

JANSI

Annual Report

2024



J A N S I
Japan Nuclear Safety Institute

Table of Contents

1~6

Overview of JANSI

A1~A8

Status of Main Activities

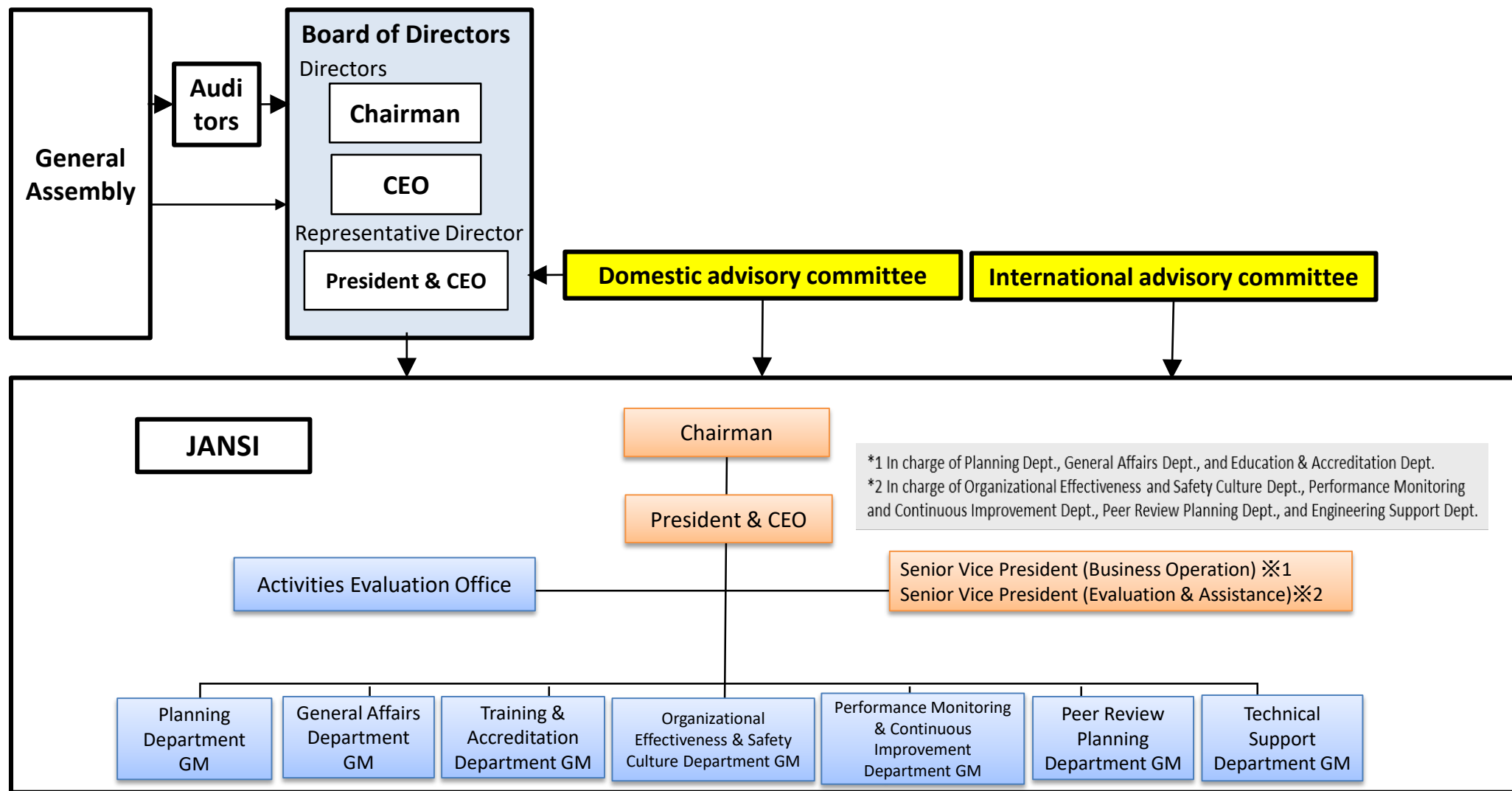
B1~B15

References

Overview of JANSI



- Name : Japan Nuclear Safety Institute (JANSI)
- Date of foundation : November 15, 2012
- Number of members : 128 (as of end of March 2025)
- Number of personnel: 192 (as of end of March 2025)
- Chairman : William Webster Jr.
- President & CEO : Isao Kato



Mission and Vision of JANSI

Based on the consensus of the industry that "the Fukushima Daiichi accident will never happen again," JANSI was established in November 2012 as a self-regulatory organization, modeled after INPO (American Nuclear Power Operations Institute) serving the U.S. nuclear industry, as a mechanism for a private sector organization holding an independent position to lead nuclear operators to continuously and voluntarily pursue further excellence from an independent perspective.

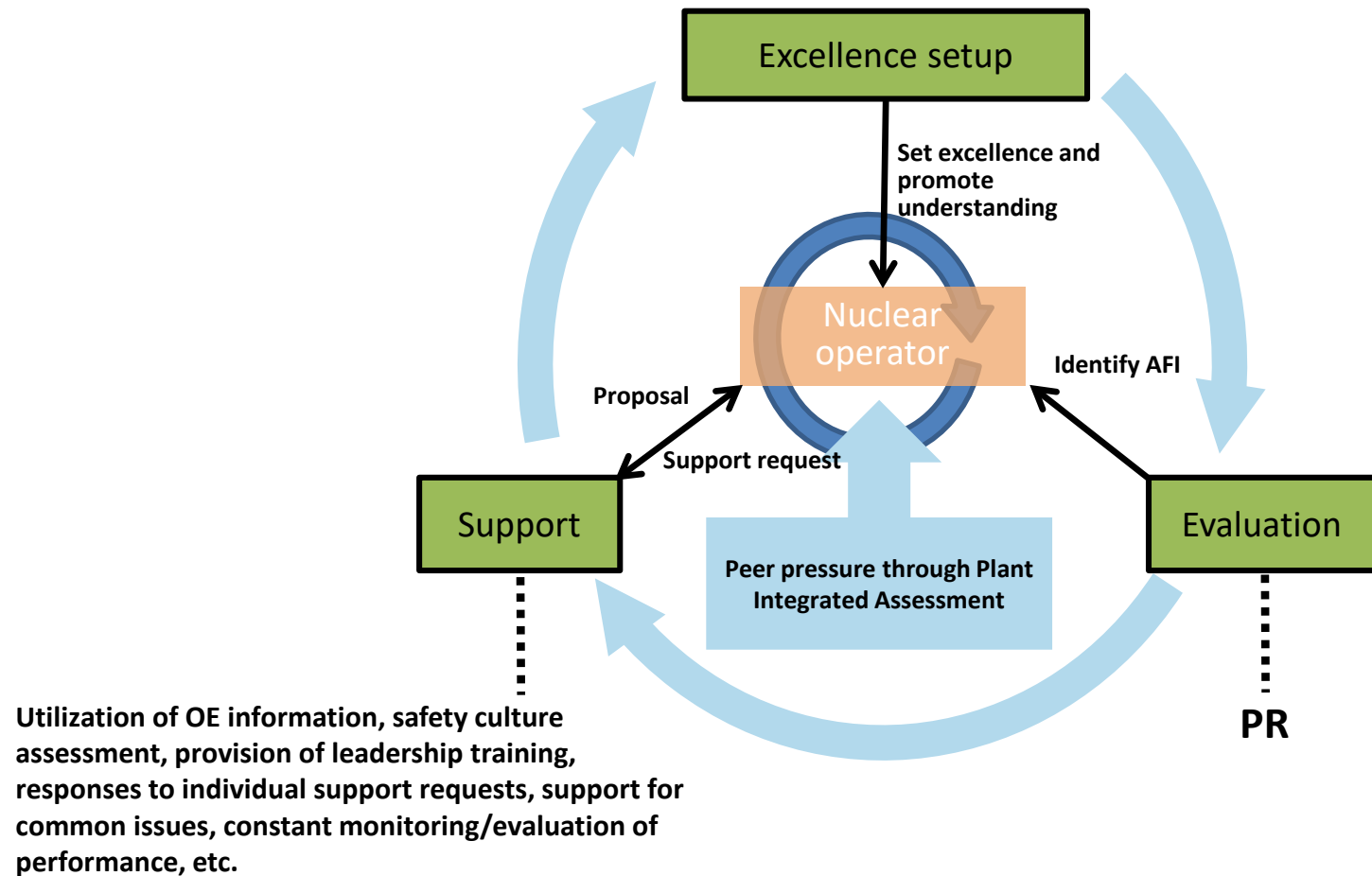
Mission

Pursue the World's Highest Level of Safety in the Japan's Nuclear Power Industry
(Untiring Pursuit of Highest Standards of Excellence)

