Summary of Press Conference Comments Made by Satoru Katsuno,
FEPC Chairman, on October 21, 2016

I am Satoru Katsuno, Chairman of the Federation of Electric Power Companies, or FEPC.

First, I apologize deeply from the bottom of my heart for the inconvenience and trouble caused to the people due to the power outage that occurred in Tokyo on 12th of this month.
Currently, investigation for the cause is underway in TEPCO Power Grid.

In addition, all the electric power companies have received instructions from the Ministry of Economy, Trade and Industry for emergency inspection, etc., of the underground transmission cables that are suspected to have aged.

We will handle this with certainty, and being responsible for electricity, an essential lifeline in people's lives, we will continue to strive for stable power supply in the future.

Today, I would like to talk about "Our thoughts on the discussion about the Electric Power System Reforms", "Initiatives towards the enhancement of Nuclear Emergency Preparedness", and the "Status of spent fuel measures".

1. Our thoughts on the discussion about the Electric Power System Reforms

To begin with, as the first point, I would like to talk about "Our thoughts on the discussion about the Electric Power System Reforms".

As explained earlier, the government has established a "Subcommittee on the policies for the accomplishment of the Electric Power System Reforms", in order to develop a mechanism to encourage handling of public issues, which ought to be realized even under liberalization; and measures for further revitalization of competition.

In the first subcommittee meeting held on the 27th of last month, along with presenting the report regarding the current status of the Electric Power System Reforms, the challenges and the course of action for accomplishing the reforms were indicated, and currently, specific investigations are being carried out for each of those challenges.

Regarding the Electric Power System Reforms, we would like to actively contribute to the detailed investigation to ensure that the reforms are absolutely beneficial to the customers.

To begin with, with respect to handling public issues under liberalization, while the Electric Power System Reforms progress, we believe that there are some challenges that are still outstanding, such as the development of a mechanism and rules for stable supply, and the stability of supply and demand of electricity.

In particular, along with the introduction and expansion of renewable energy and liberalization, from the view point of responding to insufficient adjustment capacity, supply capacity, reserve capacity, etc. that are evident in Europe and the United States, we believe that a system needs to be designed for maintaining stable supply in Japan as a whole, including a mechanism for securing the capacity mechanism and adjustment capable market, etc.

Meanwhile, along with initiatives to provide new services or to diversify the rates menu for realizing a competitive

market, we have been promoting voluntary efforts towards the revitalization of wholesale electric power market, although under a difficult demand-supply situation.

Therefore, in the future, while discussing the further competition revitalization measures, we hope that it will be based on the evaluation and investigation of our initiatives so far.

Moreover, regarding the baseload power supply market, which is currently being investigated, although discussions are being carried out from the view point of securing power supply access for the new electric power, I would like to request for a discreet discussion, so as to ensure stable operation of such power supplies with imperative steady supply, and to ensure that it does not become a hindrance in future power supply investments.
In addition, as a way of finance and accounting based on liberalization, although the taxation method of decommissioning accounting system and corporate business tax have been cited as the investigation items of the working group, I would like to request that the investigation of future systems be carried out while giving sufficient consideration to the background and objective with which the respective systems have been introduced.

Although we will actively cooperate with this subcommittee, during the actual discussion, I request that public issues that have just been mentioned, be investigated along with measures for revitalization of competition.

2. “Initiatives towards the enhancement of Nuclear Emergency Preparedness” and the “Status of spent fuel measures”
And now, as the second point, let me talk about the “Initiatives towards the enhancement of Nuclear Emergency Preparedness” and the “Status of spent fuel measures”.

First, let me talk about “Initiatives towards the enhancement of Nuclear Emergency Preparedness”

Based on the “Concept of enhancement of Nuclear Emergency Preparedness”, which was determined in the Nuclear Power related Cabinet Meeting conducted in March this year, nine electric power companies, JAPC, and J-Power reported about the current status of their initiatives and their plan to the Minister of Economy, Trade and industry in April, and yesterday the current status of the initiatives in this half year period were reported.

“Document 1” that you have at hand was announced yesterday. Based on the instructions that we have received yesterday from the Minister, we will continue to undertake initiatives for enhancing Nuclear Power Emergency Preparedness, and to explain widely to the people of the community along with the local residents near plant siting areas about these initiatives.

Next, I will talk about “Spent fuel measures”.

The nine electric power companies and J-power reported about the current status of their initiatives this year to the Minister of Economy, Trade and Industry, in the “Second Spent Fuel Measures Promotion Conference” held yesterday.

“Document 2” that you have at hand was announced yesterday as well. Every company has carried out efforts towards the expansion of the storage capacity of spent fuel, based on its objectives, and in addition, all the operators have been carrying out technical investigation and activities for improving understanding.

We will continue to steadily move towards executing the plan and along with obtaining the understandings of the local residents, we will take the necessary measures in a safe and systematic manner.

