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# Resolution Item 1

## Approval on FY2021 Business Report and Financial Statements



# 1. FY2021 Activity Status (Main Actions)

Main Actions	FY2021 Activity Status (Items with “●” are related to Highly Focused Activity)
(1) Effective and efficient implementation of peer reviews (PR)	<ul style="list-style-type: none"> <li>● Ensure to implement power plant PR (4 NPPs: Onagawa, Ohi, Takahama, Genkai)</li> <li>● Continue to take measures to obtain WANO-PR equivalency (Meeting to promote assessment are held twice a month with WANO London office).</li> <li>● Effective and efficient implementation of PR (Hold workshops for the purpose of training/capacity building of reviewers)</li> </ul>

## ○Peer Review

- Conducted 25 times since the founding of JANSI (2012)

### <The Role of JANSI Peer Review>

- Evaluate the safety improvement activities of the operators
- Create a mechanism for the top management of the operators to commit to improvement through peer reviews



### <Desired End States>

- Based on the premise that there is a feeling of trust between the power plant (interview content, reports, and other information will not be disclosed)
- Conduct “quality peer reviews” that will lead to improvements in power plants
- Continuous involvement through “evaluation and support”
- Ensure “independence”
- Seek “highest excellence” for JANSI itself too



**Pursue the World’s Highest Level of Safety and Reliability**

- Now under assessment for WANO equivalency.

Peer Review Track Record of the Past 3 Years			FY2021 Track Record
FY2018	FY2019	FY2020	
Ikata Kashiwazaki Kariwa (5-7) Sendai Tsuruga	Kashiwazaki Kariwa (1-4) Shika Ohi Hamaoka	Ikata Tokai Daini  (Onagawa and Tomari were postponed due to COVID-19 pandemic)	Onagawa Ohi Takahama Genkai



## Main Actions

## FY2021 Activity Status (Items with “●” are related to Highly Focused Activity)

(2) Strengthen daily monitoring of plant performance

- Implementation of Feasibility Study Phase 2 for performance monitoring system construction (PM&Cont.M). (Partial trial will be conducted at the same time as the full-scale operation of WANO-enhanced PM (ePM) in the second half of FY2022.)
- Utilization of PI (Provide WANO-PI quarterly, collect/evaluate voluntarily-set common PI)

(3) Continuously improve and conduct Integrated Assessment for nuclear stations

- Operation of plant integrated assessment (sharing of integrated assessment results based on FY2020 results)
- Operation of power plant commendation (no plant commendation for this time)
- Maintenance of past PI data (including recommended voluntary-set PI data).

\*Conducted Integrated Assessment from FY2016.

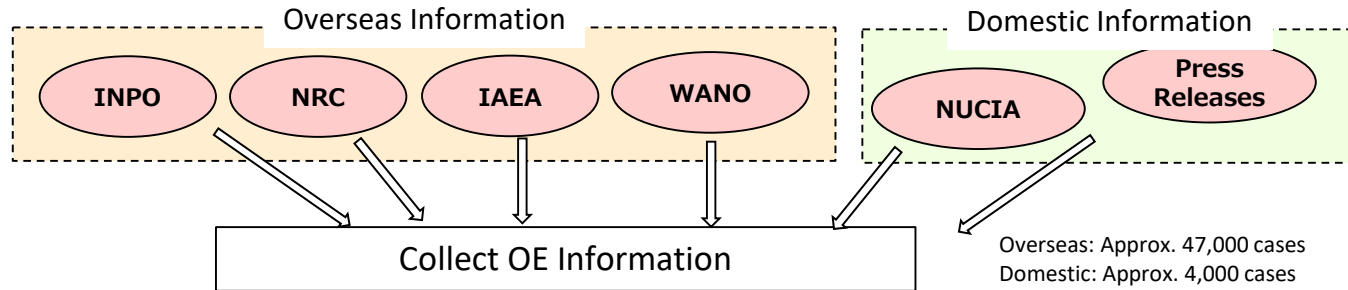
- Conducted assessment based on the previous FY's results and shared information in CEO Session
- Power plant special commendation  
(FY2018: 3 plants, FY2019: 1 plant, FY2020: 3 plants, FY2021: None)



