



# CANADIAN NUCLEAR SAFETY COMMISSION

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**Marc Leblanc**

Commission Secretary

Presentation to l'Union des municipalités du Québec  
May 16, 2018 – Gatineau, QC

# The Canadian Nuclear Safety Commission (CNSC)

## Our Mandate



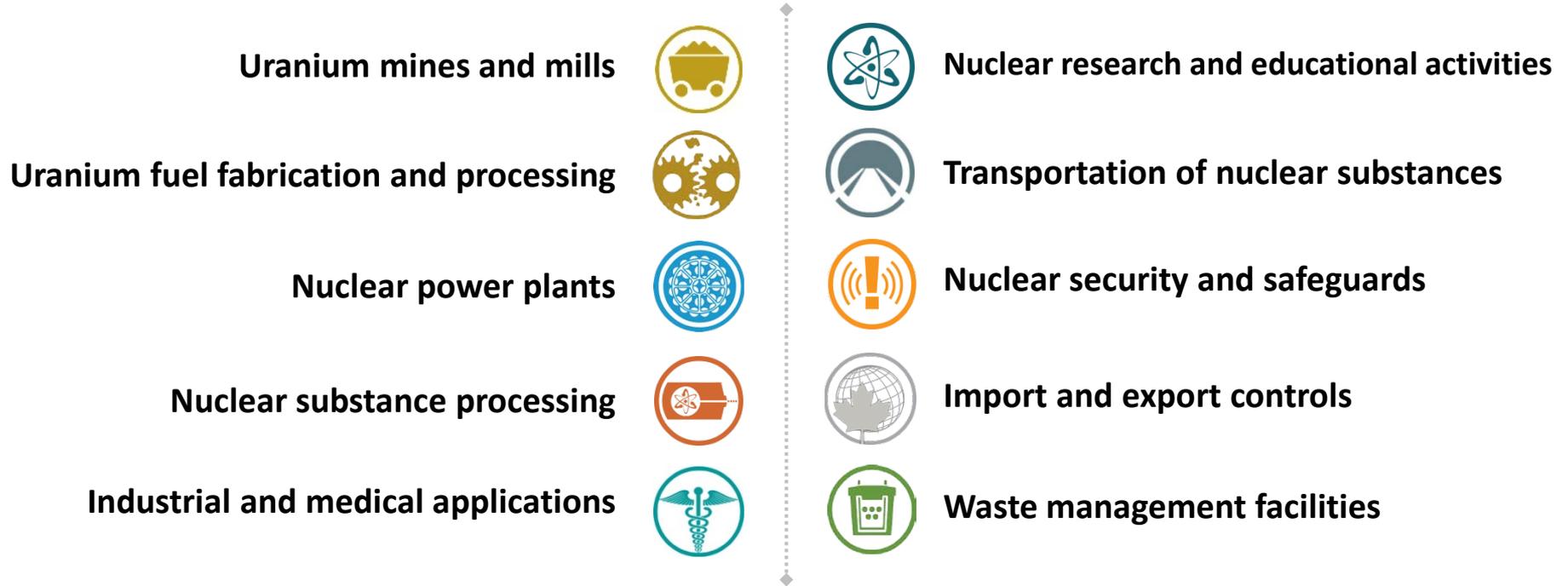
Regulates the use of nuclear energy and materials to protect **health, safety, security** and the **environment**

Implements Canada's **international commitments** on the peaceful use of nuclear energy

Disseminates **objective** scientific, technical and regulatory **information** to the public

***Nuclear Safety and Control Act*** – clear, modern legislation

# The CNSC Regulates All Nuclear Facilities and Activities in Canada...



**From cradle to grave...**

# Independent Commission



- Quasi-judicial administrative tribunal
- Agent of the Crown (duty to consult)
- Reports to Parliament through Minister of Natural Resources
  - Commission members are independent and part-time
  - Commission hearings are public and webcast
    - Staff presentations in public
  - Decisions are reviewable by Federal Court

