NUCLEAR SAFETY & SECURITY COMMISSION
BUILDS UP SAFETY & SECURITY

NSSC
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The bills to establish NSSC and revise the Nuclear Safety Act were passed in the National Assembly. The bills to establish NSSC and revise the Nuclear Safety Act were passed in the National Assembly.

**Dividing of the Nuclear Safety Act: Safety and Promotion.**

Safety related laws – 7 laws including the Nuclear Safety Act, the Act on Physical Protection and Radiological Emergency, the Nuclear Liability Act and the Act on Protective Action Guidelines Against Radiation in the Natural Environment.

The official launch of NSSC

Birth of an independent government organization
Ministry of Science, ICT & Future Planning: development of advanced reactors, R&D of RI and radiation
Ministry of Trade, Industry and Energy: establishment of promotion plans and strategies on nuclear energy
Other Related Ministries: inspections on fishery and agricultural products, management of radiation in ground water, management of radiation workers, and etc.
## ROLES AND FUNCTIONS OF NSSC

<table>
<thead>
<tr>
<th>SAFETY</th>
<th>SECURITY</th>
<th>NON-PROLIFERATION</th>
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<tr>
<td>NSSC ensures the highest level of nuclear safety.</td>
<td>NSSC protects nuclear facilities from terrorism and other threats from in and outside of Korea.</td>
<td>NSSC contributes to building a stronger global nuclear regime for the peaceful use of nuclear energy.</td>
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NSSC Assures

“Nuclear Safety, Security, and Non-Proliferation”
**VISION**

Building nuclear safety that people and the world trust

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**Principles of NSSC**

- **Technical Excellence**: accumulate expertise and experiences that people and the world build trust on
- **Independence**: progress vigorously with works only for the nation and people
- **Transparency**: leave no doubts throughout the safety regulatory process
- **Impartiality**: stand with impartiality and objectiveness
- **Reliability**: comply with principles and maintain clarity and consistency
GOVERNING ACTS OF NSSC

- Act on the Establishment and Management of Nuclear Safety and Security Commission
- Nuclear Safety Act
- Act on Physical Protection and Radiological Emergency
- Act on Protective Action Guidelines Against Radiation in the Natural Environment
- Nuclear Liability Act
- Act on Indemnity Agreement for Nuclear Liability
- Act on Korea Institute of Nuclear Safety
SPECIFIC ACTIVITIES OF NSSC

- LICENSING
  of Nuclear Facilities, Materials & Activities

- INSPECTION & ENFORCEMENT
  of Nuclear Facilities, Materials & Activities

- INCIDENT & EMERGENCY
  Preparedness & Response

- NON-PROLIFERATION & SAFEGUARDS
  for global peaceful uses of nuclear energy

- PHYSICAL PROTECTION
  against malevolent acts and terrorism

- EXPORT & IMPORT CONTROL
  of sensitive material and technology
• **Entrusted regulatory inspection:** Pre-Operational Inspection, QA Inspection, Periodic Inspection, etc.
• **Entrusted safety review:** Construction Permission Review, Operation License Review, Amendment Review, etc.

• **Review and inspection of Nuclear Material Control and Accountancy**
• **International nuclear material management**
- Nuclear Reactor Regulation Process

NSSC thoroughly inspects safety of nuclear power plants through all stages from design to construction, operation, maintenance, and decommissioning.
- RI & Radiation Safety Management
- Radioactive Waste Safety Management
- Protective Actions Against Radiation in the Natural Environment
RADIOLOGICAL EMERGENCY MANAGEMENT SYSTEM

National Radiological Emergency Management System

Prime Minister

NSSC
National Emergency Management Committee

Nuclear Operators
- Emergency Operating Facility

Korea Institute of Nuclear Safety
- Technical Support for Radiological Emergency Management

Field Team of NSSC
- Locale Radiological Emergency Management Center

Korea Institute of Radiological and Medical Sciences
- National Radiological Emergency Medical Center

Regional Governments
- Regional Radiation Emergency Center
Members of The Commission

- 2 standing members (appointed by President.)
- 7 non-standing members (3, recommended by President, 4, by the National Assembly)

Meetings of The Commission

- 2-3 times a month (at least one regular meeting in a month)
- All meetings are required to be opened to the public

Resolution and Deliberation of The Commission

- Construction Permit, Operation License, life extension permit
- Approval of the use of nuclear materials and radioactive isotopes
- Punishments and sanctions
- Budgets, and etc.,
The Nuclear Safety Special Committee (an advisory committee)

- 15 non-standing members
- The Committee provides practical advice, review matters subject to deliberation and resolution in advance, and perform consigned duties.
- Areas: safety analysis, serious accidents, machinery, electricity, geology, physical protection, environment and etc.

Establishment of Special committees

- A serious accident
- Environmental contamination
- Radiation leak
- A serious exposure to radiation.
Earthquake
- Equipment to automatically shut down reactors was installed

Flooding of Sea water
- Flood barriers were reinforced.
- Flood control gates and water-tight drainage pumps were installed.

Loss of Power
- Each site secured emergency power generating cars.
- Supplementary EDGs were reinforced.

Hydrogen Explosion
- Hydrogen removal devices that work without electricity were installed.
- Pressure reducing equipment was installed in containment buildings.

Emergency Response
- Additional protective gears for residents were secured.
- Emergency drills were improved.
- Expansion of the scope of regulation

- Reinforcement of safety culture and quality control
  - Special inspections on safety culture
  - The interval of quality control inspections: every 2 year to 1 year
Equipment and Material Tracking System

- Three parts: design, manufacturing & purchase, and history of operation
- One comprehensive system covering from construction to decommissioning

Real-name system

- Recording real names of employees from supply to disposal of all parts and items

Environmental Radiation Management

- Radiation monitoring of processed products & radiation monitoring devices in major ports.
Thank You