

Summary of Press Conference Comments Made by Satoru Katsuno,
FEPC Chairman, on February 17, 2017

I am Satoru Katsuno, Chairman of the FEPC.

Today, I would like to talk about two things: the situation of the initiatives towards independent nuclear safety improvement, and the Cabinet decision of a revision proposal for the Nuclear Reactor Regulation Act.

1. Situation of the initiatives towards independent nuclear safety improvement

First, I would like to talk about the situation of the initiatives towards independent nuclear safety improvement.

In this coming March, it will be six years since the Great East Japan earthquake. I am truly sorry as a member of the electricity industry for many people that were affected by the accident at Fukushima Daiichi Nuclear Power Station who are going through hardship and anxiety. As for the restoration of Fukushima, a Cabinet decision was made last year on December 20 regarding “the basic policy for accelerating the restoration of Fukushima from the nuclear accident”. This basic policy included matters such as the lifting of evacuation orders and reinforcing initiatives for returning.

Under the firm determination of never allowing such an accident to recur, we, as nuclear operators, will appropriately respond to the New Regulatory Requirements, along with taking on thorough safety measures and giving comprehensive explanations about them to the wide public.

We are independently and continuously working on initiatives for securing safety at a higher level that is not constrained by regulatory boundaries, utilizing external functions such as the Nuclear Risk Research Center (NRRC) and Japan Nuclear Safety Institute (JANSI). Today, I would like to explain about the current situation. Please have a look at the [handout](#).

Yesterday, on February 16, fourteen members of the top management from nuclear operators, NRRC, and JANSI assembled to reconfirm their common perception that there is no end to the pursuit of improving nuclear safety, and discussed their responsible roles and new initiatives.

This is a follow-up to the session in March 2016, and the contents from then are summarized in the first sheet of [the handout](#). Specifically, three points have been summarized around the middle.

- ① Enhancement of risk assessment techniques in collaboration with the NRRC and enhancement of decision-making pertaining to safety measures, etc. resulting from an appropriate combination of the results of risk assessment and engineering judgment, etc.
- ② Further extraction of area for improvement through peer reviews by JANSI and WANO, them, responding to them, and reflecting the results in the discussions for improving safety (peer pressure).
- ③ Improving the emergency response capabilities through the operation of Mihama Nuclear Emergency Support Center and construction of a mutual support system (alliance), etc.

We have confirmed that measures such as the above will be actively undertaken. Furthermore, we have confirmed that we will

respond in coordination to the revision of the inspection system, which I will later talk about as the second point. Please refer later to [the handout](#) for details.

We believe that it is important to face nuclear risks head-on, and always pursue what we need to do in order to reduce risks as part of further safety improvement initiatives. We will strive to regain the public trust by continuing the initiatives steadily, including the contents confirmed on this occasion, and fulfilling the operator's duty to improve nuclear safety. We will aim for the earliest possible restart of nuclear power, an energy source that continues to be important to Japan in terms of "S+3E".

2. Cabinet decision of a revision proposal for the Nuclear Reactor Regulation Act

Next, I would like to talk about the Cabinet decision of a revision proposal for the Nuclear Reactor Regulation Act.

On the 7th of this month, a Cabinet decision was made regarding a revision proposal for the Nuclear Reactor Regulation Act. This revision proposal includes topics from the inspection system reform aimed at nuclear operators, etc., such as "to introduce a framework where the operators carry out inspections etc., on their own for operating facilities, and clarify where the primary responsibility related to securing safety lies", and "let the Nuclear Regulation Authority review overall safety measures such as the inspections carried out by operators, and make general assessments based on those results to be reflected for the next inspection". This revision incorporates the "risk-informed" approach, which utilizes risk information to clarify the effects on safety, and the "performance-based" approach, which reflects the safety securing records. This will promote the operators to make independent efforts to improve safety measures, resulting in a creation of a framework where safety improvements will be effectively made.

We would like to continue to actively cooperate in deliberating the details for the regulation, and in addition, we would like to steadily carry out initiatives to improve the nuclear facilities' safety by utilizing the risk information and reviews by third parties as mentioned earlier.

Lastly, I would like to comment on JNFL's submission of report related to their safety activities.