Main Actions	FY2021 Activity Status
(4) Upgrade OE tasks and actively provide information	<ul style="list-style-type: none"> <li>○Collect/analyze OE information internally/externally and release documents to operators according to the significance (Issued information notices (2 cases))               <ul style="list-style-type: none"> <li>▪ "Information sharing related to fatal accidents caused by CO2 emission from CO2 fire extinguishing equipment that occurred in the general industries"</li> <li>▪ "Information sharing related to troubles of the U.S. Callaway 1 Condenser Air Off Take System Radiation Monitor Drain Piping Loop Seal Loss (PWR WH)"</li> </ul> </li> <li>○Study for improvement/upgrade of OE tasks               <ul style="list-style-type: none"> <li>▪ Strengthening of OE information sharing (Enhancement of NICS registration function, continued full-scale operation of private database)</li> <li>▪ Strengthening the utilization of OE information (Deepening of analysis method (improvement of OE analytical ability and trend analysis))</li> <li>▪ Enhancement of OE information processing (Consideration of OE-PI index enhancement (strengthening index enhancement, system construction))</li> </ul> </li> </ul>

## Utilization of Operating Experience Information (OE)

- Collect and analyze domestic and overseas OE information, and present measures etc. to the operators as necessary
- Domestic OE information is registered in the public database (NUCIA), and if necessary, roll out will be required.



**FY2021 Activity Results**

- Domestic information analysis: 181  
Roll out 42
- Overseas information analysis 4732  
Reference information 54
- Documents of Significance sent: 0
- Documents of Warning sent: 2

Since the founding of JANSI, sent:

- 20 Documents of Significance
- 12 Documents of Warning

## Main Actions

## FY2021 Activity Status (Items with “●” are related to Highly Focused Activity)

(5) Strengthen the support for the operators to resolve shared important issues

- Support for resolving important issues identified in PR (Shift to regular support from FY2022)
  - ① Operations fundamental for shift-operators in accident response simulator training
  - ② Mitigation of fire risk
  - ③ Support for performance improvement
  - ④ Comprehensive support for SAT: (Please refer to the Main Action (13))
- Held Plant Performance Review Meeting (PPRM) (3 times) Report to the Board Meeting
- Support through MA Review Meeting (Held MA Review Meeting (5 times) and mid-loop operation information liaison meeting (1 time))
- Regular contact and visit by Senior Representatives (SR) and support by the technical contact point (TCP) for inquiries from power plants, etc. in each specialized area (Regular communication was carried out from each SR to the relevant power plant in a timely manner, and the status of JANSI's support activities, etc. was communicated).
- Updated Excellence Guideline (Ex-GL) (OP, FP, MA, RP, CY, ES, EP)

(6) Provide support for autonomous safety activity programs

- Support for constructing/operating new fundamental programs of operators
  - ① CAP: Held "CAP Working-level working group" (5 times)
  - ② CM: Held "CM-WG" (4 times)
  - ③ Common Voluntary PI: Held a "Common Voluntary PI Review Working Group" (2 times)
  - ④ RM: (Please refer to the Main Action (11))
- Support for improving the risk sensitivity of station staffs (Education and training to increase risk sensitivity of station staffs: 8 sites, 3 corporate offices)

(7) Provide support for restarting plants

- Provide support such as exchanging opinions with preceding plants in cooperation with WANO (Restarting support for Mihama Unit 3 and conduct questionnaire survey after the support)

(8) Provide support for reprocessing and other facilities

- Support for reprocessing facilities by 11 teams according to Highly Focused Improvement items (Held JANSI progress meeting (8 times), steering meeting (2 times), progress report of support activities for the Board of Directors, etc.)

Main Actions	FY2021 Activity Status
(9) Strengthen oversight function including corporate offices	<ul style="list-style-type: none"> <li>○Support for improving the effectiveness of operators oversight (Please refer to Main Actions (10) and (11))</li> <li>○Participation in WANO CPR (Dispatched reviewers to CPR by Moscow Center)</li> <li>○Implementation of evaluation from the perspective of organizational effectiveness (Started consideration of implementation of evaluation from the perspective of organizational effectiveness)</li> </ul>
(10) Upgrade safety culture diagnosis method	<ul style="list-style-type: none"> <li>○Conduct safety culture diagnosis: 6 places (Higashidori, Ohi, Shika, Onagawa, Toshiba, Fukushima Daiichi)</li> <li>○Support for operators' safety culture fostering/improvement activities (evaluate the self-assessment process of all operators and present the evaluation results. In addition, detailed explanations and opinion exchanges have been conducted with 10 companies so far).</li> <li>○Review of safety culture diagnosis method (Conducted 10Traits based on-site diagnosis, the 7th Safety Culture Questionnaire Survey)</li> <li>○Implementation of safety culture assessment based on PR results (in addition, provided information and evaluation advice for PR)</li> </ul>