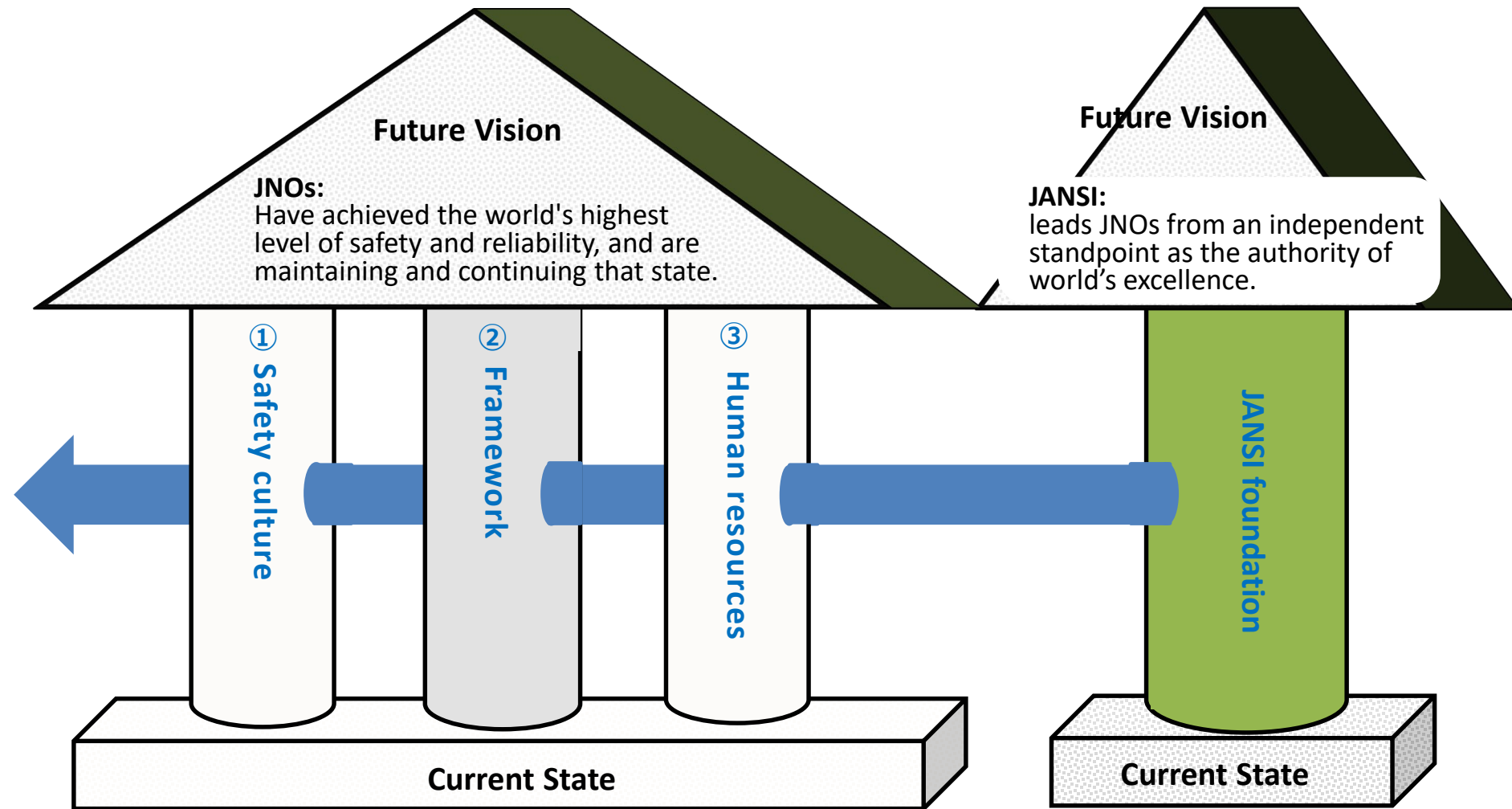
Future vision

JANSI leads the operators from an independent standpoint as the authority of world's excellence.
By establishing voluntary and continuous safety improvement initiatives, the operators have achieved the world's highest level of safety and reliability, and are maintaining and continuing that state.

Clarification of excellence (guidelines, etc.)



JANSI 10-Year Strategy Model(March 2024)



JANSI 10-Year Strategy Main Actions(March 2024)

Critical Success Factor	Main Action
1. Fostering of healthy safety culture	(1) Lead the awareness raising of operators as the main actor of self-regulation (2) Support the safety culture fostering activities (3) Determine/develop organizational effectiveness to maintain and continue high performance
2. Operation of voluntary continuous improvement foundation program	(4) Pursuit of world's excellence (5) Effective/efficient implementation of high-quality PR (6) Maturing and effective utilization of PMCM (7) Continuous improvement of Plant Integrated Assessment (8) Improvement of OE activities (9) Prompt and appropriate response to important issues
3. Securing/developing personnel necessary for business operations	(10) Enhance and implement leadership training, seminars, etc.
4. As a self-regulatory organization, enhance/strengthen the foundation of functions, awareness, technical capabilities, etc., and implement effective/efficient activities	(11) Establish foundation as self-regulatory organization (12) Collaboration with domestic and overseas related organizations & Building trusting relationships, etc.
【Important issues to be addressed in the near future】	(13) Long-term shutdown plant support & restart support (14) Support for nuclear fuel cycle facilities
【Other: Tasks separated from Main Actions】	○ Task for Operation Supervisors Certification Exam/Accreditation

Status of Main Activities

(1) Safety Culture On-Site Diagnosis

- Conduct safety culture on-site diagnoses every 3 to 4 years for the power plants, major plant manufacturers and fuel processing manufacturers.
- The interview has been expanded to the corporate offices since FY2020.
- Peer assessors from utilities participated in the diagnoses of Takahama, Tsuruga and JNFL.
- Conducted questionnaire survey for special members and semi-special members (once in 3 years each).

Track Record Classification	Safety Culture On-Site Diagnosis of the Past 3 Years			FY2024
	FY2021	FY2022	FY2023	
Nuclear Power Plants JNFL	Higashidori, Ohi, Shika, Onagawa, Fukushima Daiichi	Mihama, Shimane, Oma, Fukushima Daini, Genkai	Hamaoka, Tomari, Kashiwazaki- Kariwa, Tokai	Ikata, Takahama, Tsuruga, and Reprocessing facility
Plant manufacturers Fuel processing manufacturers	Toshiba Energy Systems	Mitsubishi Heavy Industries	Hitachi-GE Nuclear Energy	Mitsubishi Nuclear Fuel (MNF)

(2) Determine/develop organizational effectiveness to maintain and continue high performance

- Held Organizational Effectiveness Working Group with participation of members from all the utilities. (9 times)
- Participated in WANO-CPRs and shared corporate review information (Shikoku, Tohoku, Chubu and JAPC).
- Participated in the Workshop organized by WANO.

(3) Effective/efficient implementation of high-quality Peer Review

- Conducted 36 times (including Takahama) since the founding of JANSI (2012).
- Conducted peer review on Takahama.
(Exit Meeting will be in FY 2025)
- Conducted JANSI/WANO peer reviews alternately.
- Started preparation with WANO for WANO equivalent peer review on Tomari.
- Re-evaluation of equivalency will be conducted at peer review at Sendai in FY 2025.

