



Canadian Nuclear
Safety Commission

Commission canadienne
de sûreté nucléaire



Nuclear Regulatory Compliance: Enhancing Safety and Security Through a Clear Regulatory Framework

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nuclearsafety.gc.ca

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Canada

Presentation Outline



- The Canadian Nuclear Safety Commission (CNSC)
- CNSC regulatory framework
- Licensing
- Compliance and enforcement

Canadian Nuclear Safety Commission



- The Canadian Nuclear Safety Commission is Canada's independent nuclear regulator
- Established under the *Nuclear Safety and Control Act* (NSCA)
- Quasi-judicial administrative tribunal
 - arm's-length from the federal government and independent in its regulatory decision-making capacity
- Decisions are reviewable only by the Federal Court
- Commission hearings are public and webcast



CNSC Mandate



- Regulate the use of nuclear energy and materials to protect **health, safety, security** and the **environment**
- Implement Canada's **international commitments** on the peaceful use of nuclear energy
- Disseminate **objective** scientific, technical and regulatory **information** to the public



International Commitments



The CNSC participates in a range of international undertakings, including

- regulatory cooperation arrangements and MOUs with foreign counterparts
- International Atomic Energy Agency initiatives and conventions
 - e.g., the *Code of Conduct on the Safety and Security of Radioactive Sources*
- Integrated Regulatory Review Services (IRRS)
- International Commission on Radiation Protection



Canada Strongly Supports IRRS Missions



- Demonstrates commitment to continuous improvement
- Opportunity for international benchmarking
- Learning opportunity (for both reviews and host country)
- Canada led the International Peer Review module of the 2013 *Convention on Nuclear Safety* Working Group on Effectiveness and Transparency
- Canada has provided expert staff to many IRRS missions
 - led in Russia, China, India, Romania (follow-up to come)

What the CNSC Regulates



From cradle to grave

CNSC REGULATES	
	URANIUM MINES AND MILLS
	NUCLEAR PROCESSING AND RESEARCH
	NUCLEAR POWER GENERATION
	NUCLEAR MEDICINE
	NUCLEAR SUBSTANCES AND TRANSPORTATION
	WASTE MANAGEMENT
	THE ENVIRONMENT
	NATIONAL SECURITY & INTERNATIONAL COMMITMENTS

