Review on Global Nuclear Safety Framework

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1 Importance of safety and regulatory body

- MS government should pay great attention on nuclear safety because Nuclear accidents have trans-boundary effects.
- Safety First, Quality First is precondition of Nuclear energy development.
- Although operating organization responsible for safety, MS government should establish an independent and effective regulatory body to conduct strict regulation and control.
- The regulatory body should have adequate resources and authorization to implement its responsibility

2 Nuclear Safety Standard System

Background

1. IAEA safety standards have a clear hierarchy, cover all main fields and give general requirements on safety. It is the highest safety standards in the world.

2. China adopts and uses IAEA safety standards as our technical requirements and safety guides. China thinks that IAEA standards are advanced and effective in general

3. Based on Fukushima accident, the safety standards need further improve, and more detailed for implementation.

4. IAEA standards are not adopted by member states widely yet.

2 Nuclear Safety Standard System

Suggestions and recommendations

- Review and update safety standards, focus on:
  - site requirement and guides, such as extreme external events and combination.
  - severe accident management guideline
  - emergency power supply and long term reactor cooling
- To improve the practical use by providing additional appendix, case study or handbook.
- To promote universal application IAEA safety standards in order to reach coherence and equivalence.

3 Conventions and International Review Approaches

Background:

1. Conventions, such as CNS, JC, accident early notification and assistance, physical protection, rad-source safety, etc, are well established. Review meetings are voluntary and moderate.
2. IAEA has developed many service missions for safety and security. IRRS is one of the good example.
3. Review meetings on conventions and IAEA service missions find good practices and shortcoming.
4. It is lack of tools or enforcement for improvements, if the MS does not take effective measures on those recommendations.

3 Conventions and International Review Approaches

Suggestions and recommendations:

1. All MS with nuclear should participate related international conventions
2. The MS should take effective measures to enhance safety continually.
3. The international review on conventions, IAEA service missions and their follow-up should focus on implementation of suggestions and recommendations.
4. IAEA should study how to enhance implementation and establish an enforced mechanism for implementation.

4 International Cooperation on Nuclear Safety technology for regulators

Background:

1. IAEA have not nuclear safety technology research program to support regulatory body.
2. Very limited support to nuclear safety technology from IAEA TC project.
3. Compare with nuclear industry, regulatory body resource is always limited.

4 International Cooperation on Nuclear Safety Technology for Regulators

Suggestions and recommendations

- IAEA should, cooperated with MS, have a nuclear safety technology program to develop software and hardware for regulatory purpose.
- IAEA should use most TC funds to support regulators to build regulatory capacity.
- Regulators should help each other to promote harmonization on regulatory practice, technology and procedures with free of charge.
- IAEA should make a post-Fukushima action plan based on assessment and experience feedback of Fukushima Accident.

5 International and regional Cooperation on Nuclear Emergency and Assistance

1. Early notification of nuclear accident, and more detailed information be provided.
2. To establish international and regional emergency engineering centers to support and assist in case of nuclear accidents.
3. Cooperation on emergency preparedness, training, joint exercise.
4. Harmonization on nuclear emergency procedures in MS, including emergency planning zone, criteria on emergency sheltering and evacuation , etc.

6 Public Information and Communication

Background:

- Public needs more information on nuclear safety
- Difficulties for public to understand and accept the relevant knowledge on nuclear and radiation safety.

Potential Approaches for IAEA:

1. IAEA have role to reestablish the public confidence
2. To compile the specific materials for information and education, especially for students.
3. To establish website and TV program.
4. Openness and transparence of nuclear regulatory activities.

Conclusion on Global Nuclear Safety Framework --- IAEA play central role

- Nuclear safety is precondition of Nuclear energy development.
- An independent and effective regulator is very important.
- International safety standards should be general accepted by MS.
- IAEA should make a post-Fukushima action plan.
- IAEA TC program should mainly support regulator capacity
- To strengthen cooperation on nuclear emergency response and assistance.
- Reestablish the public confidence on nuclear is important.

THANK YOU