3. Establishment of a Spent Fuel Reprocessing System

Finally, I would like to say a few words on the “Establishment of a Spent Fuel Reprocessing System”.

In response to the establishment and promulgation of the methods of contributing to reprocessing, etc. in May this year, preparations were made for the establishment of the "Spent Fuel Reprocessing System" with the presidents of the nine electric power companies of Japan and JAPC, who run the nuclear power business, as the founders; and the system was inaugurated on the 3rd of this month.

The “Spent Fuel Reprocessing System”, has been established as a part of organizational measures for developing a mechanism for steady and effective implementation of reprocessing of spent fuel, etc., which is a national policy, even under the new business environment.

We will contribute to the capital required for reprocessing, etc., as part of this system, and will continue to extend necessary support to JNFL and the system, from the technical and personnel perspectives.

Yesterday, the Minister of Economy, Trade and Industry has requested us to make steady efforts for the implementation of the Nuclear Fuel Cycle. From now on, we will continue to carry out reprocessing with certainty, along with the reprocessing system and the JNFL, while obtaining the understanding of the local residents living in and around Aomori Prefecture and Rokkasho Village, which are the plant siting areas, as well as a broader section of society.

This concludes my segment of today’s media conference as the chairman of FEPC. Thank you very much.

Document 1

Status of initiatives undertaken by operators pertaining to the "Approach towards enhancement of nuclear disaster preparedness"

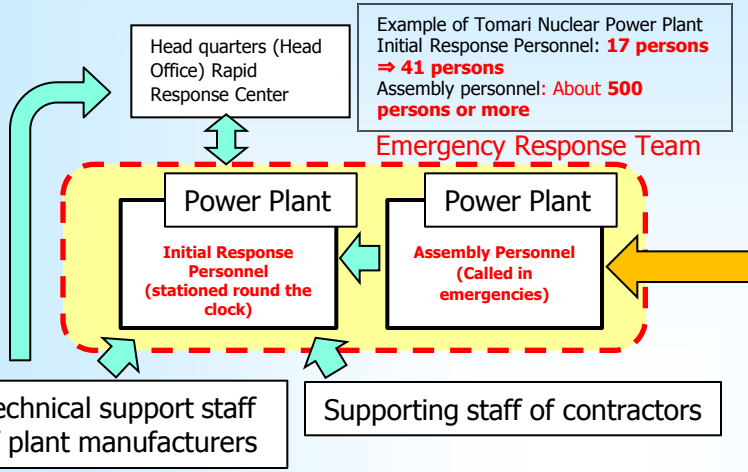
October 20, 2016

Federation of Electric Power Companies of Japan

Initiatives for enhancing the accident convergence action plan in the nuclear power plants

① Strengthening the system for nuclear accident convergence activities

・Major increase in the number of initial response personnel and assembly personnel, who carry out accident convergence activities



② Reinforcement of facilities and equipment for accident convergence

・Example of enhancement of power supply in the Takahama Nuclear Power Plant

Enhancement of power supply

○Enhancement of external power supply or multiplexing and diversification of internal power supply

External power supply (Already installed)

Being prepared for unavailability

Emergency diesel generator (4 units) (Already Installed)

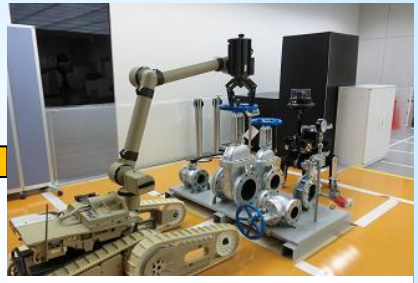
Air cooling type emergency power generating facility (4 units)

Power supply vehicle (5)

No of units is the total number for Units 3 and 4 of Takahama Nuclear Power Plant

③ Establishment of an emergency response support system jointly by the nuclear operators

・Basic robot operation training assuming accident convergence activities



Valve opening/closing operation

④ Maintenance and enhancement of accident response capacity through continuous education/training

・ Implementation of ICS based training (Tokyo)
・ Improvement of training contents through blind type training etc.

Training scene at Nuclear Disaster Response Head Quarters

Initiatives undertaken for enhancement

① Strengthening of the system
・Establishment of SA team (Hokkaido) and other items
Special teams for handling severe accidents (Abbreviation SAT)

③ Development of Emergency Response Center in Mihama Nuclear Power Plant
・Start of full-scale operations in December this year
・Expansion and improvement of equipment and materials
(Provision of additional equipment such as 2 Radio controlled helicopters, 3 heavy wireless equipment, etc.)

④ Accumulation of consistent training results
・Improvement/reinforcement of education and training
・Improvement/reinforcement of nuclear disaster training
・Combined training with Emergency Support Center

Initiatives for enhancing the nuclear disaster preparedness plan

① Supporting residents evacuation during nuclear disasters

- Example of Tomari Nuclear Power Plant

Participated in the Local Working Committee for Nuclear Emergency Preparedness as an observer and reviewed individual topics concerning emergency response such as evacuation of residents, etc. from the level of persons doing actual work

Main items which are incorporated in "Emergency Response"
- Protective measures within PAZ zone
- Protective measures within UPZ zone
- Radiation Protection Equipment, materials and fuel supply
- Emergency monitoring
- Medical care during nuclear disasters

② Cooperation between the operators in offsite activities such as emergency monitoring, inspection during evacuation, etc.

