuclear fuel (high level waste) management
 - Governor in Council now to make decision
 - Implementation date likely decades away

Scope: Accidents

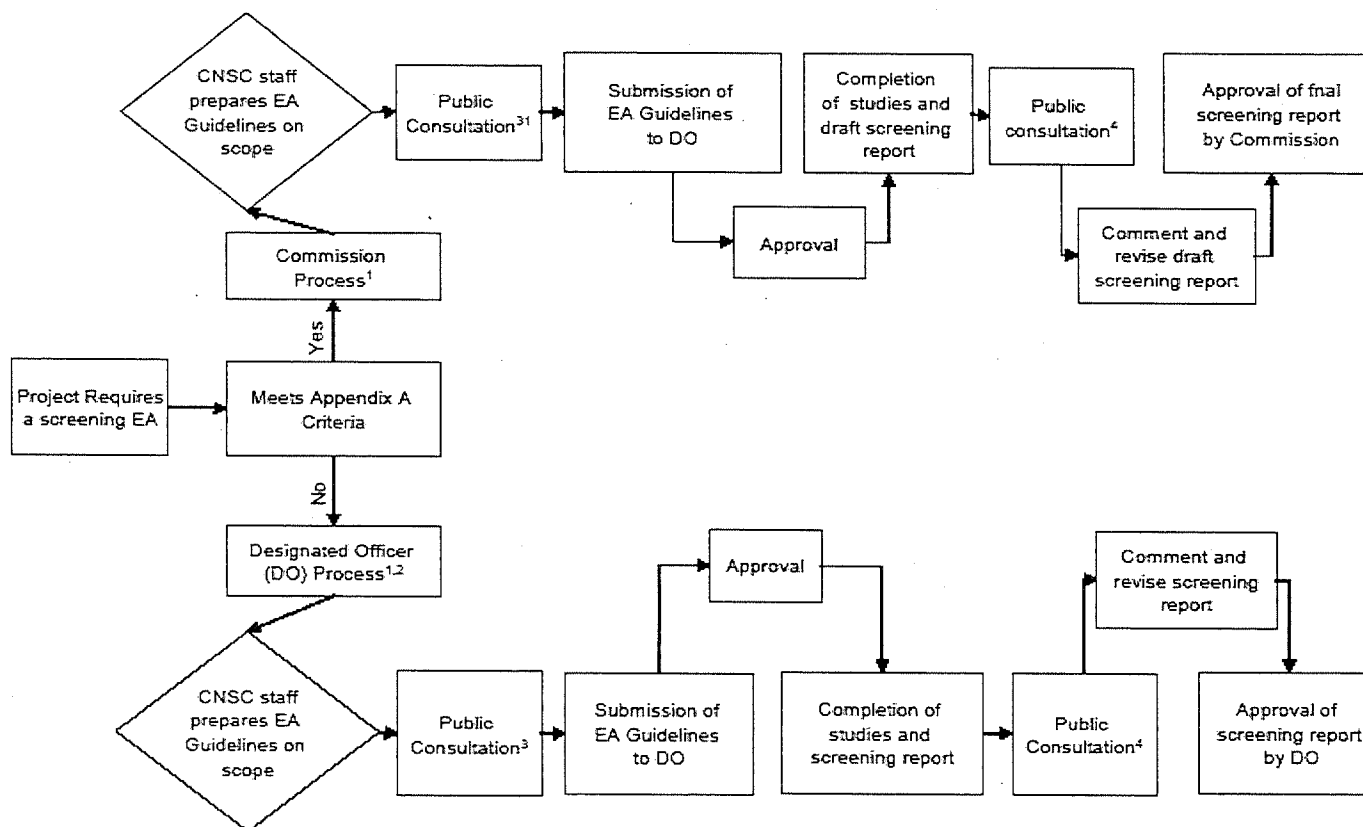
- EA must consider environmental effects of any accident or malfunction that may occur in connection with the project
- Presumably, most serious accidents/malfunctions would only arise during the operation of the station
 - Accidents/malfunctions were considered in the restart of Pickering A and Bruce A EAs
 - Presumably, new station would likely be safer
- Panel review may consider additional accident scenarios (accidents that have a lower probability of occurring than considered in the previous EAs)
 - Possible that socio-economic effects resulting from liability regime imposed under the *Nuclear Liability Act* (Canada) could be discussed

Public Consultation

- Public consultation mandatory
 - Consultation required on both the proposed scope of the EA and the EA itself
- CNSC has experience in public consultation process
 - Already conducts hearings as a quasi-judicial body
- Review panel likely to have greater credibility
 - Potential for more hearing dates
 - Greater perceived independence

Process Example

PROCESS FOR APPROVAL OF A SCREENING REPORT



¹Both the DO and the Commission processes require execution of the CEAA Federal Coordination Regulations and are subject to the requirements of the Canadian Environmental Assessment Registry

²The DO may bump the process to a Commission decision at any time, based on new information related to Appendix A Criteria

³Requirements for public consultation on EA Guidelines described in section 3(ii) of this document

⁴Public consultation is required on all preliminary screening reports