Regulatory Philosophy



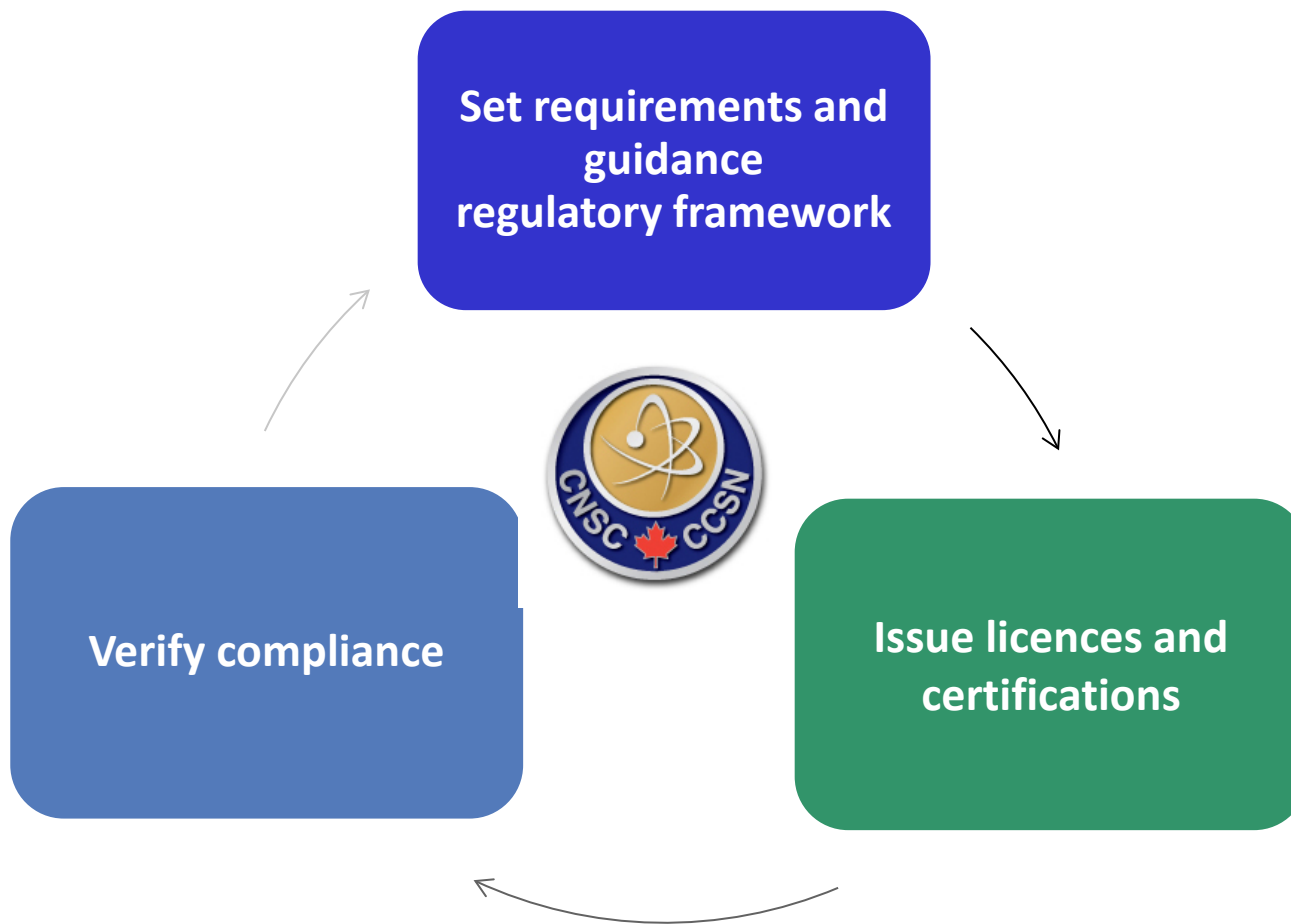
CNSC responsibilities

- Set safety requirements and verify compliance
- Base regulatory action on the level of risk – graded approach
- Make independent, objective and risk-informed decisions

Licensee responsibilities

- Licensee has the first responsibility for safety
- Manage regulated activities in a manner that protects the health, safety, security and the environment, while respecting Canada's international obligations (consistent with the licence application)

How We Regulate



Regulatory Fundamentals



- Nuclear-related activities can only be conducted by persons or organizations that are licensed by the CNSC
- An individual or organization must apply to the CNSC to obtain a licence
- Applicants must demonstrate that they meet the requirements set out in the CNSC's regulatory framework
- Once a licence is obtained, the CNSC ensures that activities are conducted safely through a process of verifying, enforcing and reporting compliance