**Transparent, science-based decision making**

# The CNSC's Regulatory Framework



## **Nuclear Safety and Control Act (NSCA)**

- enabling legislation

## **Regulations**

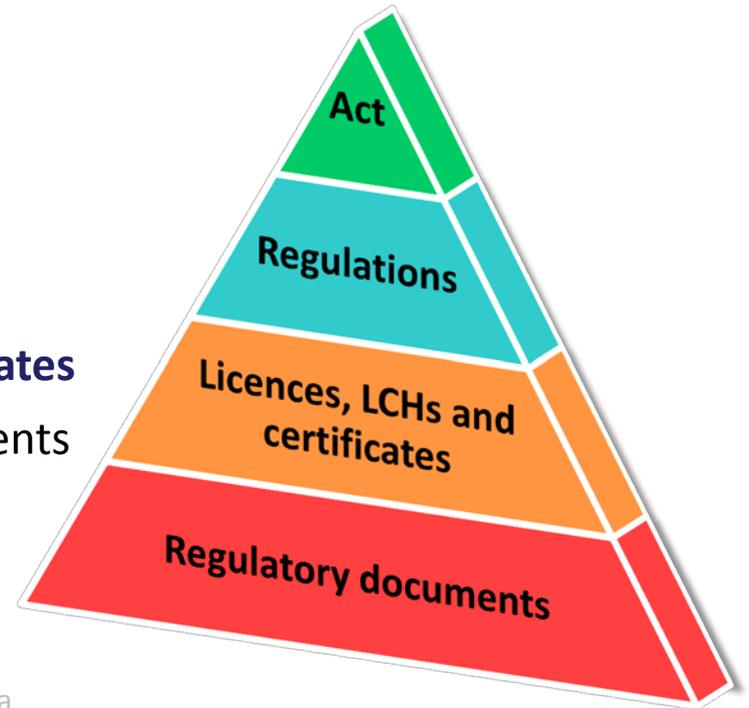
- high-level and generally applicable requirements

## **Licences, licence conditions handbooks, certificates**

- facility and/or activity specific requirements

## **Regulatory documents**

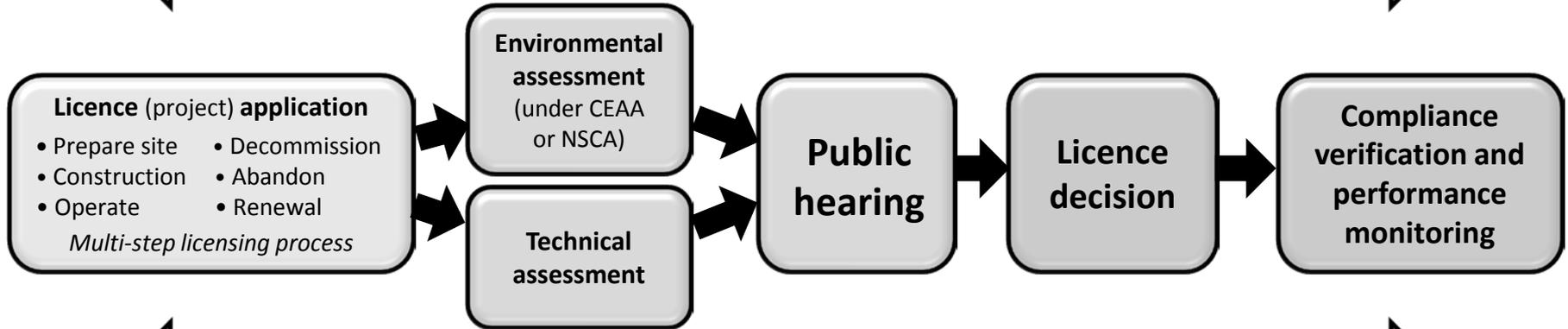
- include requirements and guidance



# The CNSC's Regulatory Licensing Process



Environmental monitoring throughout the lifecycle of the project



Ongoing Indigenous and public involvement

# Safety and Control Areas

<b>Management</b>	Management system
	Human performance management
	Operating performance
<b>Facility and equipment</b>	Safety analysis
	Physical design
	Fitness for service
<b>Core control processes</b>	Radiation protection
	Conventional health and safety
	Environmental protection
	Emergency management and fire protection
	Waste management
	Security
	Safeguards and non-proliferation
	Packaging and transport