There was a quality management issue for safety activities at Japan Nuclear Fuel Limited (JNFL), and last December, they were given orders to submit a report by the Nuclear Regulation Authority in accordance with the Nuclear Reactor Regulation Act. They have submitted a report on January 30.

JNFL will move forward by sincerely implementing the corrective action plans and improvement measures that they have formed themselves, keeping in mind that they are issues for the whole company.

We will continue to actively support JNFL through measures such as dispatching three people experienced in safety, quality, and monitoring as executive officers.

This will conclude my segment of the press conference today. Thank you very much.

END

Initiatives directed towards independent nuclear safety improvement

**Friday, February 17, 2017
Federation of Electric Power Companies**

Under the firm determination of never allowing an accident like the Fukushima Daiichi Nuclear Power Plant to recur, we*, as nuclear operators, will appropriately respond to the New Regulatory Requirements, along with taking on thorough safety measures and giving comprehensive explanations about them to the wide public.

Even at this time when several nuclear power plants have resumed operation by undergoing the examination for verification of conformance with the New Regulatory Requirements, we believe that it is important to have an attitude of always pursuing what we need to do in order to achieve a higher level of safety that is not constrained within the boundaries of the regulation.

Therefore, with the awareness that “governance involving top management is important”, the top management of the nuclear operators and external organizations, namely NRRRC and JANSI, have assembled, following the session in March 2016. Along with sharing the notion that there is no end for a pursuit in improving nuclear safety, they have discussed and confirmed each of their roles and new initiatives.

The three parties will cooperate and undertake the following types of initiatives, specifically as initiatives for safety improvement, which are not bound within the regulatory framework.

1. Enhancement of risk assessment techniques in collaboration with the NRRRC and enhancement of decision-making pertaining to safety measures, etc. resulting from an appropriate combination of the results of risk assessment and engineering judgment, etc.
2. Further extraction of area for improvement through peer reviews by JANSI and WANO, them, responding to them, and reflecting the results in the discussions for improving safety (peer pressure).
3. Improving the emergency response capabilities through the operation of Mihama Nuclear Emergency Support Center and construction of a mutual support system (alliance), etc.

Furthermore, it is extremely important that the regulators and nuclear operators have “scientific and logical discussions regarding the regulation” in terms of striving to “improve safety at nuclear facilities”.

Opinion exchange sessions has been held between top executives of the Nuclear Regulatory Authority and the electric utilities, and since this January, such sessions involving nuclear division heads has been held. Such conversations will be continued in the future. We believe that these collaborative efforts by the operators and regulators will create a synergy, leading to safety improvement.

Henceforth, we will continue to undertake steady initiatives on an ongoing basis for safety improvement and by substantially accomplishing the mission of the operators, namely, ensuring nuclear safety, we will continue to make efforts to restore the trust of the society.

* Nine electric power companies, The Japan Atomic Power Company, J-Power

(Attachment) Initiatives by the operators directed towards independent nuclear safety improvement

Initiatives by Electric Power Operators for Nuclear Safety Improvement

Federation of Electric Power Companies of Japan
February 17, 2017

On May 30, 2014, the 'recommendations for voluntary efforts and continuous improvement of nuclear safety' were compiled, outlining each nuclear licensees' initiatives for voluntary safety improvement based on the recommendations' roadmap and presenting the roadmap for each of the licensees.

1. Implementing risk management under the appropriate framework of risk governance (I)

2. Initiatives that should be implemented based on the lessons learned from Fukushima Daiichi accident:

- ① Carrying out comprehensive risk assessment covering even low-frequency events (II)**
- ② Reducing residual risks through the ample application of the defense-in-depth (III)**
- ③ Focusing on external events to identify accident sequences / cliff edges and improving resilience (IV)**
- ④ Restructuring safety improvement research for lightwater reactors and enhancing the coordinating function (V)**

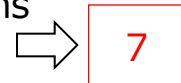
Five years on since Fukushima Daiichi accident, with looking over enhanced measures implemented so far, we have examined what have been accomplished and what should we do hereafter, and determined to further promote the voluntary and continuous efforts for safety improvement.