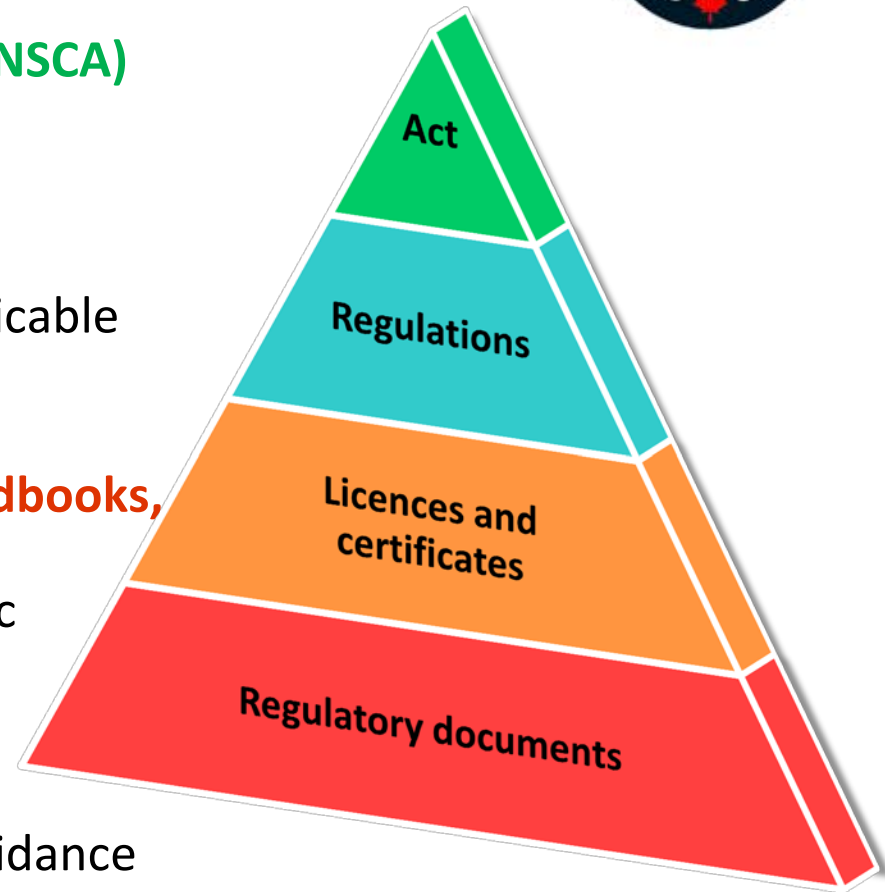


The CNSC – Our Regulatory Framework

Our Regulatory Framework



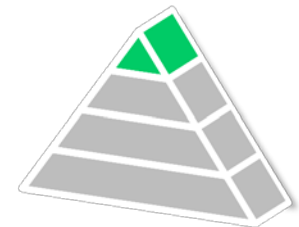
- **Nuclear Safety and Control Act (NSCA)**
 - enabling legislation
- **Regulations**
 - high-level and generally applicable requirements
- **Licences, licence conditions handbooks, certificates**
 - facility and/or activity specific requirements
- **Regulatory documents**
 - include requirements and guidance



Nuclear Safety and Control Act



- Establishes federal authority for the consistent regulatory oversight of all nuclear activities in Canada
- Assigns the CNSC powers to
 - make regulations
 - issue licences and certificates
 - enforce compliance
- Expressly prohibits anyone from engaging in any nuclear activity without a licence from the CNSC (s.26)



Regulations



Facilities and activities

- *Class I Nuclear Facilities Regulations*
- *Class II Nuclear Facilities and Prescribed Equipment Regulations*
- *Uranium Mines and Mills Regulations*
- *Nuclear Substances and Radiation Devices Regulations*

Regulations of general application

- *General Nuclear Safety and Control Regulations*
- *Radiation Protection Regulations*
- *Nuclear Security Regulations*
- *Packaging and Transport of Nuclear Substances Regulations*
- *Nuclear Non-Proliferation Import and Export Control Regulations*
- *Administrative Monetary Penalties*

Regulations about the conduct of CNSC's business

- *CNSC Cost-Recovery Fees Regulations*
- *Canadian Nuclear Safety Commission Rules of Procedure*
- *Canadian Nuclear Safety Commission By-laws*



Licences and Certificates



Licences

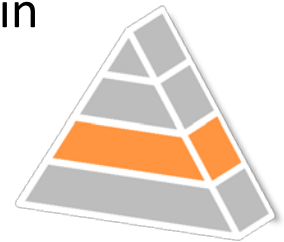
- The CNSC assesses applications for licences, and issues a licence if the applicant is deemed to be capable to operate safely

Licence conditions

- Licences include licence conditions which are outlined in licence condition handbooks

Certificates

- The CNSC issues certificates indicating that a nuclear device or a transportation package, or person working in the nuclear sector, meets specific requirements



Regulatory Documents (REGDOCs)