- Safety and control areas are the technical topics CNSC staff use across all regulated facilities and activities to assess, evaluate, review, verify and report on regulatory requirements and performance.



**Ensuring the safe operation of Canada's nuclear sites**

# CNSC Expert Staff Ensure...



## The CNSC will only issue a licence if an applicant

- is deemed qualified to carry on the activity that the licence will authorize
- has demonstrated that they will protect the health and safety of persons and the environment
- has demonstrated that they will maintain national security
- has confirmed that they will adhere to international obligations to which Canada has agreed



- ~ **900** staff members
- **83%** of staff have science-based degrees
- **400** compliance and licensing experts
- **115** active inspectors

**...that licensees are in compliance with regulatory requirements**

# Chalk River Laboratories Site



- Chalk River Laboratories (CRL) has been present in Deep River, Ontario, for over 70 years with oversight
- Waste is already present on the site – Canadian Nuclear Laboratories (CNL) has proposed a modern facility to manage it safely into the future
- Full-time CNSC staff and inspectors are onsite
- All aspects of the environment, including fish and water, are monitored by the licensee and CNSC staff
- The CNSC has conducted Independent Environmental Monitoring Program (IEMP) testing three times since 2012
- The CNSC is satisfied that the controls implemented by CNL on its current activities protect the Ottawa River from hazardous and radiological substances

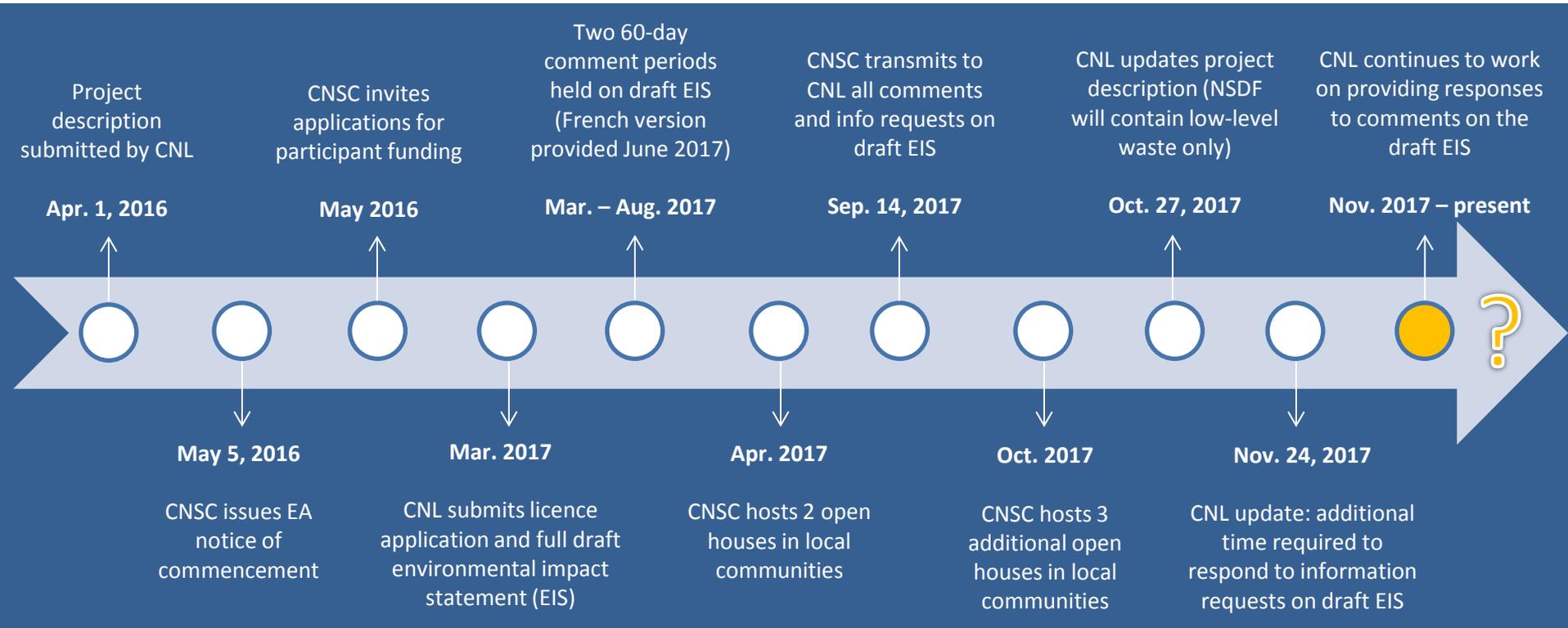
***The IEMP results confirm that the public and the environment around the CRL site are protected***