(I) Implementing risk management under the appropriate framework of risk governance

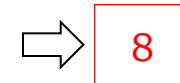
- Building an internal risk management structure
 - Introducing a mechanism for reflecting risk information to management judgment under the commitment of senior management
 - Enhancing the internal nuclear safety surveillance function in a third-party approach
 - Strengthening interactive risk communication with stakeholders and local residents including risk information



- Strengthening peer pressure among operators via self-regulatory organizations
 - Carrying out peer reviews by JANSI & WANO



- Providing restart review and support by WANO and JANSI



- The development of the Comprehensive Plant Assessment system, currently explored by JANSI



(II) Carrying out comprehensive risk assessment, covering even low-frequency events

- Promoting the partnership between the Nuclear Risk Research Center (NRRC) and nuclear licensees for research that forms the basis of safety measures concerning risk assessment and external event evaluation
- Establishment of NRRC RIDM on July, 2016
- Drawing up the roadmap for proper application of risk-informed decision making over the period of around a year which aims to advance PRA and establishes technical infrastructure
- Deploying to the Pilot plants (Ikata3, KK6,7) ⇒ 11 ⇒ 10

(III) Reducing residual risks through the ample application of the defense-in-depth

- Implementing large-scale hardware measures to counter earthquakes, tsunamis and severe accidents as part of the response to the New Regulatory Requirements in order to expand defense-in-depth and reduce risks
- Deploying mobile equipment such as vehicle-mounted generators and pumps, and providing personnel trainings for operating them in order to reduce residual risk and enhance resilience

(IV) Focusing on external events to identify accident sequences / cliff edges and improving resilience

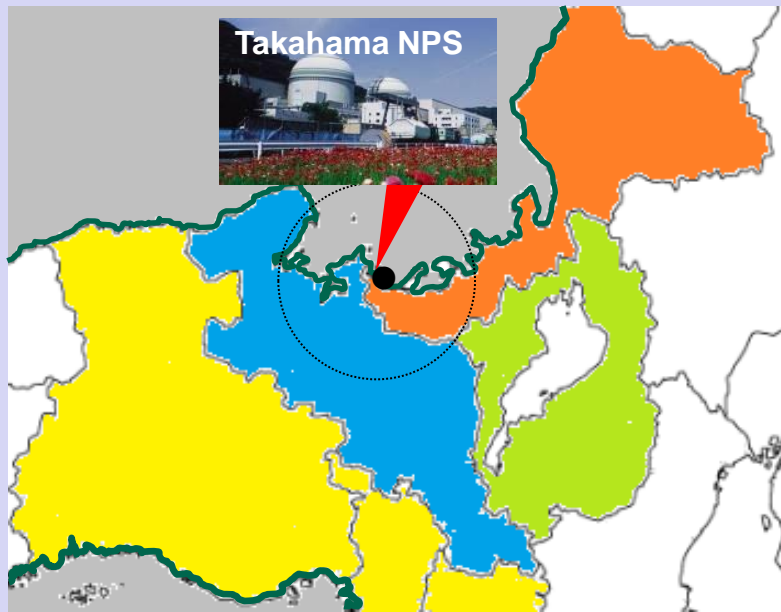
- Maintaining and improving personnel's capacities through training based on the scenario of multi-unit accident as well as blind training in order to boost resilience
- Developing mutual cooperation (alliance) between the nuclear power operators. ⇒ 12
- Cooperation in drawing an emergency response plan with the nuclear emergency response committee of each region. Enhancement of activities to support local residents in case of severe accident. ⇒ 13
- Launching the full-scale operation of the Mihama Emergency Support Center on Dec. 17, 2016. ⇒ 14

(V) Restructring safety improvement research for light-water reactors and enhancing the coordinating function

- Establishing the roadmap for developing the safety technologies and human resources for lightwater reactors in June 2015 by Japan Atomic Power Company, involving representatives from electric utilities and manufacturers, in order to set short-, mid- and long-term goals and prioritize individual technological tasks

- ◆ The operators must reinforce the safety improvement initiatives from both the hardware side and software side, but **the public needs to understand** such initiatives.
- ◆ **As for risk communication, its activities are brought out centered around the location of the power station in Fukui Prefecture.**
- ◆ **In addition, activities are also carried out** at Takahama NPS's PAZ (roughly within 5km) and UPZ (roughly within 30km) in Kyoto and Shiga **by various committees and briefing sessions for residents.**
- ◆ **Feedback will be utilized in risk management,** as well as being addressed to with sincerity.

