Nuclear Regulatory Organization Changes in Korea

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http://www.kins.re.kr
Background

- **Concerns about regulatory independence in Korea**
  - Some controversy about mixed role of regulatory body (MEST)
    - Nuclear safety regulation
    - R&D, including the promotion of nuclear energy utilization
  - However, no dispute over NPP regulation (separated at ministerial level)
    - MEST’s safety regulation vs. MKE’s nuclear power program

- **Regulatory reform initiative by National Assembly**
  - 3 bills introduced by legislators during Jul. 2009 ~ Mar. 2010
  - Common goal to establish a standalone independent regulatory body
  - Reviewed at the Science Committee of National Assembly

- **Accident at Fukushima expedited review process**
  - President ordered the Cabinet to establish a new stand-alone regulatory body
  - Bill to establish the *Nuclear Safety & Security Commission (NSSC)*, passed at the National Assembly on 29 June, 2011

* MEST: Ministry of Education, Science & Technology,  MKE: Ministry of Knowledge and Economy
Reorganization of regulatory body

- **NSSC** to be a dedicated regulatory body, supported by KINS/KINAC
- MEST’s role is now restricted to Nuclear Policy and R&D support
NSSC, as a new regulator

- Independent, stand-alone, minister-level government agency
  - as the control tower in managing nuclear safety and security *en masse*.
  - reports directly to the President
  - launched on Oct. 26, 2011

- A holistic approach has been taken in assuring “Nuclear Safety, Security and Safeguards”
Changes in Legal Framework

- **Act on Establishing & Operating NSSC**, newly enacted
- **Nuclear Safety Act**, separated from **Atomic Energy Act** (renamed to **Promotion of Atomic Energy Utilization Act**)
- Other laws for nuclear safety moved to the jurisdiction of NSSC

### Laws under the jurisdiction of the NSSC

- Act on Establishing & Operating NSSC (new)
- Nuclear Safety Act (divided from Atomic Energy Act)
- Act on Safety Management of Naturally Occurring Radioactive Material (new)
- Act on Physical Protection and Radiological Emergency
- Nuclear Liability Act
- KINS Act

### Laws under the jurisdiction of the MEST

- Promotion of Atomic Energy Utilization Act (separated from Atomic Energy Act)
- Promotion of Radiation and Radioactive Isotope Utilization Act
Measures for Independence

- **Law declares “independence” as an operating principle of NSSC**
  - NSSC shall maintain independence and impartiality... (Art. 2 of NSSC Act)

- **Exception from the Government Organization Act (GOA)**
  - Prime Minister(PM)’s general power on Administration (Art. 16 of GOA)
    - PM directs and supervises central administrative agencies
    - PM may suspend or cancel any order or disposition of central administrative agencies, when it is deemed unlawful or unjust
  - NSSC is a special central administrative agency, exempted from such intervention by PM (Art. 3(2) of NSSC Act)

- **Guarantee for NSSC Commissioners** (Art. 8 of NSSC Act)
  - Commissioners shall not be dismissed against their will except prescribed cases like guilty of wrongdoing, etc.
  - Commissioners shall not receive unfair instructions or interference while performing their duties
  - Commissioners shall have a guaranteed 3-year term (could be reappointed once)
Licensing/Inspection Process

Nuclear Safety & Security Commission (NSSC)

Technical Committee

Nuclear Industries (KHNP, etc)

Technical Expert Organizations (KINS & KINAC)

- Apply for Permit or License and Inspection
- Issue Permit or License
- Conduct Review, Inspection and Request Additional Information
- Submit Information and Implementation Results
- Request Technical Review and Inspection Results
- Submit Technical Evaluation and Inspection Results
NSSC’s Organization

- **Commission (9 members)**
  - **Chairperson** (minister level) – Dr. C.S. Kang, former professor emeritus at Seoul National University
  - **Vice-chair** (vice-minister level) – Dr. C.H. Yun, former president of KINS
  - **7 non-executive commissioners** – includes experts with various background: law, social science, environment, medical science, etc.

- **Technical Committee (15 members)**
  - Members are senior experts from various technological areas
  - **Chairperson** – Dr. U.C. Lee, professor at Seoul National University
  - **Ad-hoc subcommittees** can be formed, if needed

- **Secretariat Office**
  - 2 bureaus and 8 divisions (total staff: ~90)
  - 5 onsite resident offices on NPPs and a radwaste repository site
  - 5 offsite emergency management centers near facilities
NSSC’s Mission & Responsibility

- Mission
  Perform regulatory activities to
  • protect the public health and safety
  • preserve the environment
  • promote the national defense and security
  • fulfill the international obligations

- Major responsibility
  • Rulemaking, codes and standards for nuclear regulation
  • Authorization of nuclear facilities, materials and activities
  • Inspection and enforcement for authorized facilities, materials and activities
  • Incident response and emergency preparedness
  • Physical protection of nuclear facilities and materials
  • Non-proliferation and safeguards activities
  • Export and import control of nuclear related materials and equipment
NSSC’s Slogan & Core Values