1.0 Regulated facilities and activities

- 1.1 Reactor facilities
- 1.2 Class IB facilities
- 1.3 Uranium mines and mills
- 1.4 Class II facilities
- 1.5 Certification of prescribed equipment
- 1.6 Nuclear substances and radiation devices

2.0 Safety and control areas

- | | |
|----------------------------------|---|
| 2.1 Management system | 2.8 Conventional health and safety |
| 2.2 Human performance management | 2.9 Environmental protection |
| 2.3 Operating performance | 2.10 Emergency management and fire protection |
| 2.4 Safety analysis | 2.11 Waste management |
| 2.5 Physical design | 2.12 Security |
| 2.6 Fitness for service | 2.13 Safeguards and non-proliferation |
| 2.7 Radiation protection | 2.14 Packaging and transport |

3.0 Other regulatory areas

- 3.1 Reporting requirements
- 3.2 Public and Aboriginal engagement
- 3.3 Financial guarantees
- 3.4 Commission proceedings
- 3.5 Information dissemination
- 3.6 Glossary



Requirements and Guidance



Requirements

- Requirements are mandatory and must be met by all licensees seeking to obtain (or retain) a licence or certificate to use nuclear substances, to operate a nuclear facility, or to conduct any other nuclear-related activity

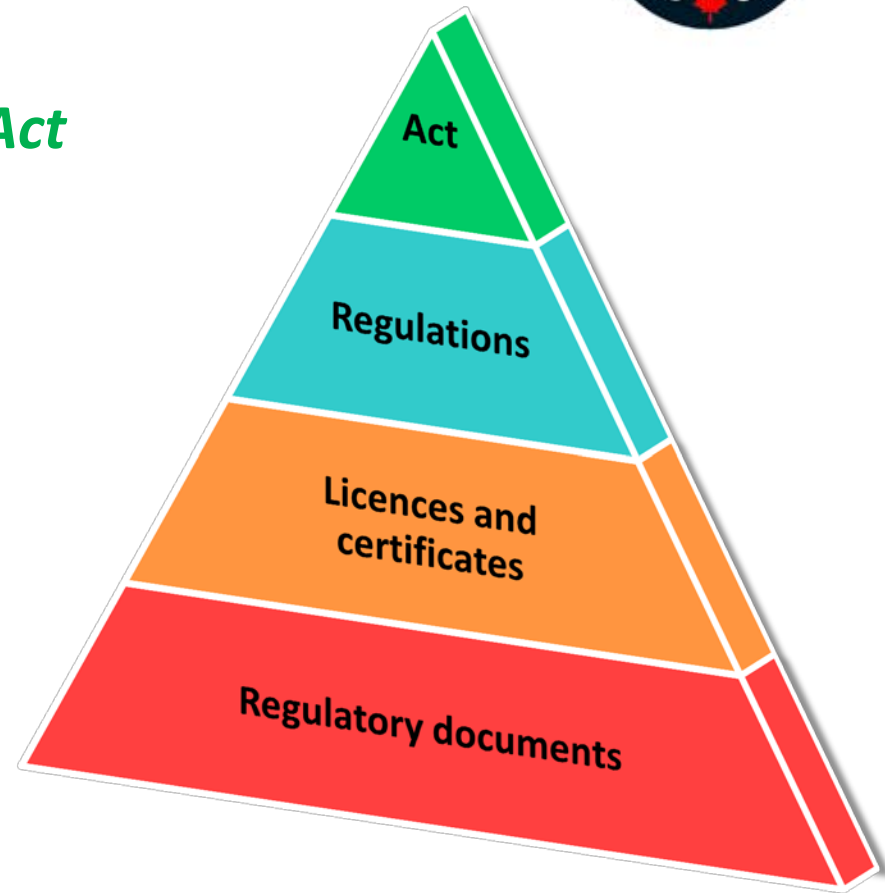
Guidance

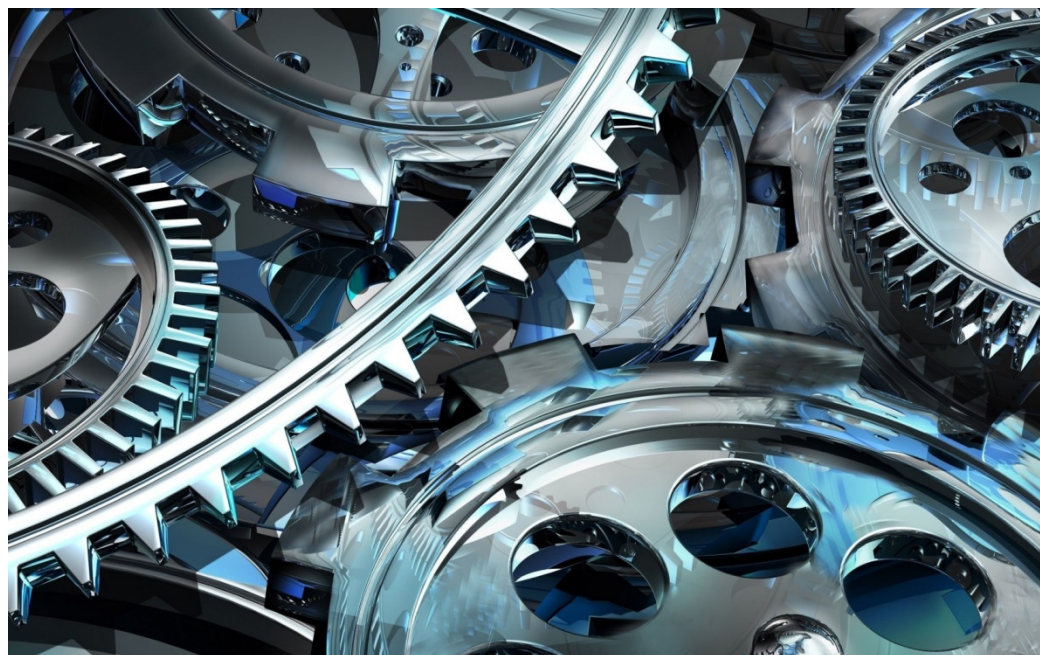
- Used to inform the applicant or licensee about ways to meet requirements, elaborate further on requirements, or provide best practices
 - CNSC staff considers guidance when determining the adequacy of a submission
 - a licensee is free to propose alternative approaches to meet requirements

Another Look: Regulatory Framework



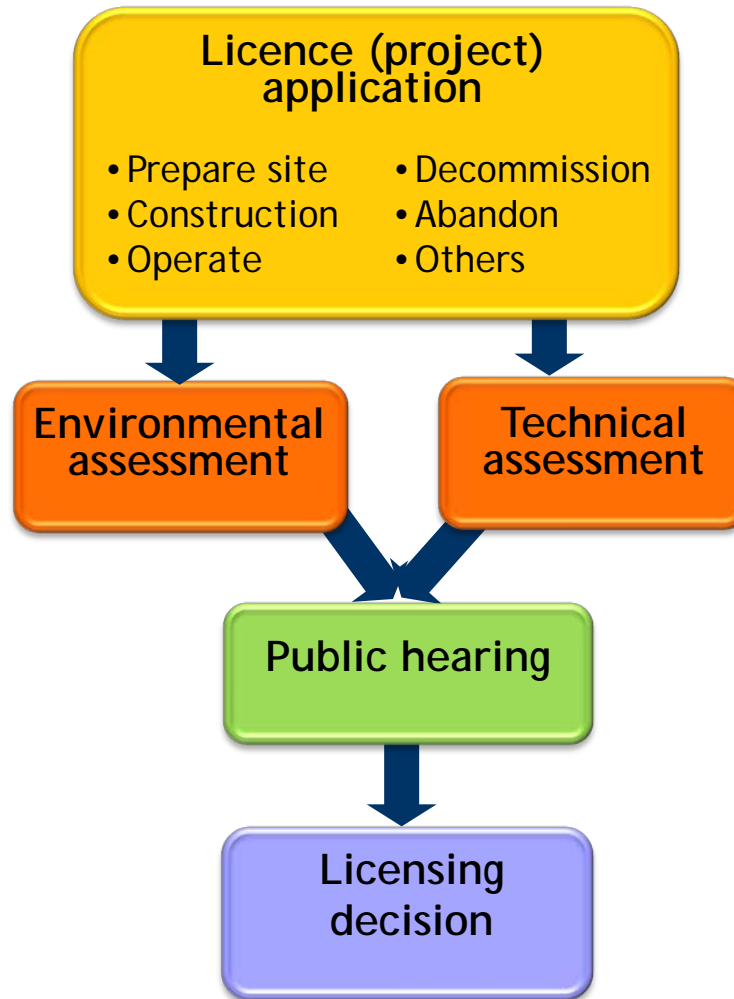
- **Nuclear Safety and Control Act (NSCA)**
- **Regulations**
- **Licences, licence conditions handbooks, certificates**
- **Regulatory documents**