Peer Reviews of the Past 3 Years			FY2024
FY2021	FY2022	FY2023	
Onagawa Ohi Takahama Genkai	Mihama Shimane Tomari Sendai Higashidori	Tsuruga Shika Hamaoka	Kashiwaza ki-Kariwa Tomari Takahama

(4) Maturing and effective utilization of PMCM

- Supporting operators for continuous earlier self-recognition of their performance and trend of decline, if any, and taking rapid countermeasures
- Implemented PMCM in collaboration with WANO ePM at operating plants (Mihama, Sendai, Ikata, Ohi, Takahama and Genkai)
- sharing plant performance information timely (sharing collected and analyzing PIs and developing reports for operators)

(5) Continuous improvement of Plant Integrated Assessment

- Revise manuals and other documents due to the change of the plant integrated assessment to reflect the decision approved by the board on January 16. Assessment will be made by peer review ratings only. (Assessment has been made by ratings of both peer review and performance indicators)
- Conducted the plant integrated assessment based on the performance of FY2023.
- Awarded special prize to Hamaoka Nuclear Power Station for the AI system to confirm wearing of protective garments at radiation controlled area. (October 2024)

(6) Improvement of OE activities

- Improved overall operability of the OE information management system installed last year to enhance sharing of overseas OE information.
- Shared OE Information with the operators on domestic/overseas OE information and JANSI-NRA regular information-sharing sessions.
- Shared OE information with FEPC and ATENA at the meetings of FEPC.
- Reviewing OE program to improve the OE activities of the nuclear power industry.

Since the founding of JANSI (2012)

- Documents of Significance: 20
- Documents of Warning: 17 *1

*1: Inflow of rain water and extreme weather events

1. Status of Main Actions (4/8)

(7) Enhance and implement leadership training, seminars, etc.

【Leadership Training】

- Conducts trainings to raise awareness of nuclear safety as top priority and acquire non-technical skills such as leadership and communication
- Provides 10 courses according to duty position for the management level employees including CEOs, CNOs, Plant Directors, Shift Supervisors)
- New course for assistant managers for candidates aspiring to management positions starts in FY2024. (Total 11 courses)

Training Participants (Number of people)			
FY2021	FY2022	FY2023	FY2024
221	201	208	227

【Systematic Approach to Training (SAT) Support】

- Support the introduction of SAT to make the training conducted by operators more effective.
Main support activities is advice for challenges of each operator (caravan).
- FY2024 main activities
 - Workshop on SAT and OJT which is a common challenge faced by all companies was held in November, inviting a Spanish expert from TECNATOM as an instructor.
 - Plant Caravans were held upon request of operators. (9 companies)
 - SAT basic training for new persons responsible for training will take place in September.

(8) Provide long-term shutdown plant support & restart support

(Onagawa NPS)

- Implemented walk-down and made the report as support to restart. JANSI's liaison stayed at the station during the start-up period. (Onagawa Unit 2 started operation in November.)

(Shimane NPS)

- Implemented walk-down and made the report as support to restart. JANSI's liaison stayed at the station during the start-up period. (Shimane Unit 2 started operation in January.)

(Kashiwazaki-Kariwa NPS)

- Implemented walk-down and had meetings as support to restart.

* Walk-down: A process to observe the facility/equipment and behavior of workers at the station and make improvement based on the results.

(company-wide)

- Implemented hands-on training with 8 teams from long-term offline station at the restarted station.

(9) Support for nuclear fuel cycle facilities

- Two groups of risk management and corrective action visited and observed the state of the reprocessing plant on April 24, 2024. Maintenance program group visited the site on March 13.
- Checked safety measures during shutdown and improvement of recording of effective assessment of maintenance, etc.
- As a result, support in 3 areas was shifted to standard procedure through TCP (technical contact points: JANSI's contact points for operators in 15 expert area. (All areas were already moved to standard procedure.))

(10) Examination and accreditation of operation sift-supervisors

- JANSI is designated as the qualifying institution from the nuclear operators, and carries out certification consistent with the Nuclear Power Plant Operation Supervisor certification rules (JEAC4804) and the pass/fail assessment rules of the nuclear operators.
- In FY2024, examinations of operation sift-supervisors (oral/written examinations and lectures) were held 4 times.
- Implemented communication activity between holders of certificate of Chief Operation Staff and academic experts by visit to NPPs
(September: Takahama/Ohi, October: Genkai, December: Hamaoka, January: Sendai)
- Implemented information exchange subject to each stratified operating staff: July: Holders of certificate of Chief Operation Staff, October: Mid-level operating staff, December: Chief Operation Staff of decommissioning plants, December: Female operating staff, others (female technical staff), March: Young operation staff
- Upon request of Commissioner Okada of Japan Atomic Energy Commission, a closed meeting was held with Dr. Okada and members of female operator/technical staff information exchange meeting of JANSI on July.

(11) Other actions

- Plant performance improvement (focused area of FY2024): Leadership (driving force) for plant performance improvement was discussed at CEOs/CNOs meetings.
- Initiative for extending plant operation years, with enhancing and sharing of maintenance technology foundation.
- Continuous improvement of work efficiency and drastic reformation of operational model.

JANSI holds the “JANSI Annual Conference” to report on the results of its activities, and to receive opinions from domestic/overseas nuclear community in order to make future activities more effective.

Track Record of the Past 3 Years

Event Date	2023.3.15	2024.3.13	2025.3.12
Number of Participants	Approx. 500 (Held Venue and Online)	Approx. 500 (Held Venue and Online)	Approx. 500 (Held Venue and Online)
Panel Discussion	<u>Expectations, Prospects, etc. of Future Activities</u> Chairperson : Ms. Yukari Yamashita (Managing Director of the Institute of Energy Economics, Japan) Mr. Robert E. Schuetz (CEO, Energy Northwest) Dr. Akira Yamaguchi (Director, Nuclear Safety Research Association / Professor emeritus, University of Tokyo) Mr. Victor M. McCree (Owner & Principal Operating Officer, NucLeader Consulting, LLC / Former Executive Director for Operations for the NRC) Mr. Nozomu Mori (Representative Executive Officer & President, Kansai Electric Power Company) William Edward Webster Jr. (Chairman, JANSI) Hiromi Yamazaki (President & CEO, JANSI) 	<u>Continuous Improvement : How to extend in Japan</u> Chairperson : Mr. Akio Yamamoto (Professor, Nagoya University Graduate School of Engineering) Mr. Jeff Lyash (CEO, TVA (Tennessee Valley Authority)) Mr. Hiroyuki Yamaguchi (Professor, Kyushu Univ. Graduate School of Human-Environment Studies) Mr. Kingo Hayashi (President and Director, Chubu Electric Power Co., Inc.) Hiromi Yamazaki (President & CEO, JANSI) 	<u>Improvement of proficiency in the nuclear power industry</u> Chairperson : Mr. Makoto Takahashi (Professor, Graduate School of Engineering, Tohoku University) Mr. Shuichi Kaneko (Deputy Secretary-General and Director-General, NRA Human Resource Development Center, NRA) Ms. Amanda Donges (SVP, Teaching and Learning, INPO) Mr. Rick Libra (CNO, Southern Nuclear) Mr. Etienne Dutheil (Director, Nuclear Power Generation, Electricité de France (EDF)) Mr. Kojiro Higuchi (Representative Director and President, Tohoku Electric Power Company) Isao Kato (President & CEO, JANSI) 

1. Activities for main action of The 10-Year Strategy

- (1) The fiscal year 2024 marks the first year of the current “JANSI 10-Year Strategy (2024-2033).” All activities were carried out based on the “FY2024 Business Plan,” which was developed in line with the 10-Year Strategy.
- (2) At the March board meeting, approval was granted for the revision of the current 10-Year Strategy, and activities for the fiscal year 2025 will be based on this revised strategy.

