



Canadian Nuclear
Safety Commission

Commission canadienne
de sûreté nucléaire

Canada



Overview of the Convention on Nuclear Safety

10th Review Meeting

CMD 26-M36

Staff Presentation
September 2, 2026



Outline

- Overview of Convention on Nuclear Safety (CNS)
- Review Cycle for 10th Review Meeting (RM)
- Results of Review of Canada at 10th RM
- Project Highlights and Lessons Learned
- Conclusions and Next Steps
- List of Acronyms for Reference



OVERVIEW OF CNS



Origin and Goals of the CNS



CNS is an international agreement, adopted in 1994 in response to the Chernobyl accident.



Three CNS objectives:

- High level of nuclear safety worldwide
- Effective defence against potential radiological hazards at NPPs
- Prevent accidents and mitigate radiological consequences, should accidents occur

Triennial peer review by signatories, called Contracting Parties (CPs)

- Submit a national report and respond to written questions from other CPs
- CNS is an “**incentive instrument**”
 - No inherent enforcement mechanism
- Participate in the review meetings (RM) every 3 years
 - Present national report to other CPs
 - Respond to follow-up questions and engage in review of other national reports



Plenary Session of CNS Review Meeting
Source: CNSC staff



CNS Reporting Obligations

Article	Subject	Article	Subject
6	Safety of Existing NPPs	13	Quality Assurance
7	Regulatory Framework	14	Assessment and Verification of Safety
8	Regulatory Body	15	Radiation Protection
9	Licensee Responsibility	16	Emergency Preparedness
10	Priority to Safety	17	Siting
11	Financial and Human Resources	18	Design and Construction
12	Human Factors	19	Operation



Phases of CNS Review Cycle

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Reporting periods cover 3 years; the review for each period is in phases, some of which extend to the next reporting period.

- Drafting and submission of national report (1 year)
- Peer review (6 months)
 - Submit questions to other CPs
 - Answer questions submitted to Canada
- Attend review meeting (2 weeks)
 - Deliver Canada's national presentation
 - Attend other CP's presentations (pose questions)
 - Finalize country review reports



Organization of CNS

- There are 98 CPs to the CNS
- CPs are assigned to Country Groups (CGs) to make peer review manageable
 - Currently 7 CGs
- CPs elect officers who organize and preside over the peer review in CGs and plenary sessions
 - President and two Vice-Presidents
 - Chairperson, Vice-chairperson, Coordinator, Rapporteur for each CG
- IAEA serves as Secretariat to the CNS



REVIEW CYCLE FOR 10TH RM



CGs for 10th RM

10

CG1	CG2	CG3	CG4	CG5	CG6	CG7
Japan	Ukraine	Slovakia	Spain	China	Sweden	Korea
Czechia	Canada	Pakistan	UK	USA	Russia	India
France	Romania	Belgium	Brazil	South Africa	Hungary	Belarus
Finland	Armenia	Argentina	UAE	Switzerland	Netherlands	Bulgaria
Egypt	Slovenia	Bangladesh	Turkiye	Mexico	Singapore	Moldova
Bosnia	Zimbabwe	Viet Nam	Kazakhstan	Estonia	Albania	Myanmar
Tunisia	Ghana	Peru	Libya	Qatar	Bolivia	Norway
Iraq	Macedonia	Mali	Saudi Arabia	Jordan	Australia	Kuwait
Paraguay	Italy	Serbia	Senegal	Niger	Austria	Indonesia
Latvia	Poland	Congo	Germany	Syria	Bahrain	Benin
Croatia	Ireland	Cyprus	Morocco	Madagascar	Angola	EURATOM
Luxembourg	Montenegro	Thailand	Cuba	Sri Lanka	Chile	Cambodia
Lebanon	Nigeria	Denmark	Malta	Portugal	El Salvador	Greece
Ireland	Lithuania	Uruguay	Oman	Liberia	Uzbekistan	Mongolia