# Proposal: Near Surface Disposal Facility (NSDF) Project



**Chalk River Site, Deep River, Ontario**

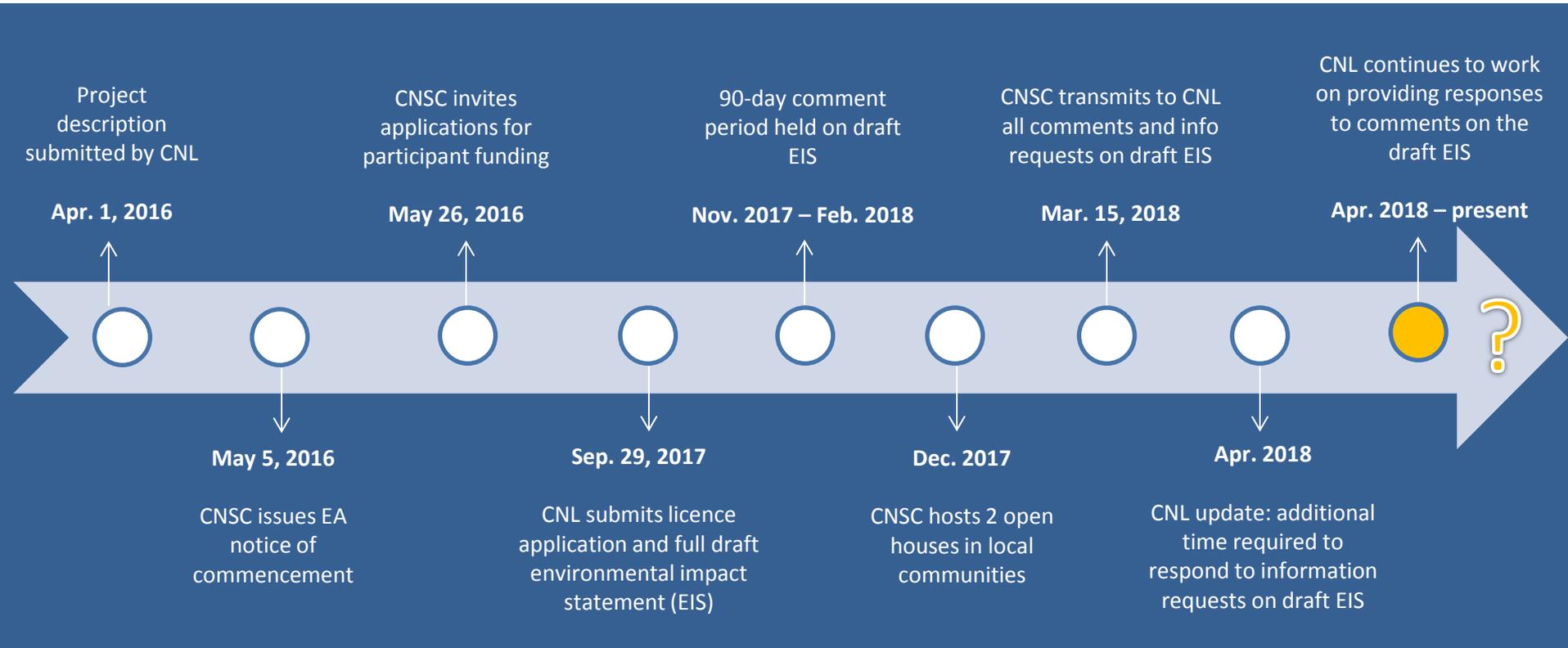
# NSDF: Key Dates – Public Updates and Outreach