### ○Safety Culture Diagnosis

- On-Site Diagnosis: Based on the results of a questionnaire survey every 3 years, it is **conducted every 3 to 4 years** for power plants, major plant manufacturers, and fuel processing manufacturers (Able to hear opinions of the on-site staffs, and grasp the potential problems)  
The interview has been expanded to the corporate offices from FY2020.
- Questionnaire Survey of Safety Culture: Conducted as a **fixed-point observation every 3 years** for Special Members and Associate Special Members

#### 【On-Site Diagnosis】

On-site diagnosis observes and analyzes the target organization from multiple perspectives of organizational culture, and gives a diagnosis on how they are involved in maintaining and improving performance including safety, from an independent and objective standpoint.

Its purpose is to provide an opportunity for the target organization itself to recognize its own situation in relation to safety more correctly, and to improve its learning ability as an organization pursuing excellence in safety.

世界最高水準の安全性の追求

Track Record Classification	On-Site Diagnosis Track Record of the Past 3 Years			FY2021 Track Record
	FY2018	FY2019	FY2020	
NPPs JNFL	Fukushima Daini, Takahama, Shimane, Genkai, Oma	Tokai/Tokai Daini, Hamaoka, Tomari, Kashiwazaki Kariwa, JNFL	Tsuruga, Ikata, Sendai	Higashidori, Ohi, Shika, Onagawa, Fukushima Daiichi
Plant manufacturers Fuel manufacturers	Toshiba	Mitsubishi Heavy Industries	Hitachi-GE Nuclear Energy	Toshiba

# Main Actions

# FY2021 Activity Status

(11) Summarize safety improvement tasks and enrich RM support

- RM system development support (Startup of RM effectiveness evaluation/self-evaluation TF, held RM working-level meeting (3 times))
- Trial of RM review (Held RM trial review at 2 stations (Hamaoka, Sendai))
- Development of safety measures evaluation method (Conducted SA evaluation of Shika Unit 2 at the request of Hokuriku EPCO, FY2020 proposal follow-up report, proposal (No.7) issuance, interim summary of defense in depth level 1-3 and external events review, etc.) \*IAEA SRS-46: IAEA's "Defense in Depth Evaluation of NPPs"
- Development of foundation for evaluation of safety improvement measures (Participation in IAEA SRS-46\* revision CS meeting, etc.)
- JSAR Guideline development (Completed JSAR guidelines creation)

## ○ Safety improvement measures evaluation, recommendation and support

Pursue world's excellence by investigating/collecting the latest findings of the world, and evaluate/support safety improvement measures of each operator.

- A) **Develop evaluation methods** (IAEA's SRS-46 is applied as methods different from those of operators and NRA. Participating in revision of SRS-46)
- B) **Safety Improvement Measures evaluation and recommendation** (1 Defense in Depth level 1-3 recommendation was issued in May 2021. Now following up on the response status of 6 SA (Severe Accident) measures recommendations)
- C) **Survey on Good Practices of Safety Improvement Measures** (Now conducting an overseas survey of issues extracted from the gap with the U.S./Europe. U.S. STS, mid-loop operation, etc.)
- D) **Future Activities** (Evaluation using the SRS-46 will be completed in FY2022, overseas surveys and seminars & lectures will be continued)

### [Evaluation of safety improvement measures]

#### A) Development of Evaluation Method

Adoption of IAEA SRS-46 "Assessment of Defense in Depth for Nuclear Power Plants" (1) Independence, (2) Uniqueness, (3) Originality, (4) (Exclusion of) Self-righteousness  
Now participating in the revision of IAEA SRS-46

#### B) Safety Improvement Measures Evaluation and Recommendation

- SA evaluation: Complete for FY2020
- DB-related: Under consideration/FY2021 interim report
- External events: Under consideration/FY2021 interim report
- Identify and consider issues related to safety measures
- Issue recommendations (1 for DB in FY2021, 6 for SAs)
- Follow up on recommendations (follow up on response status every year)

#### C) Survey on Good Practices of Safety Improvement Measures

Now conducting an overseas survey of issues extracted from the gap with the U.S./Europe.