2. Status of FY2024 activities pertaining to the foundation of organizational management

- (1) Promoting a New Way of Working (Completed the office space optimization, reorganized operational documents such as the rules for the free address work area, and communicated them within the organization)
- (2) Implementation of self-assessment and internal audit

3. Meeting status related to the Articles of Incorporation

- (1) General Meeting of Members 1 time
- (2) Board Meeting 5 times
- (3) Associate Special Member Representative Meeting 1 time
- (4) Domestic Advisory Committee Meeting 2 times
- (5) International Advisory Committee Meeting 1 time

References

“Self-regulation” means the operators voluntarily and continuously improving safety and pursuing excellence by disciplining oneself and each other, not being satisfied with meeting only legal regulatory standards.

“Self-regulatory organization” is an organization that maintains independence and leads the operators so that their self-regulation can proceed effectively and efficiently.

Roles and Responsibilities in Self-regulation

[JANSI members (operators)]

- As a main actor of self-regulation, operators fulfill their responsibilities as a member of community and continue to make united efforts to improve safety
- Individual and collective responsibility for safety of nuclear facilities
- Give authority and support to a self-regulatory organization to implement the mission

[Self-regulatory organization (JANSI)]

- Roles and responsibilities to assist self-regulation activities effectively and efficiently
 - Evaluate and monitor self-regulatory activities (Watchdog)
 - Stimulate activities (Catalyst)
 - Promote activities by showing the path forward (Facilitator)
 - Be firm anchorage (Accountable Agent)
- Technical capacity that underpins the authority of self-regulation
- Appropriate relationship with the regulator

Basis for Self-Regulatory Organization (JANSI) Activity

[Granted strong authority]

- Commitment to utility CEOs based on the “Collaboration Principles”
 - Respect and maintain independence
 - Granted authority to plant shutdown
 - Granted access rights to power plant information, etc.

[Development of organization/framework]

- Appointment of all utility CEOs as Directors
- External oversight (Domestic and International Advisory meetings)
- Reorganization within JANSI in line with the 10-Year Strategy

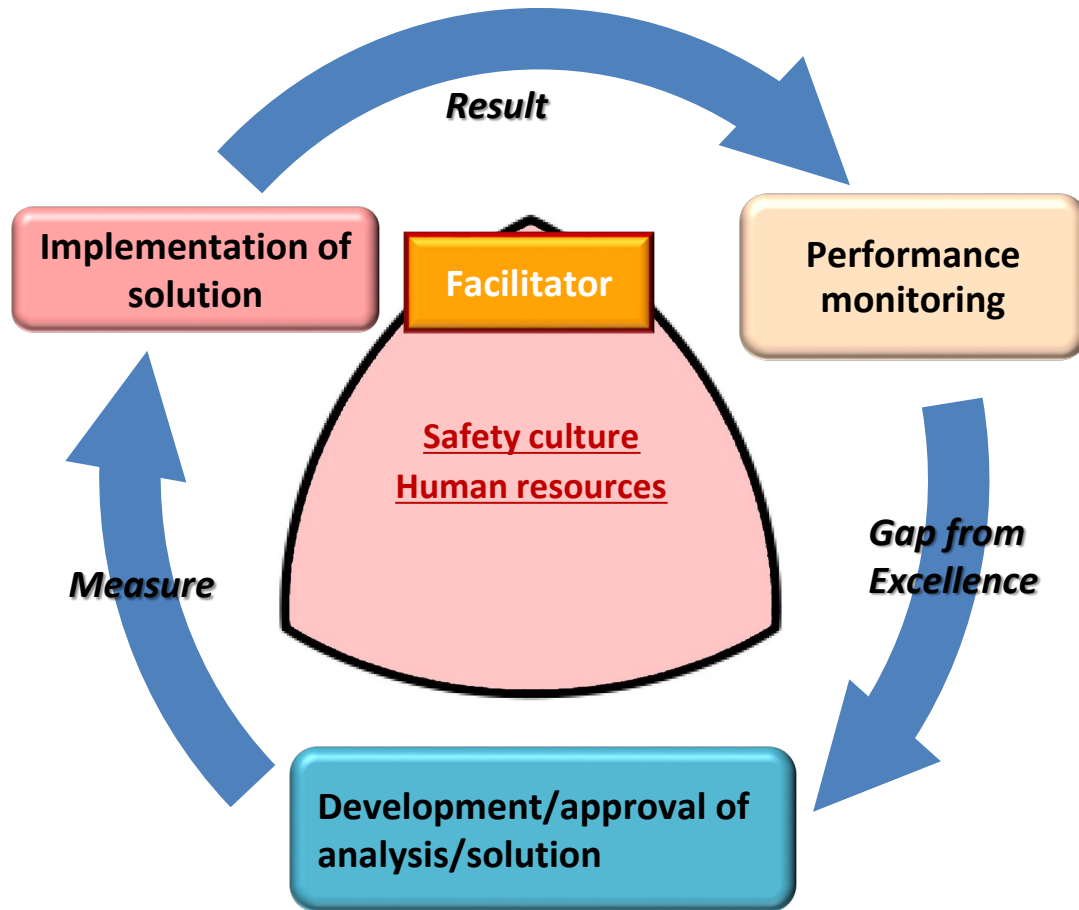
[Formulation of the 10-Year Strategy]

- Identification of main activities to achieve the future vision and formulation of the 10-year activity plan. Clarification of the path to achieving the vision.

In order to achieve the mission, JANSI's core identities, unique strengths, and JANSI employees' values and criteria for carrying out activities are clarified.

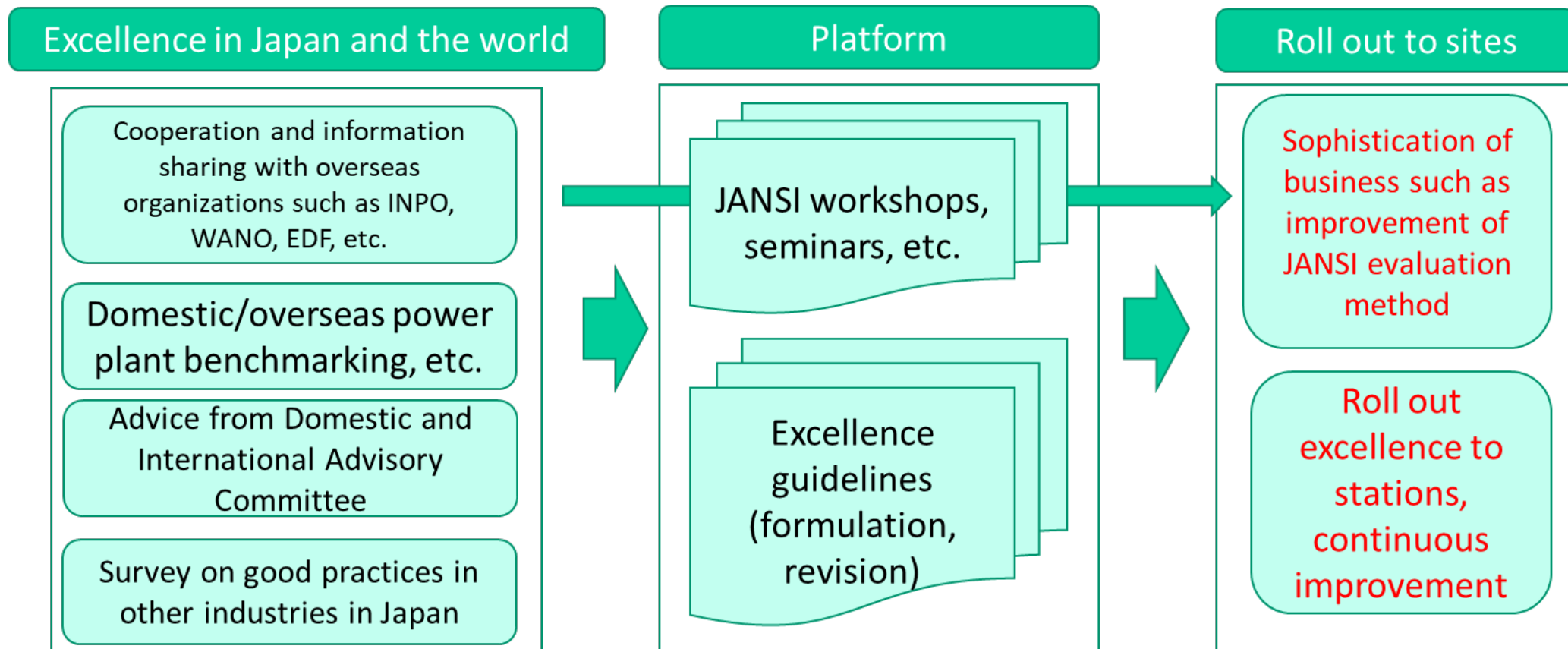
These are the starting points of JANSI activities such as communication and collaboration with the operators, as well as international organizations such as WANO, domestic organizations such as ATENA, and the regulator. JANSI will share these recognitions, work on self-development every day, and pass them on, making it a foundation for demonstrating the overall strengths to always take on challenges.