Canada continued to be a leader in the review process, posing 254 questions to 22 CPs during the 10th review cycle:

- **Those in the same Country Group (CG2) as Canada who submitted reports on time**
 - i.e., Ukraine, Romania, Armenia, Slovenia, Zimbabwe, Ghana, North Macedonia, Italy, Poland, Iceland, Montenegro and Lithuania
 - Nigeria also submitted a report, but too late to be reviewed
- **Other CPs** including G7 countries, CANDU countries, China, Russian Federation, Turkiye

▶ Canada's 10th report was jointly developed by CNSC, Industry and Canadian Governmental Agencies.

- Among the first to be posted publicly
 - Initially to the IAEA public website and then on Open Government
- Good learning tool or reference for CNSC staff
- Follows IAEA guidance on structure of report and utilized the new template developed by Canada for all CPs to use



▶ Canada received **161 written questions** from 30 CPs during the 10th review cycle, including:

- **Article 7** – Regulatory Framework
- **Article 8** – Regulatory Body
- **Article 11** – Financial and Human Resources
- **Article 14** – Assessment and Verification of Safety
- **Article 16** – Emergency Preparedness
- **Article 18** – Design and Construction
- **Article 19** – Operation
- **General** – Miscellaneous



Ramzi Jammal speaking at the CNS.
Source: CNSC Staff

- Vienna, April 13 to April 24, 2026
- CNSC Executive Vice-President (R. Jammal) led Canada's multi-organizational delegation (Candel)
- Canadian delegates:
 - Delivered Canada's [presentation](#), answered questions
 - Posed follow-up questions at review of other CPs
 - Championed openness and transparency
 - Helped facilitate as CNS officers of RM
 - Participated actively in open-ended working group (OEWG)
 - Worked closely with like-minded CPs on a joint statement re: armed conflict in Ukraine



Canadian Delegation

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CNSC

Ramzi Jammal – *Head of Delegation*

Alex Viktorov – *Alternate Head of Delegation*

Brian Gracie

Martin Hitchon – *Vice-Chair for CG7*

Bryden Marinelli – *Rapporteur for CG1*

Kate Whiteaker

Kyle Cormier

Mok Cher Fong

Health Canada

Keith Henderson (Radiation Protection Bureau)

AtkinsRealis

Patrick Reid

Industry

Maury Burton (Bruce Power)

Sara Irvine (OPG)

Nick Reicker (NB Power)



CNSC Members of the Canadian delegation at the Review meeting. Source: CNSC Staff

Permanent Mission to International Organizations in Vienna (VPERM)

Alison Grant – *Ambassador for VPERM*

Kate Churchill-Smith – *Global Affairs Canada*

Angela Veitch – *Global Affairs Canada*

Shawn Friele – *Global Affairs Canada*

▶ OEWG meets at sidelines of RM and proposes improvements for Convention processes.

Proposals accepted at OEWG at 10th RM:

- Establish a working group to undertake a review of the INFCIRC documents
- Conduct a survey on the effectiveness of CNS processes and the changes implemented for this review meeting
- Formalize the establishment of the OEWG for future review meetings
- Consider types of nuclear installations to be reported on for future review meetings

Canada:

▶ **Implemented strategy with like-minded countries** to ensure that nuclear safety issues stemming from the invasion of Ukraine were discussed in multiple country groups.

▶ **Helped ensure that results of the 10th RM reflected concerns for nuclear safety in Ukraine.**

- Collective results, as captured in Summary Report for the RM
- Results for individual CPs in their country review reports

▶ **Also co-signed a joint statement** following the 10th RM that expanded on the concerns and **called for an immediate end** to Russia's invasion and occupation.