Communication activities at around the power station and consumption area



Consumption area: Initiatives for fostering understanding such as having direct conversations

Fukui Pref. (Risk communication)

(FY2015 record)

- Briefing sessions at the Fukui Pref. Nuclear Environmental Safety Management Council **Total 4 times**
- Briefing sessions at the Fukui Pref. Nuclear Safety Committee **Total 6 times**
- Visiting households **Approx. 3200** (Mihama Town)
- PR brochure "Echizen-Wakasa no Fureai (Getting to know Echizen-Wakasa)" **311,000 copies/issue (all region)**

Kyoto Pref. (Risk communication)

- Briefing sessions at local councils* related to Takahama NPS **Total 6 times**
- Briefing sessions for residents **Total 7 times (1,208 people)**
- Briefing sessions for neighboring area around the power station **Total 6 areas (78 people)**
- Flyers in newspapers **Approx. 90,000 copies** (Seven cities and towns in northern Kyoto Pref.)

*: Kyoto Pref. Local Council hereafter

Shiga Pref. (Risk communication)

- Briefing sessions at Shiga Pref. Safety Measures Liaison Council **Total 8 times**
- Briefing session hosted by Takashima City **Once**

- Opinion exchange sessions between top executives (from nine utilities, JAPC, JNFL, JANSI, and JAEA) and the Nuclear Regulation Authority (Planned to be held monthly)
 - This has been held 22 times since October, 2014.

- Opinion exchange sessions between nuclear division heads and the Nuclear Regulation Authority (The first session was held in January 18, 2017)
 - ◆ The operators mentioned the below as agendas in nuclear power generation
 - ✓ Delays in deciding on the design basis seismic motion and tsunami at BWR plants, and increases in workload of seismic evaluations
 - ✓ Issues in the formalities and rationale for operation prolongation approval application (operating beyond 40 years)
 - ✓ Clarifying the criteria for immediate imposition of backfit.
 - ✓ A US-ROP based inspection system reform / introducing a risk informed regulation in the future.

○JANSI Peer Review

- 7 sites accomplished since the foundation of JANSI (2012~)
- Improvement of peer review capability is essential. So enhance international cooperation with WANO-TC and other organizations.

Site	Site
Higashidori, Tohoku	Shimane, Chugoku
Shika, Hokuriku	Sendai, Kyushu
Kashiwazaki-Kariwa, Tokyo	Tsuruga, JAPC
Takahama, Kansai	

Red letter shows the sites reviewed in FY 2016.

○WANO Peer Review

- 17 sites 45 times accomplished since peer review launch in Japan(1993~)
- The sites reviewed in FY 2016 are mentioned below.
- Kashiwazaki-Kariwa, Tokyo
 - Sendai, Kyushu
 - Tsuruga, JAPC

<JANSI>

- Walk down and review of preparations based on "operation resumption guidelines"
- Review by foreign expert in collaboration with WANO TC is planned in future.
 - Reviews by experts in specific fields
 - Providing overseas findings related to resumption of operations