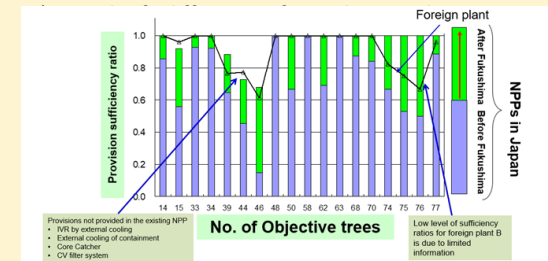
U.S. STS, Mid-loop operation, Digital I&C, External event measures, Source term behavior during SA, etc.

#### D) Future Activities

- By FY2022, evaluate Defense in Depth level 1-3 and measures against external events, and give an overall summary
- Operators support activities such as new findings surveys, effectiveness evaluations, and seminar & lectures held by JANSI will be continued in and after FY2023

### Quantitative Evaluation of Safety Improvement Measures (SA evaluation example)

- Improvement of safety measures before and after compliance with new regulatory requirements
- Identify areas for improvement of safety measures
- Standard comparable to global standard



**Example: Comparison of sufficiency evaluation between domestic PWR plant A and foreign plant B**

## Main Actions

## FY2021 Activity Status

(12) Leadership training for emergency preparedness

[Leadership training]

- Planned and rational implementation of training
  - Systematic implementation of CEO training, CNO training, Senior Management training, Station Manager training, etc.
  - Held "Training Promotion Working Group" (June, November) and shared the training plan while confirming the intentions of the operators such as the scale and timing of the training.

### Training Track Record (Number of people)

FY2018	Fy2019	FY2020	FY2021
266	203 (*1)	128 (*1)	610 (*2)

\*1: In FY2019/2020, a part of the training was canceled due to the COVID-19 pandemic

\*2: Recorded 389 non-technical skill training participants



Online implementation

[Support for nuclear emergency training]

- Activities based on the Nuclear Emergency Training Review Committee
  - Held the emergency training presentation via the Web
  - Held Nuclear Emergency Training Review Committee Meeting B (3 times) and Meeting A (1 time)
  - Seminars and lectures related to emergency response were held
  - Implement JNFL support as an alternative to Nuclear Emergency Training Assistance Visit

Main Actions	FY2021 Activity Status
(13) Educate operators about systematic approach to training (SAT)	<ul style="list-style-type: none"> <li>○Implementation of practical training and power plant caravan               <ul style="list-style-type: none"> <li>▪ For SAT support, there were applications from 19 sites of 11 companies, and provided support for each power plant while confirming the needs of each company (confirmed that the support status will be shared by the "Training Promotion Working Group"). (SAT: <b>Systematic Approach to Training</b>)</li> </ul> </li> <li>○E-learning attendance and promotion of guideline utilization               <ul style="list-style-type: none"> <li>▪ Promote e-learning attendance and utilization of guidelines (145 people attended the e-learning (the cumulative total: 1592 people))</li> </ul> </li> </ul>
(14) Incorporate Fukushima Daiichi lessons learned	<ul style="list-style-type: none"> <li>[Prevention of Fukushima accident from fading]               <ul style="list-style-type: none"> <li>▪ Explain and share the utilization results and good practices of "maintaining conscience of Fukushima Daiichi accident video" in the "Training Promotion Working Group" (November).</li> </ul> </li> <li>[Confirmation of Incorporating the lessons from the Fukushima Accident]               <ul style="list-style-type: none"> <li>▪ Lessons learned from Fukushima Daiichi accident was posted on the member website, and held an online information session for the operators.</li> </ul> </li> </ul>