<i>Core Identities</i> JANSI's raison d'etre, Unique strengths	<i>Core Values</i> JANSI employees' values and criteria for carrying out activities
● Is an authority of excellence ● Community formation and independence from each operator ● Overall observation/evaluation and thoughtful insight ● Catalyst function that promotes improvement ● Collaboration with domestic/overseas organizations 《Identities in comparison with international organizations》 ▪ Evaluation/assistance based on an understanding of Japanese culture and systems in Japanese language ▪ Acts as a bridge between Japan and overseas' excellence ▪ Maintain a close community among the operators, and utilize as a platform for pursuing excellence ▪ Close cooperation with related organizations in Japan	● Never forget the Fukushima Daiichi lessons learned ● Commitment to "pursuit of excellence" ● Integrity ● Build trusting relationship with the operators and related organizations ● Demonstrate leadership ● Close internal communication and cooperation

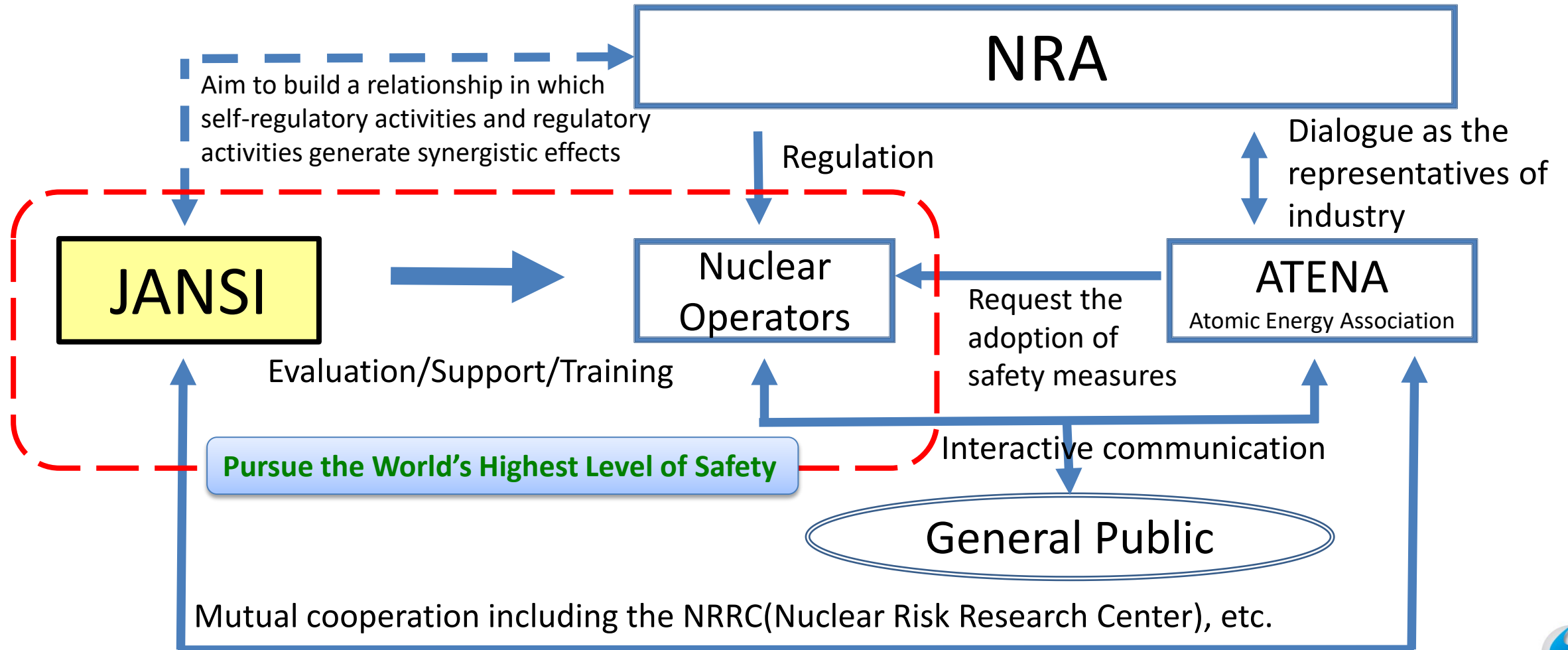


Initiatives for autonomous and continuous improvement (<u>mechanism</u> example)	
Performance monitoring	○ On a daily basis 【Collect excellence information, etc.】 ▪ Benchmarking ▪ Excellence guidelines ▪ OE information 【Catch up with the site situations】 ▪ CAP ▪ Performance indicator ▪ Management observation
	○ On a regular basis 【Self assessment】 ▪ Effectiveness assessment 【Third party assessment】 ▪ Independent oversight ▪ External oversight (JANSI, WANO)
Development/approval of analysis/solution	○ On a daily basis ▪ CAP/Risk management - Identify risks based on various types of information and determine responding policy according to the importance
	○ On a regular basis ▪ PI Committee - Analyze the performance comprehensively based on various types of and determine responding policy
Implementation of solution	○ Key points to solve ▪ “New setting and review of expectation/new standards,” “process review,” “education improvement,” “stronger involvement of senior management (Plant Manager, Deputy Plant Manager)/managerial positions (Manager)”
	○ Key points for effective implementation ▪ Involvement of managers (monitoring) ▪ Clarification of role division/responsibility ▪ Allocation of resources

JANSI acts as a "bridge between Japan and the world" and as the "nuclear industry's platform," it pursues excellence in Japan and the world and shares with the operators to encourage continuous improvement.



Common Goal: Improving Nuclear Safety



Relationship with the NRA

- Although self-regulatory activities and national regulatory activities are independent from each other, they aim to build a relationship that generates synergistic effects.
 - Information sharing on operating experience information (OE information) is underway
 - Careful discussions are being held on the mechanism for sharing information with the NRA including the peer review reports, while considering the business environment.

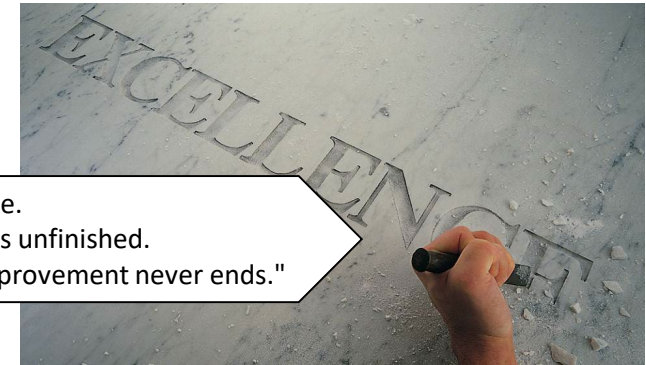
Relationship with Industrial Organizations

- Mutual cooperation with ATENA, NRRC, etc.
 - Concluded technical cooperation agreements with ATENA and NRRC, and have implemented: attendance at each other's conferences, information sharing, mutual business support, collaboration to solve important issues in the industry, etc.
 - Information has been shared with other organizations such as Japan Atomic Industrial Forum and Japan Electrical Manufacturers' Association as appropriate.