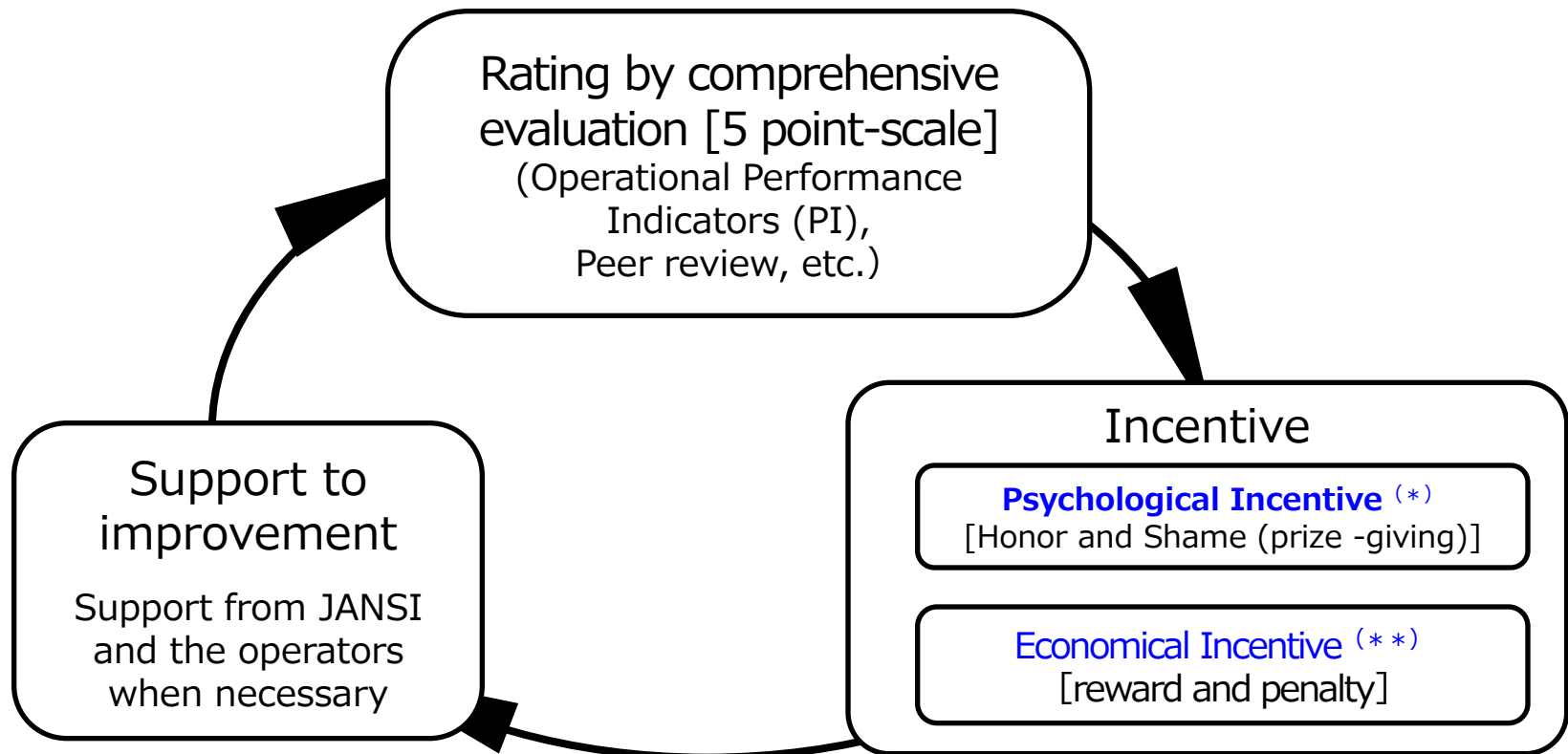
(Results)

- November 2014: Sendai and Takahama TSM by INPO, WANO, operators, and JANSI
- April - November 2015: Support to Sendai by operators and JANSI
- September 2015 - March 2016: Support to Takahama by same as above
- November 2015 - September 2016: Support to Ikata by same as above
- December 2016 - : Support to Genkai by same as above

