



Canadian Nuclear
Safety Commission

Commission canadienne
de sûreté nucléaire

Canada

Canada's Approach to Decommissioning: The Regulator's Perspective

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Karine Glenn

Director of the Wastes and Decommission Division
Canadian Nuclear Safety Commission



nuclearsafety.gc.ca

Canadian Nuclear Safety Commission (CNSC)



- Nuclear regulation falls under federal jurisdiction
- The CNSC is Canada's sole nuclear regulator
- Regulates all nuclear-related facilities and activities
- Composed of 800 staff and the Commission
- Independent, quasi-judicial tribunal and court of record
 - consists of up to seven members appointed under the authority of the *Nuclear Safety and Control Act* (NSCA)
 - reports to Parliament through Minister of Natural Resources
- Commission hearings are public and webcast

Transparent, science-based decision making

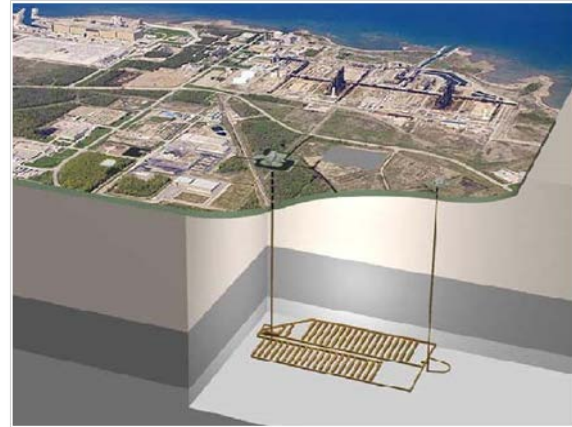


CNSC-Regulated Facilities and Activities



- Uranium mines and mills
- Uranium fuel fabrication and processing
- Nuclear power plants
- Nuclear substance processing
- Industrial and medical applications
- Nuclear research and education
- Transport
- Import/export control
- Security and safeguards
- Waste management facilities

From cradle to grave



Commission Hearings and Meetings



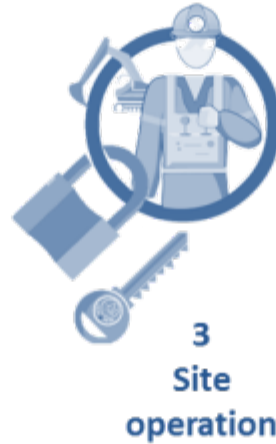
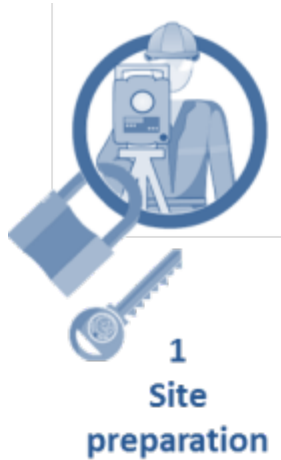
- Public hearing process
- Independent, quasi-judicial tribunal and court of record
 - consists of up to seven members appointed under the authority of the *Nuclear Safety and Control Act* (NSCA)
- Public participation during CNSC hearings or meetings
 - use of webcasts for public hearings/meetings
 - often held in local communities



Stages of Licensing Nuclear Facilities



Staged approach / Early planning



Each stage requires a CNSC licence

Planning for decommissioning and financial guarantee are required for stages 1–4

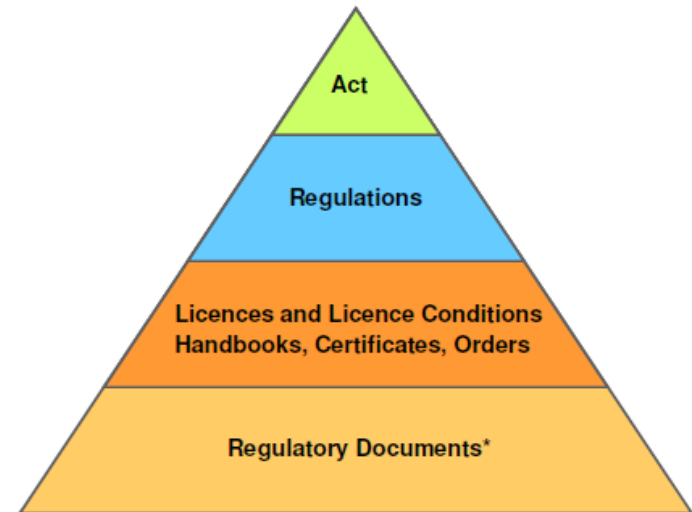
CNSC Regulatory Framework



- *Nuclear Safety and Control Act (NSCA) – 2000*
- CNSC regulations – performance based with prescriptive requirements
- Applicants need to demonstrate that their proposed decommissioning strategy and activities meet CNSC requirements