Relationship with INPO (Institute of Nuclear Power Operations)

- As self-regulatory organizations with the same vision of "pursuing the highest level of performance," INPO and JANSI mutually cooperates on behalf of the operators of the US and Japan on the issues of improving safety of nuclear power plants.
 - Benchmarking visit to US power plants
 - Exchange of opinions between the US and Japanese nuclear industries regarding the reflection of Fukushima Daiichi lessons learned

Reprinted from the INPO website.
The word "EXCELLENCE" remains unfinished.
It is a symbol of "The road to improvement never ends."



Relationship with WANO (World Association of Nuclear Operators)

- Although WANO and JANSI are independent organizations, they cooperate with each other to improve the safety of nuclear power plants by taking advantage of their respective characteristics. JANSI closely cooperates with WANO Tokyo Center.
- JANSI strives to grasp and pursue international standards for world's excellence and evaluation/support methods.
 - From JANSI: Dispatch reviewers to WANO peer reviews, provide PI information of domestic operators, etc.
 - From WANO: Dispatch overseas peer reviewers, etc.
- JANSI peer reviews are recognized as equivalent to WANO, and equivalence is exercised about once a year, replacing WANO peer reviews on behalf of WANO.

Based on the reflection on the Fukushima Daiichi accident, JANSI drives the operator activities and pursue world's excellence beyond the regulatory framework.

For this reason, JANSI top executives directly informs the CEOs of the operators about the areas for improvement and encourages improvement.

【Peer Reviews】

- **Directly present peer review results (areas for improvement, etc.) to the operator CEOs**
(Regarding common issues, the content will be shared at the CEO session (a place for exchanging opinions exclusively for the operator CEOs, hosted by JANSI))

【Safety Culture】

- **Directly present the safety culture diagnosis results to the operator CEOs**

【Power Plant Integrated Assessment】

- **Present the integrated assessment results (5-grade evaluation) at the CEO session (Peer pressure)**

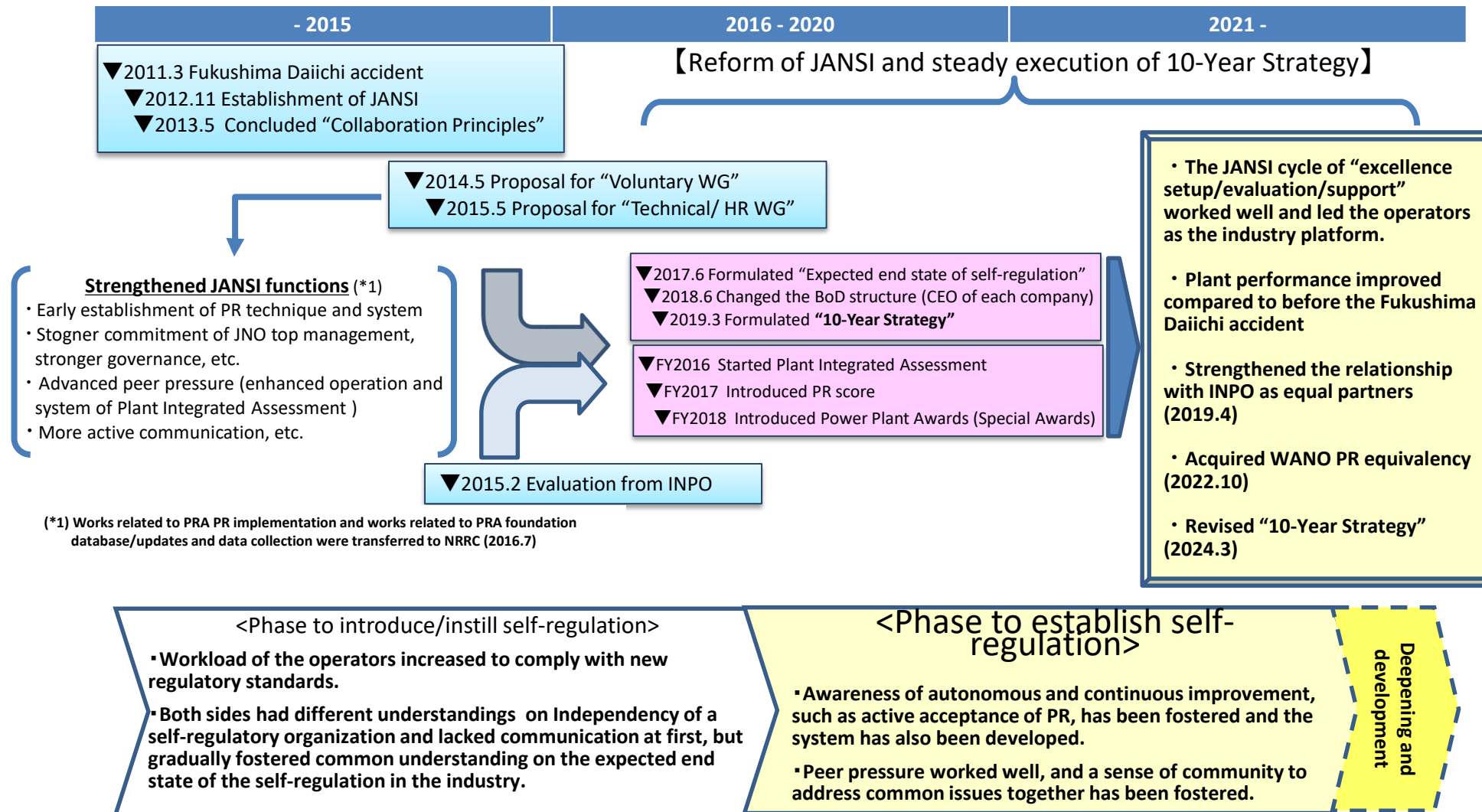
【Recommendation for safety improvement measures】

- **Directly present the consideration of safety improvement measures to the operator CEOs**

【CEO session, CEO training, Dialogue】

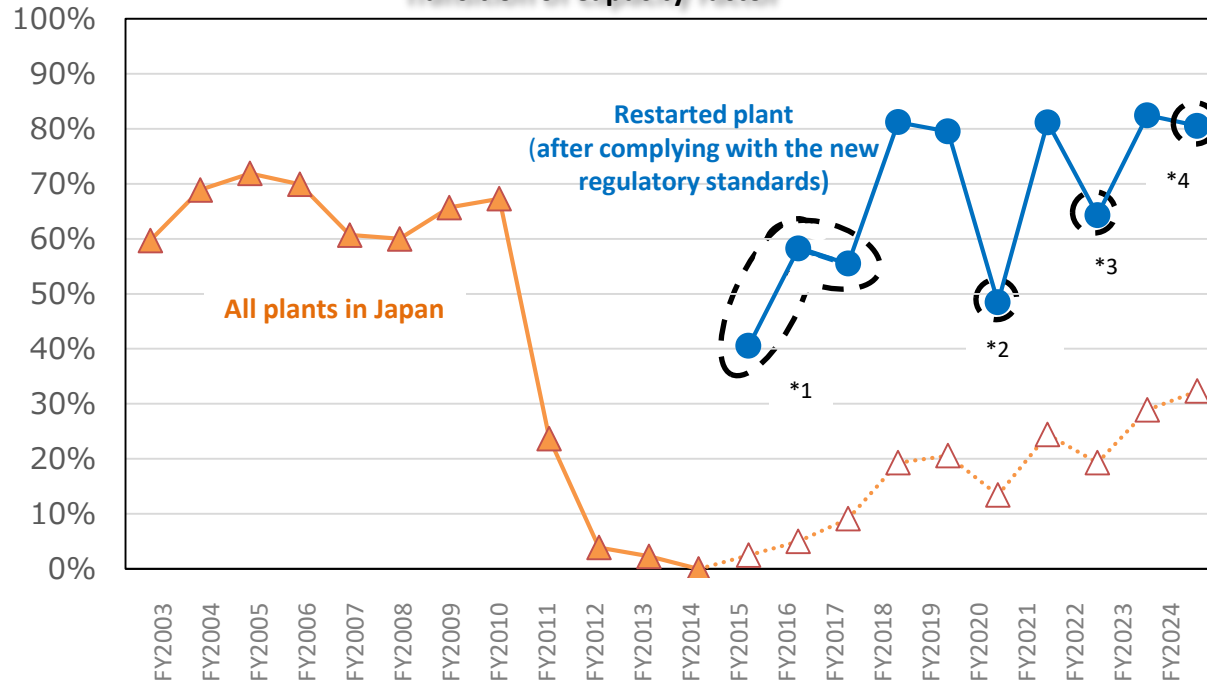
- **Direct exchange of opinions with the operator CEOs toward the realization of self-regulation**