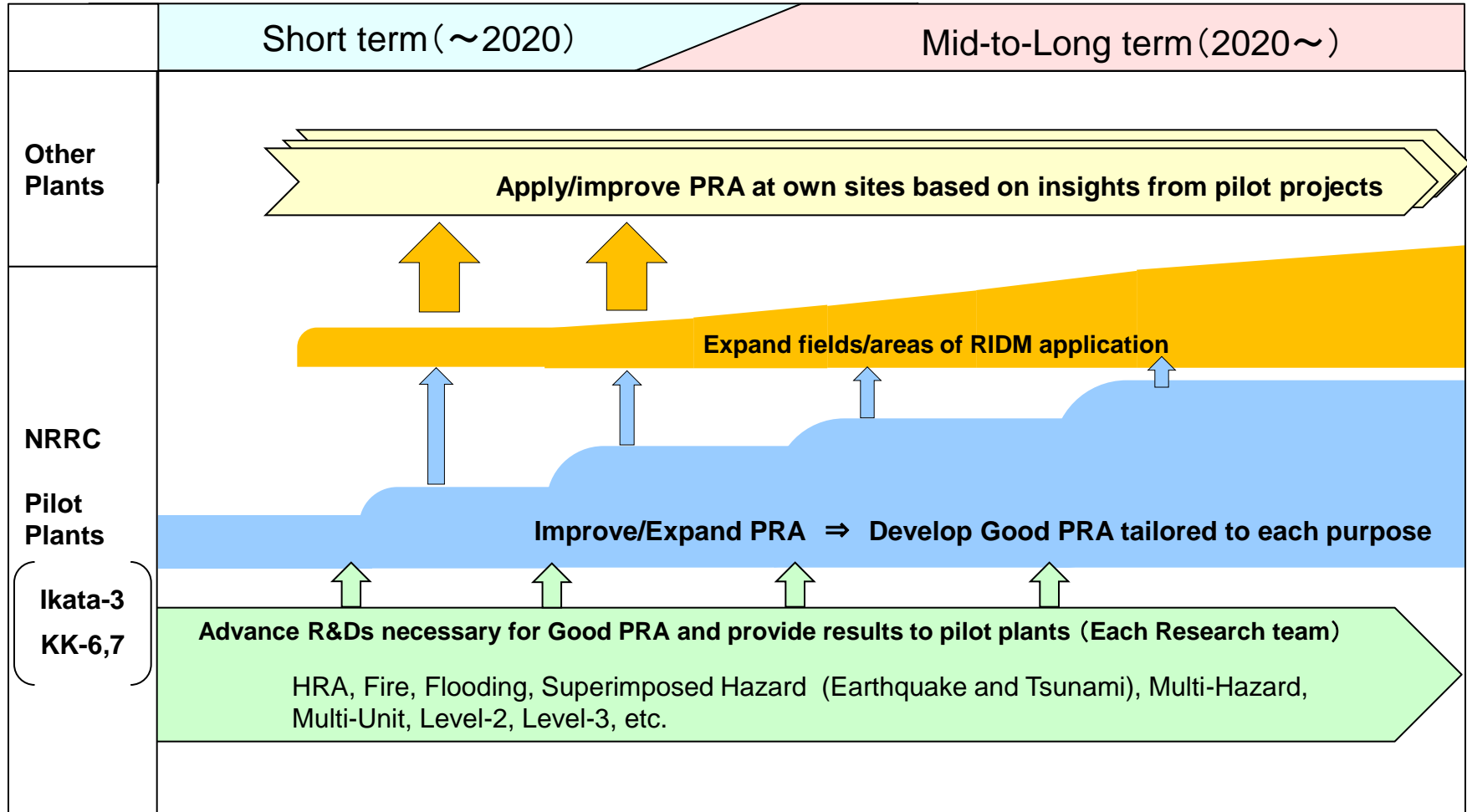
<WANO>

- Restart review will be conducted by the WANO Tokyo Center for power plants that are nearing operation resumption
- Operation resumption reviews were conducted at Sendai Nuclear Power Plant of Kyushu Electric Power Company in June 2013, Takahama Nuclear Power Plant of Kansai Electric Power Company in July 2015, and Ikata Nuclear Power Plant of Shikoku Electric Power Company in October 2015 and individually beneficial advise was given.

- The launch of operational Performance Indicators and other methods in 2016
- Plan to introduce peer review results into the evaluation.



(*) Give prizes to high performance plants in front of all CEOs of operators
(**) Increase and decrease JANSI membership fee based on the comprehensive evaluation (if appropriate, may transfer to insurance fee of nuclear property insurance)