# Proposal: Nuclear Power Demonstration (NPD) Closure Project



# NPD: Key Dates – Public Updates and Outreach



# Public Review of Environmental Impact Statements (EIS)



- Over 275 commenters on EIS for both projects, including CNSC, government authorities, environmental groups, Indigenous groups, local communities and wider public
- Over 1,400 comments received, including more than 450 from CNSC and government authorities
- Participant Funding Program (PFP) applicants:
  - **NSDF - \$125,000** awarded to 9 applicants
  - **NPD - \$155,000** awarded to 7 applicants



**All comments can be viewed on the CEEA website**

<http://www.ceaa.gc.ca/050/evaluations/proj/80122?culture=en-CA>

<http://www.ceaa-acee.gc.ca/050/evaluations/proj/80121?culture=en-CA>

# EIS: CNSC and Federal and Provincial Authorities' Comments



## Key comments and questions raised on:

- waste characterization and isolation/containment
- facility design
- end state and anticipated length of regulatory control
- engineering barrier performance and safety
- grouting method (NPD specific)
- hydrogeological modelling
- environment and potential effects to air, surface water and species at risk

### Federal and provincial review team for NSDF/NPD:

- Environment and Climate Change Canada
- Health Canada
- Natural Resources Canada
- Government of Quebec
- Ontario Ministry of Environment and Climate Change (NPD only)

*Thorough review based on science and evidence*

# EIS: Public and Indigenous Comments



## Key comments and questions raised on:

- proximity to Ottawa River and site selection
- potential contamination of groundwater
- long-term safety and worst case scenarios
- lack of baseline data and traditional knowledge
- waste legacy and characterization
- alternatives assessment
- alignment with international standards