- In order for peer reviews, safety culture diagnosis, and various support activities to be continuously effective, it is important to maintain a sound environment surrounding these activities.
- Frank dialogue with the operators is indispensable for observing/evaluating the operator performance, and its content is maintained on the premise that it is kept private and used productively.



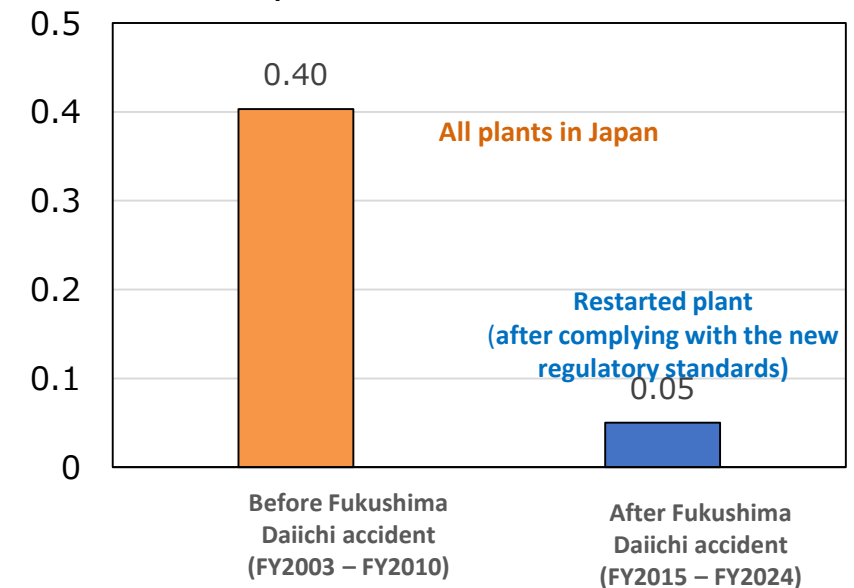
- Restarted plants are operating smoothly, with fewer unplanned shutdowns after Fukushima Daiichi accident (1F accident)
- It is considered that in addition to initiatives for improvement of operators' performance, restart assistance by JANSI, evaluation by peer reviews, utilization of OE information are functioning effectively and contribute to improvement at the restarted plants.

Transition of Capacity Factor



- *1: The capacity factor for FY2015-FY2017 is low mainly due to operation starting in the middle of the fiscal year (FY2015: Sendai Unit 1, 2, Takahama Unit 3; FY2016: Ikata Unit 3; FY2017: Takahama Unit 4, Ohi Unit 3, Genkai Unit 3) and shutdown due to provisional injunction to halt operation (FY2015-2017: Takahama Unit 3).
- *2: The capacity factor in FY2020 is low mainly due to specialized safety facility installation work (Sendai Unit 1, 2, Takahama Unit 3, 4) and provisional injunction to halt operation (Ikata Unit 3).
- *3: The capacity factor in FY2022 is low mainly due to specialized safety facility installation work (Genkai Unit 3, 4, Takahama Unit 3, Mihama Unit 3) and PR negative flux rate trip (Takahama Unit 4).
- *4: The capacity factor is low mainly due to operation starting in the middle of the fiscal year (Onagawa Unit 2, Shimane Unit2).

Unplanned shutdown of nuclear reactors



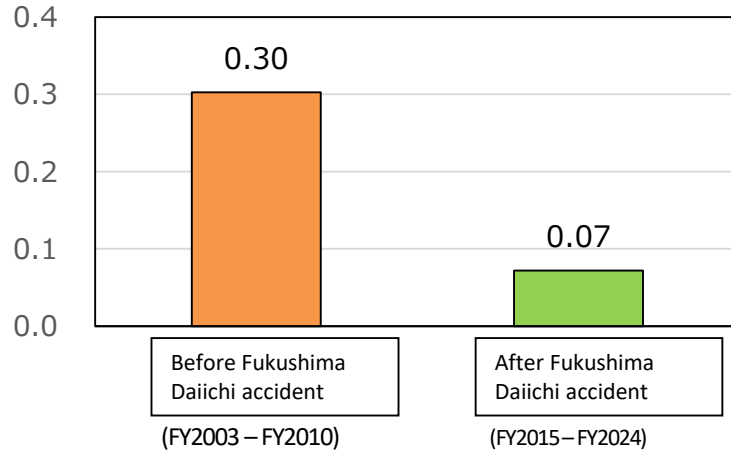
(Note)

- “Before the Fukushima Daiichi accident”, extracted events of unplanned shutdown subject to all plants in Japan from FY2003 (when NUCIA started operation) to FY2010 (when Fukushima Daiichi accident occurred, showing operating hours per 1 reactor per year).
- “After the Fukushima Daiichi accident”, extracted events of unplanned shutdown from FY2015 to FY2024 subject to restarted plants complying with the new regulatory standards, showing operating hours per 1 reactor per year.

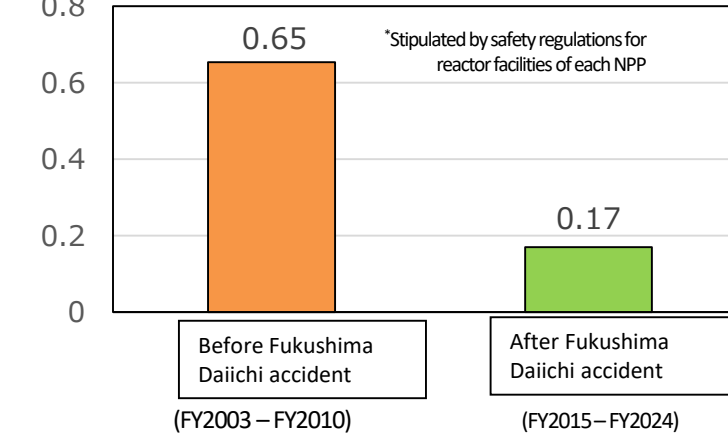
(Source): Japan Atomic Industrial Forum Website, Nuclear Information Archives (NUCIA)

- In overall plants in Japan (including long-term shutdown plants), events requiring reporting based on the laws have been improved after Fukushima Daiichi accident.
- Operators and JANSI are addressing improvement by discussing common challenges. Improvement measures for industrial accidents/fires have been reviewed and make efforts for controlling.