- **Slogan**
  “Nuclear Safety and Security, Our Top Priority”

- **Core Values**
  - **Excellence** in regulation
  - **Independence** from outside influence and pressure
  - **Transparency** in regulatory process
  - **Fairness** in regulatory activities
  - **Reliability** of regulatory decision

- **Principles of Operation**
  - First priority on **serving the people**
  - **Mutual respect** based on trust
  - **Performance enhancement** through efficient management
  - Active **information disclosure** and **public communication**
  - **International collaboration** for global partnership
Clarification of NSSC’s Function

- **Stand-alone?**
  - Technical tasks of nuclear safety regulations to be performed by expert organizations, KINS/KINAC

- **Political Appointment?**
  - Commissioners shall not participate in political activities (NSSC Act)
  - Party members shall not be eligible to be a commissioner (NSSC Act)

- **Judicial Power?**
  - Punishment by fine is under jurisdiction of criminal court, except some administrative penalty (e.g., penalty for lateness or negligence)

- **Responsible for 3S?**
  - NSSC is responsible for safety, security and safeguards, including export control
IRRS Recommendations on NSSC (July 2011)

- Prepare **selection criteria for the NSSC members** to reflect the need of independence and nuclear safety competence
- Clearly define the **responsibilities within the new regulatory body** and avoid overlaps between the Secretariat, KINS and the Advisory Committee
- Allocate **resources and staff**, commensurate with those responsibilities
- Prepare **human resources plans** for the Secretariat that provide appropriate staff to enable the accomplishment of its administrative function in support of the Commission
- Establish an **advisory committee** to support the decision-making process
- Provide for development of a **management system** to cover all activities of the new Nuclear Safety Commission and its Secretariat
Potential Challenges associated with Transition

- **Change Management**
  - Potentials for weakening regulatory function by new assignment of many regulatory staff following significant organizational changes
  - Measures needed for maintaining continuity of regulatory activities in progress

- **Securing competent staff**
  - Difficulties in recruiting officials to serve in a small, independent, separate government organization (NSSC)
  - Incentive program needed to attract competent staff

- **Emotional separation from nuclear promotion**
  - Concerns about culture of complicity in nuclear community
  - Special efforts needed to recognize regulator’s identity and role and also to construct strong safety culture of regulatory body
    - Survey of Safety climate within regulator needed
Public Confidence(Trust) Building

- **Public Confidence in Regulator**
  - An expectation that the regulator will not allow the public to be harmed when vulnerable

- **Status in Korea**
  - Low level of public confidence in the government
  - Investing significant social capital to increase public confidence in nuclear power - expected to decrease the cost of electricity production

- **Strategy for Public Confidence Building**
  - Establish a model for public confidence in nuclear safety
  - Develop specific elements of public confidence expectation for various public groups
  - Implement practical measures for improving public confidence
Public Confidence Model

Choi’s model, 2007
## Elements of Confidence in regulator

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<th>Elements of confidence in regulator</th>
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<td><strong>Local Residents</strong></td>
<td>Observance of commitments, consistency, regulatory independence, prompt response to the incident, considerations, emergency response capability, sharing values and goals, communication, expertise</td>
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<td><strong>NGOs</strong></td>
<td>Regulatory independence, information disclosure, cooperation, sharing values and goals, expertise, communication</td>
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<td><strong>Media</strong></td>
<td>Transparency, prompt information disclosure, regulatory independence, expertise, communication</td>
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<td><strong>General Public</strong></td>
<td>Prompt responsiveness (via media), conservatism in measures in incident/accident situation, expertise, communication</td>
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Measures for Public Confidence in Regulator

- Improving reg. system & strengthening competence
- Meeting on inspection result reporting
- Strengthening site office/residents interface
- Public participation in regulatory process
- Disclosure of incidents information
- Establishing section for public communication
- Regular meeting with media
- Socio-drama (Role playing)
- Other measures for removing elements of distrust

- Regulatory competence
- Expertise
- Cognitive safety index
- Regulatory independence
- Consideration of the public
- Emergency response capability
- Participation in reg. process
- Transparency
- Communication
- Sharing values and goals
- Consistency in words and behaviors

Measures for Public Confidence in Regulator
Concluding Remarks

- Regulatory reform to establish the NSSC is an important and leading part of Korea’s action plan to strengthen nuclear safety
- Continuing efforts are to be made to establish a good regulatory culture, in line with regulatory framework change
- Measures for transition management and public confidence are being implemented
- Best efforts shall be made by the NSSC towards implementation of lessons learned from Fukushima accident, and IAEA’s Action Plan on Nuclear Safety as well
- Korea continues to support the initiatives for strengthening nuclear safety framework worldwide, and to provide full cooperation and participation in those efforts
Thank you for your attention!

(Q/A)