***The CNSC will only approve a project if safety is demonstrated***

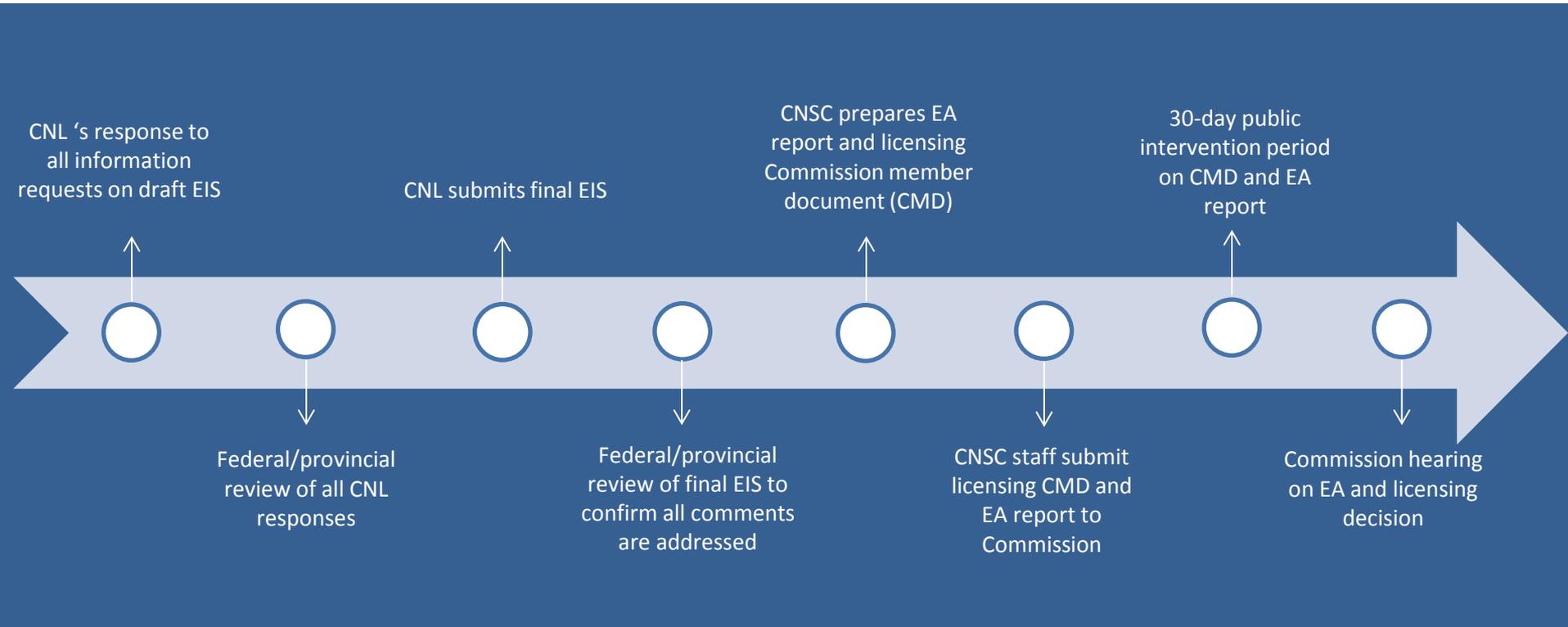
# Next Steps: Further Engagement



- If a project has satisfied the requirements of the EA and technical assessment, and the CNSC is satisfied with the safety case, the Commission will proceed to the public hearing stage
- The CNSC offers Indigenous groups, the public and stakeholders the opportunity to participate in its public hearing process



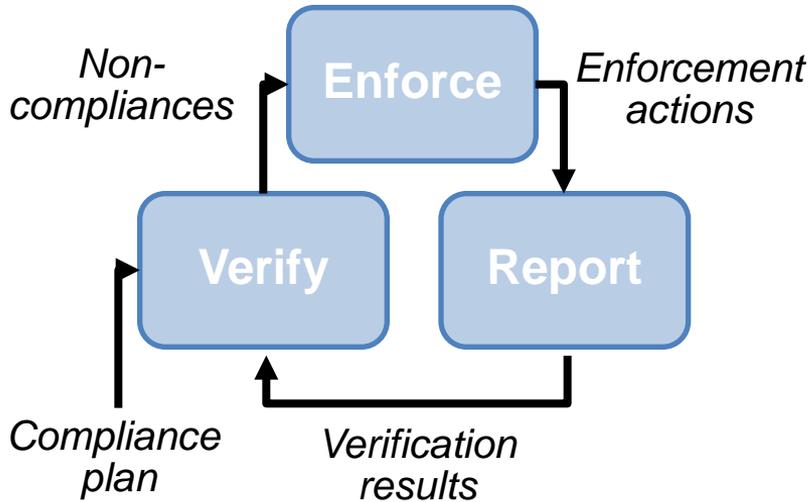
# Overall Next Steps: EA and Licensing



# Ongoing Compliance



## The CNSC's role:



A strong regulator is present and active in ensuring that operators and licensees are fulfilling their commitments and primary responsibility for safety



- Onsite inspectors
- CNSC annual reports
- Annual regulatory oversight reports
- Independent Environment Monitoring Program
- Environmental risk assessment every 5 years
- Probabilistic safety assessment every 10 years

## Strong regulatory oversight throughout lifecycle



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