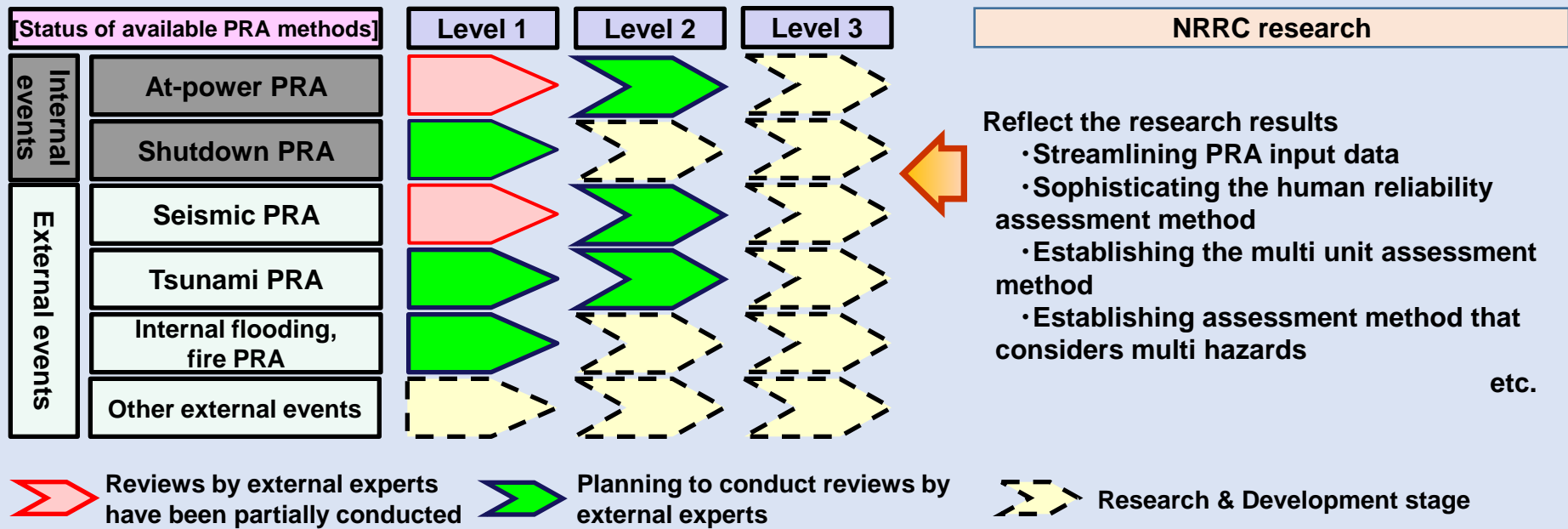


<The operator's initiatives up till now>

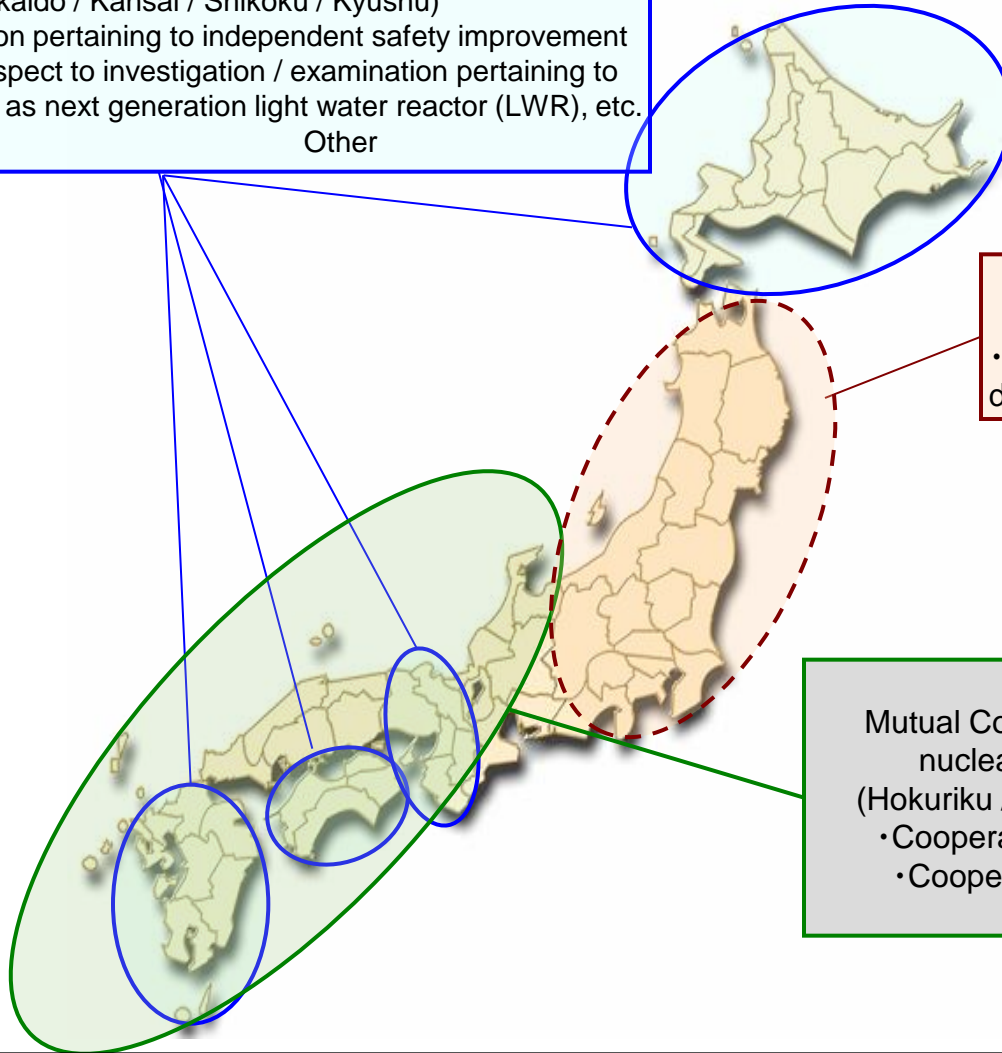
- In the application to modify reactor installment license, **internal events level 1 PRA (at-power and shutdown), seismic level 1 PRA, tsunami level 1 PRA, internal events level 1.5 PRA (containment damage frequency) have been implemented and utilized for selecting accident sequences.**
- **Station personnel have implemented shutdown PRA and utilized the results for formulating a work schedule during outage.**