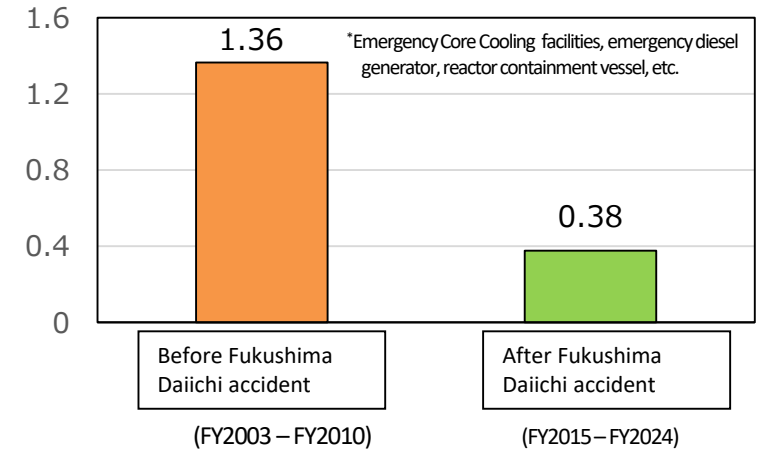
(Case/reactor, year)

Events Requiring Reporting

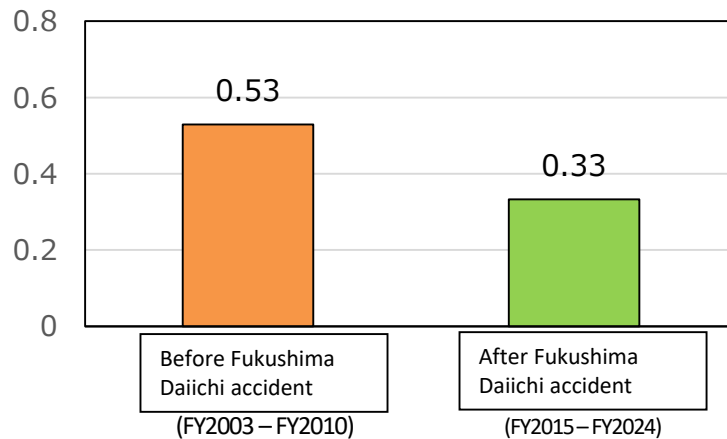
(Case/reactor, year)

Deviations from Limiting* Condition for Operation


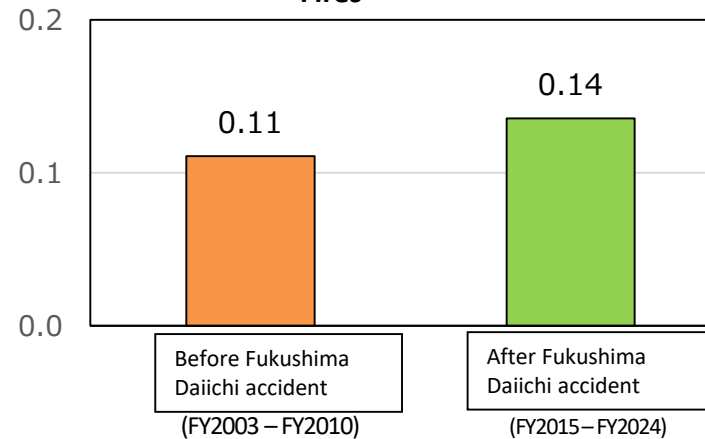
(Case/reactor, year)

Important Facility* Failures

(Case/reactor, year)

Industrial Accidents

(Case/reactor, year)

Fires

(Note)

- “Before the Fukushima Daiichi accident”, extracted events subject to all plants in Japan from FY2003 (when NUCIA started operation) to FY2010 (when Fukushima Daiichi accident occurred), showing operating hours per 1 reactor per year.
- “After the Fukushima Daiichi accident”, “ extracted events from FY2015 to FY2024 subject to all plants in Japan complying with the new regulatory standards, showing operating hours per 1 reactor per year.
- Decommissioning plants are not in subject after decommissioning.

(Source)

Nuclear Information Archives (NUCIA)

The list of JANSI Board Members

Director/Auditor	Name (titles omitted)	Affiliation
Director, Chairman	William Edward Webster Jr.	
Representative Director, President & CEO	Isao Kato	
Director	Kazuhiro Ishiyama	Representative Director & President, Tohoku Electric Power Company
Director	Hitoshi Kanno	Representative Director President and Chief Executive Officer, J-Power
Director	Tomoaki Kobayakawa	Representative Executive Officer and President, TEPCO Holdings Inc.
Director	Susumu Saito	President and Director, Hokkaido Electric Power Company
Director	Kengo Nakagawa	Representative Director, President & Senior Managing Executive Officer, Chugoku Electric Power Company
Director	Kingo Hayashi	President and Director, Chubu Electric Power Company
Director	Masaru Nishiyama	President and Chief Executive Officer Kyushu Electric Power Co., Inc.
Director	Naohiro Masuda	Executive President and CEO, Japan Nuclear Fuel Limited
Director	Koji Matsuda	Representative Director & President, Hokuriku Electric Power Company
Director	Yoshihiro Miyamoto	Director and President, Shikoku Electric Power Company
Director	Mamoru Muramatsu	President, The Japan Atomic Power Company
Director	Nozomu Mori	Director, Representative Executive Officer, President Kansai Electric Power Company
Auditor	Yasunori Inada	Vice President and Executive Officer, CEO of Nuclear Energy Business Unit, Hitachi, Ltd.
Auditor	Hajime Yamazaki	President & Representative Director, Global Nuclear Fuel-Japan

ATENA: Atomic Energy Association

Established in 2019 as a new organization that plans effective safety measures and promotes introduction to the sites of nuclear operators, while effectively utilizing the knowledge and resources of the entire nuclear industry and engaging in dialogues with the regulatory authority, etc., for the purpose of establishing autonomous and continuous efforts in the nuclear industry.

CNO: Chief Nuclear Officer**INPO: Institute of Nuclear Power Operations**

The operators' self-regulatory organization established in 1979 by the U.S. nuclear operators for the purpose of promoting a high level of safety and reliability in commercial nuclear power generation, as a lesson learned from the TMI (Three Mile Island) nuclear power plant accident that occurred in March 1979.

JANSI: Japan Nuclear Safety Institute

An organization established in FY2012 under the consensus of the Japanese nuclear industry as an organization that untiringly pursues the world's highest level of safety in order to prevent any events similar to the TEPCO Fukushima Daiichi Nuclear Power Station accident.

NRA: Nuclear Regulation Authority**NRRC: Nuclear Risk Research Center**

Established in 2014 as a research and development center for developing the technologies and expertise necessary for initiatives by nuclear operators to tirelessly improve the safety of the use of nuclear power generation.

SR: Senior Representative - A representative who will be JANSI's general contact point for stations

TCP: Technical Contact Point - JANSI's contact point for stations in 15 areas of expertise

WANO: World Association of Nuclear Operators

A global organization established in 1989 with the aim of improving the safety and reliability of nuclear power plant operations through friendly competition and exchanges among the nuclear operators worldwide in the wake of the Chernobyl nuclear power plant accident.

CAP: Corrective Action Program

Mechanism for picking up nonconformities in the organization and leading to recurrence prevention as well as prevention.

CM: Configuration Management

The system engineering task or process for establishing and maintaining the scope, performance, functional and physical requirements, design, and operational information throughout its life.

OE: Operating Experiences - Information on operating experience including troubles**Peer Pressure**

A mechanism for improving safety through mutual check and balance by holding discussions on safety improvement of the entire operators based on further identification of/response to improvement items and its results through peer reviews, based on the notion that "We are in the same boat" and that the whole nuclear industry is influenced by the performance of each other.

Peer Review

Intended to improve the safety and reliability of station office through experts' visit to power plants and review (evaluation) of activities pertaining to ensuring the safety (nuclear safety, radiation safety, occupational safety, etc.) and reliability of the station office from their professional standpoint. In the nuclear industry, WANO and JANSI conduct peer review of power plants at a fixed frequency.

PI: Performance Indicator - Power plant performance indicator**PMCM: Performance Monitoring & Continuous Monitoring**

Constantly grasps the status of power plant performance from performance monitoring system data and various information.

RIDM: Risk-Informed Decision-Making – Decision making utilizing risk information

A decision-making process currently being undertaken by the operators towards implementation, which aims at a more rational decision-making by integrating findings from Probabilistic Risk Assessment (PRA) in addition to the conventional deterministic assessment.

SAT: Systematic Approach to Training

Systematically performs training program design and effectiveness evaluation by starting with business analysis and listing necessary knowledge and skills.

TPT: Team Performance Improvement Training - Team performance improvement training for operators



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