The CNSC – Licensing

CNSC Licensing Process



Licence Application



- An application must demonstrate that proposed safety and control measures will meet or exceed the Commission's expectations
- All submissions are expected to be supported by appropriate analytical, experimental or other evidence
- When deciding whether to renew an existing licence, the Commission also considers past performance by verifying compliance history, where available
- When the Commission issues a CNSC licence, it may add licence conditions as deemed necessary

Technical Assessment Framework



Safety and control areas


- Management system
- Human performance management
- Operating performance
- Safety analysis
- Physical design
- Fitness for service
- Radiation protection
- Conventional health and safety

- Environmental protection
- Emergency management and fire protection
- Waste management
- Security
- Safeguards
- Packaging and transport


Other areas

- Financial guarantees
- Consultations and communications

Regulatory Documents (REGDOCs)



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3.5	Information dissemination
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Canadian Nuclear Safety Commission

Public Hearings



- Provides the Commission with a variety of relevant views and information on the project
- Gives involved parties and members of the public an opportunity to be heard before the Commission
- The Commission considers all of the evidence filed when making its decision
 - documents and presentations from intervenors and from applicants
 - recommendations, documents and presentations from CNSC staff



The Licensing Decision



- No licence shall be issued, renewed, amended or replaced – and no authorization to transfer one given – unless, in the opinion of the Commission, the applicant:
 - A. is qualified to carry on the activity that the licence will authorize the licensee to carry on*
 - B. will, in carrying on that activity, make adequate provision for the protection of the environment, the health and safety of persons and the maintenance of national security and measures required to implement international obligations to which Canada has agreed*

Licence



- When the Commission issues a CNSC licence, it may add licence conditions as deemed necessary
- Includes the criteria against which compliance will be measured





The CNSC – Compliance and Enforcement

Compliance



Compliance activities are:

- focused on the licence and licence conditions
- risk-informed
- aligned with the 14 safety and control areas
- drawn from a suite of tools



Verify



Systematic approach

- Site inspections, review of operational activities, and review of licensee documentation
- Licensees must report routine performance data and unusual occurrences
- Collect samples and analyze them

Inspections

- Planned on a routine, periodic basis
- Triggered for other reasons:
 - change in personnel
 - poor regulatory performance
 - following an incident
 - follow-up to a previous inspection
- Announced or unannounced



Inspectors and designated officers may:

- recommend/suggest potential improvements
- request actions be taken through discussions, meetings, letters
- issue an order
- issue an AMP
- recommend prosecution

Commission may:

- summon licensees to appear
- impose restrictions or revoke licences
- issue orders
- recommend prosecution to the Attorney General of Canada



