



Canadian Nuclear
Safety Commission

Commission canadienne
de sûreté nucléaire

Canada

SOME CURRENT LEGAL DEVELOPMENTS AND ISSUES IN NUCLEAR LAW

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ANNUAL GENERAL MEETING
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CANADA 150

Overview

➤ **Some recent legal developments in Canada:**

- *Nuclear Liability and Compensation Act*
- ratification by Canada of the *IAEA Convention on Supplementary Compensation for Nuclear Damage*
- Fukushima-related amendments to Regulations
- two regulatory documents: Fitness for duty
- first decommissioning licence for modern NPP (Gentilly II) in Canada
- Ontario Power Generation's Deep Geological Repository

➤ **Some current legal issues:**

- federal review of environmental assessment law
- *UN Declaration on the Rights of Indigenous Peoples*
- post-Fukushima – global accountability for safety
- readiness for new technologies



Nuclear Liability and Compensation Act

- In force January 1, 2017
- Sets absolute liability limit of an operator of a nuclear installation at an amount that will increase to \$1 billion over 4 years – \$650 million at proclamation, \$750 million, \$850 million, \$1 billion
- Operators must carry financial security to address liability
- Form of financial security:
 - operators to cover liability amount with insurance from approved insurer
 - subject to Minister's approval, operators permitted to cover up to 50% of their liability with other forms of financial security (s. 28, NLCA)
- ***Nuclear Liability and Compensation Regulations***
 - designate nuclear installations
 - set classes of nuclear installations and,
 - liability limits commensurate with their risk

Nuclear Liability and Compensation Act (2)

Role of regulator – technical advisor, under new law:

- The CNSC is advisor to the Minister of Natural Resources on development of regulations with respect to designation of nuclear installations (s. 7(1))
- Statutory obligation on insurers to report to Minister on suspension or cancellation of insurance (s. 30)
- Penalty scheme under the Nuclear Liability and Compensation Act (NLCA)
- The CNSC will keep apprised of licensees' compliance with NLCA, but won't administer it – nuclear liability and nuclear safety are different (*Energy Probe v. Canada (AG)*, [1994] O.J. No. 553)

Ratification by Canada of the *Convention on Supplementary Compensation (CSC)*:

- On June 6, 2017, Canada ratified the CSC
- Canadian ratification of the Convention will create treaty relations with other members of the CSC, which include the United States.

Developments in Certain Regulations and Two Regulatory Documents

- **Fukushima-related Amendments: *Amending Certain Regulations Made Under the Nuclear Safety and Control Act* :**
 - At the April 12 Commission meeting, the Commission made regulations (44(1) of the *Nuclear Safety and Control Act*)
 - Next steps:
 - GIC approval
 - *Canada Gazette*, Part II

- **2 regulatory documents on fitness for duty:**
 - REGDOC 2.2.4, *Human Performance Management: Fitness for Duty: Managing Worker Fatigue* – Published March 21, 2017
 - REDGOC 2.2.4, *Human Performance Management: Fitness for Duty: Random alcohol and drug testing* – Commission meeting August 2017

Decommissioning of Nuclear Power Plant and Status of Deep Geological Repository

➤ **Decommissioning licence for nuclear power plant (NPP) (Gentilly II)**

- first modern decommissioning licence for a NPP
- June 21, 2016
- 10-year licence

➤ **Status of Deep Geological Repository (DGR) project**

- May 26, 2017: Ontario Power Generation submitted its response to the Minister's additional information requests
- Anticipated dates:
 - August/September 2017: public comment period on the draft Agency's report and potential conditions
 - November 2017: submission of decision package to Minister
 - January 2018: ministerial decision

➤ **Two judicial review applications for DGR**

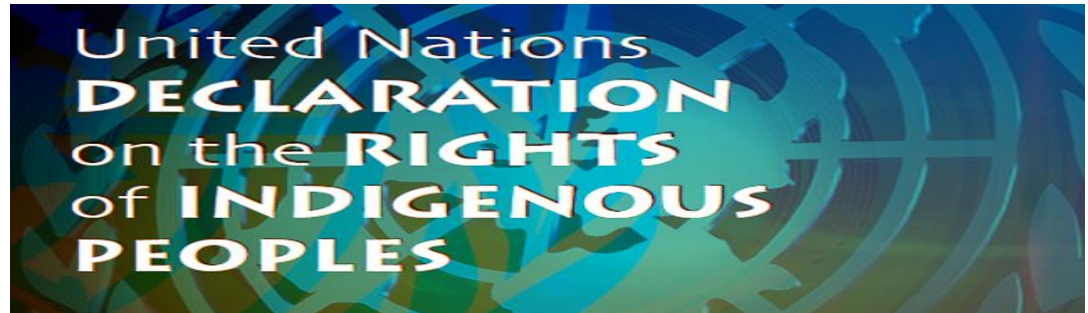
- *Save Our Saugeen Shores, Inc. v. AG Canada et al.* (T-946-15)
- *Mann v. AG Canada et al.* (T-922-15)
 - both judicial reviews held in abeyance until the outcome of the ministerial decision