## ○Annual Conference

▪ 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	2020.3.18 (Cancelled)	2021.3.17	2022.3.23
Number of Participants	—	Approx. 600 (Held Online)	Approx. 600 (Held Online)
Panel Discussion	<p>The event was cancelled in response to the spread of COVID-19 infection and the "Basic Policy for Countermeasures against COVID-19 Infections" announced by the government.</p> <p><u>A tripartite talk was held on the <i>Denki Shimbun</i></u>, related to the theme "improvement of risk sensitivity" scheduled for the day.</p> <p>(Tripartite Talk)</p> <p><b><u>Risk Management from the perspective of Hayabusa2 and Nuclear Power</u></b></p> <p>Yuichi TSUDA: Hayabusa2 Project Leader, Japan Aerospace Exploration Agency            Professor Akira YAMAGUCHI: Nuclear Professional School, School of Engineering, The University of Tokyo            Hiromi YAMAZAKI: President &amp; CEO, JANSI</p>	<p><b><u>Establishment and Progress of Voluntary Continuous Safety Improvement Initiative</u></b></p> <p>(Chairman) Professor Akira YAMAGUCHI, Nuclear Professional School, School of Engineering, The University of Tokyo            Fumihito OGATA: Executive Vice President, West Japan Railway Company            Jeffrey B. Archie: Former CNO, South Carolina Electric &amp; Gas Company (SCE&amp;G)            Yutaka FUJII: President &amp; Director, Hokkaido Electric Power Company            Kazuhiro IKEBE, President &amp; CEO, Kyushu Electric Power Company            Hiromi YAMAZAKI: President &amp; CEO, JANSI</p> 	<p><b><u>Enhancement of Resilience in Nuclear Safety -New Perspective for Plant Operation-</u></b></p> <p>(Chair) Kyoko OBA: Deputy Chief Engineer, Japan Atomic Energy Agency (JAEA)/Associate Professor, Nagaoka University of Technology            Dr. Erik HOLLNAGEL: Professor Emeritus, Linköping University            Jacques REGALDO: Senior Vice President, EDF            Dr. Kazue NAKAJIMA: Executive Director, Japan Organization of Occupational Health and Safety            Keisuke NAGAI: Director and President, Shikoku Electric Power Company            Hiromi YAMAZAKI: President &amp; CEO, JANSI</p> 

# Main Actions

# FY2021 Activity Status

(15) Foster operators' awareness as owner of self-regulation by having discussion among executives

- Activities for understanding corporate office top management and station executives
  - Held Board Meeting (5 times), CEO Session and CNO Session (4 times each)
  - Held interviews between the President&CEO and the newly appointed CEO/CNO (6 times)
  - Conducted leadership training for corporate office top management and station executives
  - Conducted web interviews between the Planning Department GM and the newly appointed station managers (Oma, Ohi, Genkai, Shika)
  - Conducted interviews with the station manager and other executives during the joint assessment
  - Dissemination of various contents to the station working-level (issued "JANSI ACTIVITIES" (6 times), issued "JANSI Annual Report 2020," published articles in Denki Shimbun, etc.)



(16) Operator support in emergency, e.g. issue of significant event notice

- Cooperating with the operators and WANO-TC, participation in the operator-WANO training
  - Incorporated areas of improvement for training in line with organizational reform in "JANSI Power Plant Emergency Preparedness Guidelines" (4th revised edition)
  - Based on the above guidelines, participated in the operators nuclear emergency preparedness drill together with the operators and WANO-TC.

(17) Secure medium/long-term human resources and development of human resource development program

- Securing medium- to long-term personnel (Human resources request through "Staffing Planning Meeting")
- Appropriate staffing (newly establish competence evaluation system)
- Maintenance and improvement of staff competence (Maintenance of staff training system)
- Sharing awareness and values within JANSI through knowledge management (KM) (Enhancement of information held by those who left the company, training textbooks, etc.)

Main Actions	FY2021 Activity Status
(18) Raise awareness as self-regulatory organization by the executives	<ul style="list-style-type: none"> <li>○ Small-group dialogue               <ul style="list-style-type: none"> <li>▪ Conduct dialogue with the President&amp;CEO (targets are transferees and all GLs: 40 people), and send a message from the President&amp;CEO at each dialogue</li> <li>▪ Individual dialogue between the Chairman and GMs</li> </ul> </li> <li>○ Employee awareness survey               <ul style="list-style-type: none"> <li>▪ Follow-up on the improvement status for proposals issued based on the results of FY2020 awareness survey</li> </ul> </li> </ul>
(19) Strengthen collaboration with NRA	<ul style="list-style-type: none"> <li>○ Gathering information on the conclusion of a memorandum of understanding with NRA at WANO, etc. (There is no progress in concluding MOU with NRA at WANO and JANSI)</li> <li>○ Held "OE Regular Information Exchange Meeting" with NRA (4 times)</li> </ul>
(20) Build peer relationships with WANO, INPO and other international organizations	<ul style="list-style-type: none"> <li>○ WANO-related (World Governing Board Meeting (3 times), Tokyo Center Board Meeting (3 times), WIO Conference (2 times) participation)</li> <li>○ INPO-related (Held US-Japan CNO Leadership (LS) Meeting, participated in CEO Conference, held INPO-JANSI Meeting)</li> </ul> <div data-bbox="1342 753 1740 1011" style="text-align: right; margin: 10px 0;"> </div> <ul style="list-style-type: none"> <li>○ Electricity of France (EDF) related (renewal of cooperation agreement with EDF)</li> <li>○ International organizations related such as IAEA, OECD/NEA, etc. (participate in ISRSC, etc.)</li> <li>○ International Advisory Committee related (conducting web conferences with committee members and holding International Advisory Committee Meeting)</li> </ul>