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RESULTS OF REVIEW OF CANADA AT 10TH RM

▶ Results of peer review were finalized at the 10th RM in Canada's country review report, which:

- Concluded that Canada met its CNS obligations
- Indicated that peer reviewers agreed that some Challenges from the previous RM were successfully addressed
- Identified a new Challenge to be addressed in 11th national report
- Identified Good Practices and Areas of Good Performance



Status of 4 Challenges from previous RMs

#	Description	Status
C9-1	Update guidance document Generic Criteria and Operational Intervention Levels for Nuclear Emergency Planning and Response and include guidance on protection strategies and reflect guidance in provincial plans	Remains Open
C9-2	Approve and implement revision of Ontario's Provincial Nuclear Emergency Plan	Closed
C9-3	Optimize regulatory capacity and capability to effectively and efficiently assess licence applications for other nuclear technologies	Closed
C9-4	Ensure an effective approach between federal departments to provide proponents with certainty related to process and timelines for environmental/impact assessments	Remains Open



Canada's Review Results (2/3)

22



1 new Challenge assigned to Canada at 10th RM:

- Complete actions to address the suggestions and recommendations from the independent assessment of regulatory safety culture

Canada received:

2 "Good Practices" (out of 22 awarded at the RM)

- Regulatory sandbox to assess novel technologies and SMR designs
- Use of new technology to develop inspector competence (virtual reality/digital twins)

6 "Areas of Good Performance"

- International collaboration (memorandum of cooperation with US/UK)
- Regulatory oversight that allows for isotope production
- Development of plans for workforce of the future
- Use of automated and robotic technologies to reduce occupational radiation exposure
- Implementation of risk-informed compliance verification program and inspection guides
- Updated regulatory basis to evaluate new reactor designs

MCI's are identified from a survey of reviews of all national reports

MCI's from summary report for 10th RM:

- Human resources, knowledge management, competence management and generational change
- Extreme weather and changing environmental conditions
- Impact of artificial intelligence in activities related to nuclear safety
- Emergency preparedness under extraordinary circumstances
- Securing reliable supply chains

CPs are expected to report on MCIs in their report for 11th RM



PROJECT HIGHLIGHTS AND LESSONS LEARNED



Observations from CanDel

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Good learning experience for
report team, delegates

CNSC staff reviewed all Good
Practices identified
(22 in total, several of which were
of interest to Canada)

CNS peer review process
not always robust
(e.g., CPs sometimes draft
their own Challenges)

Situation in Ukraine
complicated review process

Some changes made to the Review
Meetings experienced issues:
(Reduced session times,
consistency of findings)



CONCLUSIONS AND NEXT STEPS

▶ CNS provides a valuable opportunity to assess the state of nuclear safety in a global sense.

▶ CNS advances nuclear safety through a valuable peer review process.

- Enables CPs to learn from each other (share Good Practices and Areas of Good Performance, discuss emerging issues)
- Identifies Challenges for each CP to follow-up at next RM

▶ Report team and CanDel collaborated effectively under CNSC leadership to achieve project objectives.

▶ Canada was a strong participant at the 10th RM.

- Maintains a strong nuclear safety record
- Delegation contributed significantly to the review process and its improvement
- Demonstrated leadership in nuclear safety and regulatory excellence



Next Steps

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Complete the
posting of
deliverables
for 10th
review cycle
on Open
Government
site
(Fall 2026)

Next report
will cover
April 2025 to
March 2028
(Will describe
Canada's
effort to
address 1 new
and 2 old
Challenges)

Preparations
for 11th RM
begin in
September
2027 with
the
formation of
next report
team and
nomination
of new
officers

Continuation
of the Open
Ended
Working
Group
initiatives



Canadian Nuclear
Safety Commission

Commission canadienne
de sûreté nucléaire

Canada

Joignez-vous à la conversation

Join the conversation



nuclearsafety.gc.ca
suretenucleaire.gc.ca





List of Acronyms for Reference

CanDel	Canadian Delegation
CG	Country Group
CNS	Convention on Nuclear Safety
CP	Contracting Party
NPP	Nuclear Power Plant
OEWG	Open-Ended Working Group
RM	Review Meeting
SMR	Small Modular Reactor
WG	Working Group