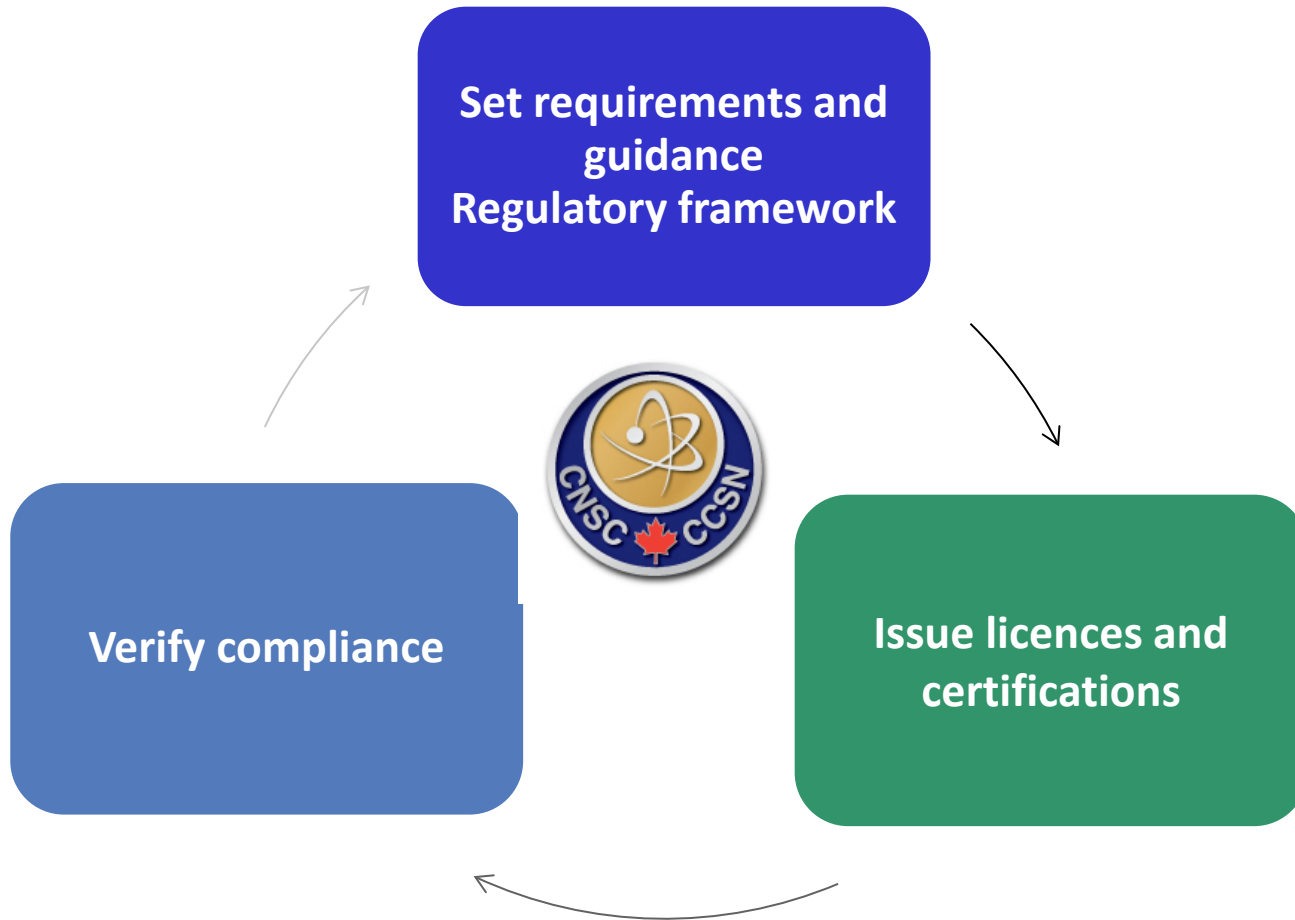
Report



- Licensees are required to report to the CNSC how they are in compliance through:
 - compliance reports
 - event reports
- The CNSC reports licensees' performance publicly



Conclusion



Conclusion



- Nuclear safety relies on a robust regulatory framework, which comprises four key elements:
 - clarity in regulatory requirements
 - a risk-based licensing approach
 - an inspection regime with compliance verification
- Clear communication between the regulator and the industry leads to consistent operational safety and security



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