## 2. FY2021 Activity Status (Technology Basis)

Technology Basis	FY2021 Activity Status
(A) Support through autonomous guideline development	<ul style="list-style-type: none"> <li>○Development of Vessel Internals Inspection &amp; Evaluation Guidelines: Held Review Meetings (3 times)</li> <li>○Development of EQ Management Guidelines: Held Review Meetings (2 times), EQ Management Seminar</li> <li>○Development of guideline for Quality Improvement of Analysis work: Held Review Meetings (2 times), published the third edition of revised guidelines, held information session, completed hand-off to FEPC at the end of March 2022.</li> </ul>
(B) Development of maintenance technology basis	<ul style="list-style-type: none"> <li>○Industry-wide platform for maintenance engineering, dissemination of technical basis information (improved the maintenance information library, maintenance/enhancement of database, enhancement of on-site engineer network activities, maintenance of deterioration mechanism, etc.)</li> <li>○Revision support for maintenance management rules, etc. (revision support for maintenance management rules (JEAC4209))</li> </ul>
(C) Organizational effectiveness support (QMS)	<ul style="list-style-type: none"> <li>○Support through QMS committee: Committee held (3 times)</li> <li>○Support through Internal Audit Committee: Committee held (3 times)</li> <li>○Training for improvement of quality assurance activities: QA new manager training, auditor training (once each)</li> <li>○Support for revision of JEAC4111: At the "special lecture" (The Japan Electric Association), was in charge of the lecturer</li> </ul>
(D) Organizational effectiveness support (Human Performance)	<ul style="list-style-type: none"> <li>○Held Human Performance Improvement (HPI) Training: Basic, Advanced, RCA, Technical (4 times in total)</li> <li>○Continuous study of training for HF specialist education: Study through QMS Task Review Meeting (3 times), held "HF Specialist Meeting"</li> <li>○Create safety awareness materials (posters): 3 times</li> <li>○Provide results of HF analysis to PR personnel as reference information: 4PR (Ohi, Genkai, Takahama, Mihama)</li> </ul>
(E) Manufacturer support	<ul style="list-style-type: none"> <li>○Ensure to conduct manufacturer PR: 3 places</li> </ul>

Technology Basis	FY2021 Activity Status
(F) Operation Supervisors Certification tasks	<ul style="list-style-type: none"> <li>○Operation Supervisors Certification: 4 times</li> <li>○Support for the operator experience training: Continued long-term acceptance (No new short-time acceptance)</li> <li>○Enrich certifications : Explanation on knowledge and skills (KSA) catalog for emergency personnel, maintenance of standard KSA catalog for BWR operators, explanation of revision of JEAC4804 (Operation Supervisors Certification Regulations), etc.</li> </ul>
(G) Maintenance Skill Certification tasks	<ul style="list-style-type: none"> <li>○Granting certification and issuing certificates as per operators' request: Written exam: 23 people passed, Practical exam: 28 people passed, Exam certification: 28 people, Renewal: 893 people, Skills training (renewal pending): 170 people</li> <li>○Consideration of transferring tasks to other organizations: Completed transfer of duties to JAPEIC</li> </ul>
(H) Support development of codes and standards	<ul style="list-style-type: none"> <li>○Promotion of codes/standards maintenance: <ul style="list-style-type: none"> <li>▪ Participation in codes/standards formulation meetings (committee, expert committee, subcommittee, review meeting, etc.) of the Atomic Energy Society of Japan, Japan Electric Association, and Japan Society of Mechanical Engineers using the WEB system.</li> <li>▪ Actively plan, participate, and present in academic conferences, domestic external seminars, lectures, and training sessions held on the Web.</li> </ul> </li> <li>○Smooth transfer to FEPC: <ul style="list-style-type: none"> <li>▪ Technical support for relevant utilities, cooperation in technical studies related to codes and standards, etc.</li> </ul> </li> </ul>

# 3. Corporate Overview

## (1) Change of members

	March 31, 2021	Increase/Decrease	March 31, 2022
Number of members	129 companies	No increase or decrease due to admission and withdrawal from membership	129 companies

## (2) Staff

	March 31, 2021	Increase/Decrease	March 31, 2022
Number of staff (*)	204	Decrease of 26	178

(\*) : including Directors (full-time), Executive Officers