<Initiatives in the future with assistance from NRC>

- PRA methods will be prepared and streamlined with assistance from NRC (research, external experts' review, etc.)
- **The methods will be applied in operating models as they become ready, and the PRA results will be utilized to consider and determine the prioritization of issues and safety measures.**



Mutual technological cooperation agreement between the PWR electric power companies
(Hokkaido / Kansai / Shikoku / Kyushu)
 • Sharing of information pertaining to independent safety improvement
 • Cooperation with respect to investigation / examination pertaining to new technology such as next generation light water reactor (LWR), etc.
 Other



Mutual cooperation agreement between Tokyo Electric HD / Tohoku Electric
 • Cooperation in the event of a nuclear disaster

Mutual Cooperation Agreement between the five nuclear power companies in West Japan (Hokuriku / Kansai / Chugoku / Shikoku / Kyushu)
 • Cooperation in the event of a nuclear disaster
 • Cooperation in decommissioning etc.


Furthermore, twelve electric power companies have already signed the "Agreement for cooperation amongst nuclear power operators in the event of a nuclear disaster".

Further enhancement of nuclear disaster countermeasures (initiatives by the nuclear power operators (example))

- If a nuclear disaster occurs, since the residents within the PAZ area (area within 5 km from the power plant where the disaster has occurred) will start being evacuated first, **means of transportation (bus, welfare vehicle, helicopter, boat) required for evacuating persons who need assistance are provided as much as possible.**
- **After completing the PAZ evacuation, the transportation capacity provided for PAZ evacuation are provided for evacuating the residents of the UPZ area (area within 5 - 30 km from the power plant where the nuclear disaster has occurred)**


[Vehicle]

- **Ten buses** from among the buses used for pick-up and drop-off of the employees of the nuclear power plant are provided.
- The drivers are dispatched by the nuclear power operators as well.





[Welfare vehicle]

- A total of **25** welfare vehicles (wheel chair type and stretcher type) are provided. (21 vehicles are given on loan to the local municipalities. Four vehicles are allocated to the Head Office of the operators.)
- Drivers and assistants are provided by the operators.



[Helicopter / boat]

- If land evacuation routes cannot be accessed, **one** helicopter and **one** boat are provided.





Heliport



Robot operation drill

Machineries



Drone



Remote Operated Heavy Machineries



ヘリポート

調整池

事務所棟

予備屋外訓練フィールド

資機材保管庫・車庫棟

屋外訓練フィールド

調整池

Mihama Nuclear Emergency Support Center



Robot Controlling Car