Current Issue #1 – CNSC Role in Environmental Assessment

- Lifecycle regulating begins with environmental assessment (EA), integrates results into regulatory oversight for nuclear projects
- Current framework for nuclear projects:
 - ***Canadian Environmental Assessment Act, 2012 (CEAA 2012)***
 - The CNSC is the Responsible Authority to determine if a designated project is “likely to cause significant adverse environmental effects”
 - If the answer is no, licensing under the Nuclear Safety and Control Act (NSCA) follows
 - ***Nuclear Safety and Control Act***
 - The CNSC regulates “to prevent unreasonable risk to the environment”
 - If project is not designated under CEAA 2012, licensing requires assessing environmental impact and preventing environmental risk
- EA process review – Expert Panel, recommended changes

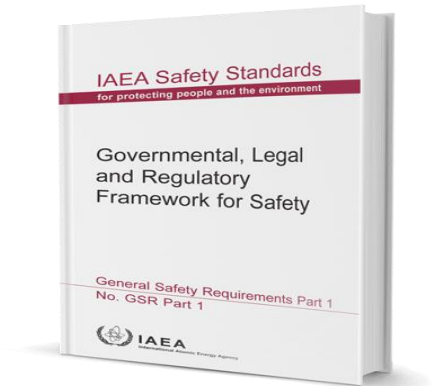
Current Issue #2 – Implementing UNDRIP Principles

- United Nations Declaration on the Rights of Indigenous Peoples (UNDRIP) is an international human rights standard
- Consultation, honour of the Crown – s.35, Constitution
- “free, prior and informed consent” – article 19 UNDRIP
- Goal of reconciliation with Indigenous peoples of Canada
- Working Group of Ministers to review laws, policies



Current Issue #3: Global Accountability for Nuclear Safety

- A nuclear accident anywhere is an accident *everywhere*
- National responsibilities with global impacts
- *Convention on Nuclear Safety* – peer review process
- IAEA Integrated Regulatory Review Service (IRRS) – peer review missions
- WANO and industry peer review
- How do we, collectively, enhance global safety and ensure accountability?
- Importance of transparency



Current Issue #4 – Readiness for New Technologies – Small Modular Reactors

- Most designs still conceptual – novel features have potential benefit, but pose uncertainties
- Credible science and technology information is critical to support (and assess) safety claims
- The CNSC is also looking at other regulators' small modular reactor work:
 - US NRC: design certification process; developing pre-licensing feedback mechanism for vendors
 - UK ONR: generic design assessment – focused on adequacy of design processes and safety claims, using existing assessment standards to conduct reviews

CNSC Work Respecting Small Modular Reactors

➤ **Vendor design review (VDR)**

- early feedback and identification of key issues, any fundamental barriers to licensing – **not** design certification
- conclusions of any VDR do not bind or otherwise influence decisions made by the Commission.

➤ **Small modular reactor (SMR) discussion paper (DIS–16-04)**

- lots of feedback – existing regulatory framework adequate, with graded approach, streamlining – need for common understanding

➤ **IAEA SMR Regulators' Forum**

- technology-neutral pilot project, facilitated by IAEA Scientific Secretary (Canada, China, Finland, France, Korea, Russian Federation, USA)
- not to develop separate SMR requirements, but to understand impacts on existing frameworks, develop common positions

CNSC Vendor Design Reviews

VDR No	Country of origin	Company	Reactor type / Output per unit	Status
1	Canada / U.S.	Terrestrial Energy	Molten salt integral / 200 MWe	In progress – pending completion September 2017
2	U.S. / Korea/ China	UltraSafe Nuclear/Global First Power	High temperature gas prismatic block / 5 MWe	In progress – pending completion March 2018
3	Canada	LeadCold Nuclear	Molten lead pool fast spectrum / 3 – 10 MWe	In progress – pending completion June 2018
4	Canada / U.S.	StarCore Nuclear	High temperature gas prismatic block / 10 MWe	Pending start July 2017
5	U.S.	Advanced reactor concepts	Sodium pool fast spectrum /100 MWe	Pending start fall 2017
6	U.K.	Moltex Energy	Molten salt / ~1000 MWe	Pending start fall 2017
7	U.K.	U-Battery	High temperature gas prismatic block / 4 MWe	Pending start fall 2017



Questions?

Thank You

Annex I – Environmental Assessment



EAs for Projects on the <i>Regulations Designating Physical Activities</i>: CEAA 2012	EAs for Projects not on the <i>Regulations Designating Physical Activities</i> and for Subsequent Licensing Phases
Project description	Licence application including project description
EA review (Environmental Impact Statement)	Review of licence application including EA review
Commission hearing and decision	Commission hearing and decision
On-going licensing, monitoring and compliance <ul style="list-style-type: none">• Site/regional offices conduct inspections• Daily inspections at nuclear power plants	On-going licensing, monitoring and compliance <ul style="list-style-type: none">• Site/regional offices conduct inspections• Daily inspections at nuclear power plants



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