Safety case is the driver

Elements of the regulatory framework



*Describes requirements and includes recommendations

CNSC Regulatory Oversight



- CNSC oversight is conducted through verification and enforcement
- Regulatory oversight activities include:
 - onsite inspections and desktop reviews
 - assessments, reviews and evaluations of licensee programs, processes and reports
 - review of information provided by licensees including mandatory reports
- The nature of the oversight is commensurate with the risk associated with the licensed site



Transparency through regular reporting to the Commission

Decommissioning Planning



Preliminary Decommissioning Plan (PDP)

- Required for all licensed activities encompassing a facility's life cycle
- Provides basis for cost estimate for decommissioning
- For major facilities, required to be updated and reviewed at a frequency of five years or when requested by the Commission

The PDP does not authorize the conduct of decommissioning activities

Decommissioning Planning (cont.)



Detailed Decommissioning Plan (DDP)

- Filed with the CNSC prior to decommissioning
- Required for appropriate licensing action
- Refines and adds procedural and organization detail to the PDP
- The safety case in support of DDP is the basis for staff's recommendation and licensing decisions to authorize decommissioning

Once approved, the DDP is incorporated into the licensing basis

Financial Guarantees (FGs) for Decommissioning



- Required as part of the licence application
- Required through the entire lifecycle of the facility
- Approved by the Commission
- Required to be updated and reviewed every five years or when requested by the Commission (along with PDPs and cost estimates)
- Annual reporting on status of FG

Cover all decommissioning, dismantling, disposal of waste and any long-term monitoring

Long-Term Waste Management



- Integral part of decommissioning planning
- Facilities to accept the waste generated from decommissioning should be planned, approved and constructed before that waste is generated
- Concrete solutions needed not only for used nuclear fuel but also for low- and intermediate-level wastes

Deferring the problem to future generations is not a viable option

Challenges



- Not in my back yard (NIMBY)
- Science is often ignored by politicians and special interest parties
- Long lead times required for disposal facilities
- Maintaining flexibility in potential decommissioning approaches with the safety case being the driver

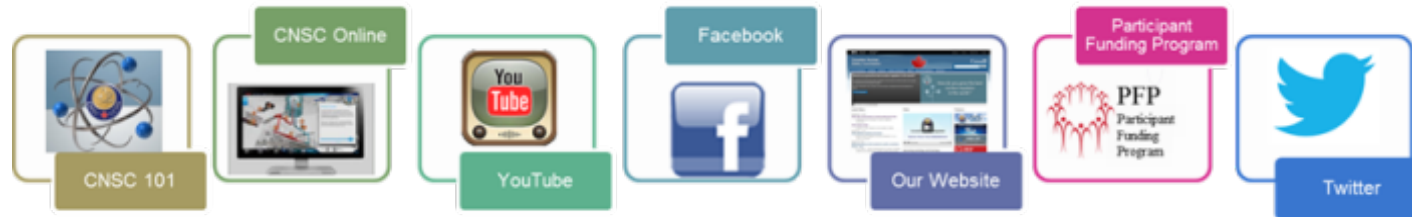
Industry, proponents, politicians and regulators have an equal role in disseminating the science behind the safety cases

Public Engagement Is a Priority



- Public hearing process
- Participant Funding Program
- Indigenous and public consultations
- Extensive outreach and engagement program
- Requirement for licensees to communicate

CNSC recognizes, supports and encourages the involvement of the public and Indigenous peoples in all CNSC processes



Building trust is a continuous process

Modernization of the CNSC's Waste and Decommissioning Framework



- Developing, consolidating and updating regulatory documents including:
 - REGDOC-1.1.4, Licence Application Guide: *Licence to Decommission Reactor Facilities* (new)
 - REGDOC-1.2.1, *Repositories and Waste Facilities* (new)
 - REGDOC-2.11.1, *Waste Programs* (new)
 - REGDOC-2.11.2, *Decommissioning Planning* (update to G-219)
 - REGDOC-3.3.1, *Financial Guarantees* (update to G-206)
- Discussion paper DIS-16-03, *Radioactive Waste Management and Decommissioning* issued for public consultation in 2016
 - What We Heard report will be published late 2017

Summary



- Canada has a strong regulatory framework that provides for decommissioning of nuclear facilities and related activities
- Canada has experience in decommissioning nuclear facilities
- Long-term waste management must be an integral part of decommissioning planning
- Industry, proponents, politicians and regulators have equal role to play in disseminating the science behind the safety cases



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Thank You!



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