

Summary of the 21st Chief Nuclear Officer Conference

1. Date: November 12, 2025 (Wed.) 13:00 ~ 15:00
2. Place: Otemachi Headquarters, Central Research Institute of Electric Power Industry (CRIEPI)

3. Participants:

Chair: Apostolakis (NRRC)

Members: Kaneda (Hokkaido EPCO; substitute for Katsuumi),

Sato (Tohoku EPCO; substitute for Aoki),

Yamada (TEPCO HD; substitute for Fukuda),

Fukumura (Hokuriku EPCO), Mizuta (Kansai EPCO),

Otani (Chugoku EPCO; substitute for Mimura),

Kawanishi (Shikoku EPCO), Hayashida (Kyushu EPCO), Ishizaka

(JAPC), Matsumoto (JNFL), Hagiwara (J-Power), Asaoka (NRRC)

Observers: Okada (FEPC), Eto (JANSI; substitute for Taminami),

Kato (ATENA), Meserve (NRRC)

Organizer: Tanigawa (NRRC)

NRRC Management: Yoneda, Hiraki, Watanabe, Nishimura, Nakajima, Yamada,

Tsuzaki, Saito, and Matsui

Presenter: Kusunoki (NRRC)

4. Proceedings:

(1) Discussions with the NRRC director

Director Apostolakis presented “Initiatives for Utilizing Risk Information” (Document 21-2) and discussed the topic with the CNOs. The discussion focused on the next critical step in implementing RIDM, given the NRA’s recent positive attitude toward RIDM.

(Remarks of the NRRC director)

- As the NRA adopts a more proactive stance toward using risk information, they have also increasingly called for the necessity of full-scope PRAs. Since a full-scope PRA is a large-scale undertaking, planning, including organizational structure, role sharing, subject plants, and funding, should begin immediately. This effort should be an industry-wide initiative, naturally led by ATENA. The NRRC will provide necessary technical support. We understand that the Agency for Natural Resources and Energy also recognizes the need for full-scope PRA..
- As specific actions, I propose, first, promptly initiating planning for full-scope PRA development, followed by developing RI-ISI guidance as the next effort after the OLM guidance development. This is because RI-ISI is the most successful application in the United States, and it clearly improves safety. Furthermore, the NRRC will support training the personnel needed to build and improve utilities’

RIDM infrastructure.

- Regarding the final item in the list of actions, Safety Goals, I have long sought to initiate a discussion on this subject, but both the NRA and the industry have been reluctant to engage in a direct discussion of Safety Goals. I am concerned that simply meeting target figures, such as CDF, determined without any discussion on Safety Goals will be misinterpreted as having reached an acceptable safety level. In the United States, performance objectives that represent acceptable risk derived from Safety Goals are used in the day-to-day management of power plants. Discussing Safety Goals and acceptable risk is essential in Japan as well, and I look forward to the University of Tokyo's review of Safety Goals.
- In the United States around 1980, a full-scope PRA conducted by the industry at the Indian Point power plant showed a particularly high contribution from fire risk, which unsettled the regulator. Thus, a full-scope PRA makes it easy to see at a glance the extent of each hazard's contribution to risk.

(Remarks of the Executive Advisor)

- It is a significant step forward that NRA committee members have become eager to discuss the use of PRA in such a short period of time. While the industry has been working to advance internal PRA and has made some progress on external-event PRA, much work remains to comprehensively assess risks through a full-scope PRA. This is the right opportunity to proceed with a full-scope PRA in a disciplined manner.

(Main comments from committee members)

- Now that the NRA has become proactive in using risk information, this is a good opportunity to incorporate risk-informed regulations. We should thoroughly implement full-scope PRAs. Our company is currently developing model plants for fire and internal flooding PRAs. While deploying these to all plants will take time and money, we are committed to seeing this through. However, we believe that rather than waiting until the models are complete to use the results, we can use the risk information obtained if high-risk scenarios are identified even during the development process. We also intend to thoroughly review RI-ISI, which is the most successful risk-informed application in the United States.
- I am interested in using PRA in power plant operations. Since the new regulation requires equipment design and operation to be based on a deterministic approach, this imposes constraints on plant operations. For example, regulatory requirements for tornado-related measures restrict vehicle use in the plant site. I expect that PRA's contribution to achieving more effective risk management will lead on-site staff to recognize its benefits and PRA to gain momentum.
- The story of how the U.S. industry used the fire PRA of the Indian Point Nuclear Power Plant to have the regulator acknowledge fire risk impressed me with the good communication between both sides in the U.S., as seen from the perspective of the Japanese industry, which tends to hesitate to make any suggestions to "the authority," the regulator.

- While developing full-scope PRAs is important, we should bear in mind that the reliability of PRAs varies with the specific hazard being addressed. To use risk information effectively—such as for optimizing AOTs and surveillance intervals—it is essential to identify which PRAs require improved reliability. Furthermore, to promote the use of risk information, it is crucial to establish a clear overall framework that shows how the utilities' activities and the NRRC's work will fit into the 2020 industry roadmap.
- Regarding safety goals and performance objectives, such as those specified in the OLM guidelines, are being used with the NRA's approval. While it may take time for the Nuclear Regulatory Commission to formally establish safety goals as a broad framework, one viable approach is to build momentum toward their adoption by applying performance metrics across various RIDM applications.

(2) Draft R&D Research Plans for FY2026

The NRRC presented the R&D research plans for FY2026.

(3) Status of NRRC Activities

The NRRC reported one of the RIDM Team Activities: Initiatives Related to RIDM Discussions-(See Document 21-4)

(4) Others