▪ Activities based on cooperation agreements between 12 nuclear operators inclusive of 9 power companies, JAPC, JNFL and J-Power.

・Enhancements based on the track record of response to the disaster at Fukushima Daiichi Nuclear Power Plant

Enhancements

As of June 2000
Conclusion of agreement between operators

○ Staff: 44 persons
○ Equipment provided:
- GM Survey Meter
- Dust Sampler
- Monitoring Car

As of April 2016
- Expansion of staff and equipment

○ Staff: 300 persons
○ Equipment provided
- GM Survey Meter
- Dust Sampler
- Monitoring Car
- Personal Dosimeter
- High dose radiation protective clothing
- Full mask
- Tyvek suit
- Rubber gloves

etc.

Initiatives for enhancement

① Materialization of residents evacuation support

▪ Emergency response in Tomari region【Approved in the Nuclear Emergency Preparedness Commission meeting on Oct 14, 2016】

Items	Specific Contents
Support pertaining to transportation capacity	Cooperation in securing welfare vehicles that are insufficient (13 vehicles) as evacuation means for evacuation of persons requiring support within PAZ zone
Support for the inspection during evacuation	Cooperation and support in terms of staff (500 persons) and equipment for inspection and decontamination during evacuation
Supply and support for daily necessities to Radiation Protection Facilities	Cooperation and support by providing emergency food and drinking water (For four days)
Power supply to Off site Centers	Cooperation by providing power supply to offsite centers (Supply of power continuously by power supply car)

② Strengthening cooperation between nuclear operators

Mutual cooperation among 5 companies in Western Japan

Aug 5, 2016 (Cooperation agreement between 4 companies dated April 22, 2016)

Agreement was concluded by 5 companies, namely, Hokuriku, Kansai, Chugoku, Shikoku and Kyushu for mutual cooperation in the nuclear industry

【Agreement contents】
- **Cooperation during nuclear disasters**
- Cooperation in decommissioning
- Cooperation in establishing specific major accidents response facilities

<Collaborative training between nuclear operators assuming nuclear disaster>

Setup and operation of logistics support bases

TV Conference at executive level

Inspection during evacuation

Document 2

Action status for spent fuel storage measures (Overview)

October 20, 2016

The Federation of Electric Power Companies of Japan

Status of efforts made by each companies

○ Common Efforts

Continue offering support through guidance based on the knowledge gained from the review conducted for ensuring conformance with the New Regulatory Requirements for Nuclear Power Plants; directed towards early completion of the Rokkasho Reprocessing Plant, and its safe and stable operation thereafter.

○ Efforts made by each companies

Efforts made towards increasing storage capacity based on the spent fuel measures policy

- ✓ **Announced the construction plan for dry type storage facilities for spent fuel in December 2008; Applied for permission for change in reactor installation license in January 2015**
  At present, the review directed towards obtaining approval is being supported. (Chubu)
- ✓ **Reinforcement of internal systems in order to promote spent fuel storage measures (Kansai)**
- ✓ **Support towards start of operations of the Recycled Fuel Storage Center (Scheduled to start in the latter half of FY 2018 (Tokyo, JAPC)**
- ✓ **Investigation and review pertaining to storage measures (Hokkaido, Tohoku, Hokuriku, Chugoku, Shikoku, Kyushu)**

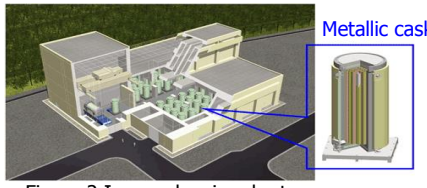


Figure 2 Image showing dry type spent fuel storage facility

Image showing dry type spent fuel storage facility

Status of initiatives undertaken by operators in general (1)

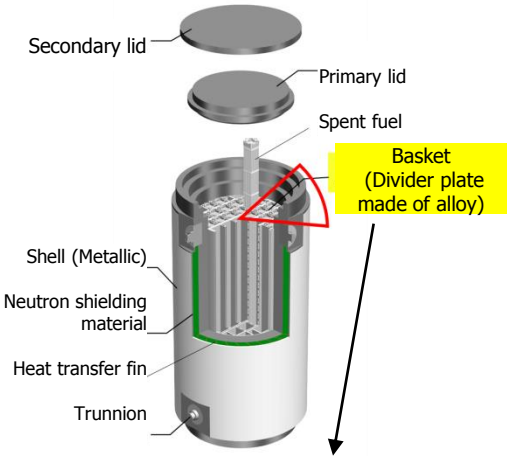
① Technical review on increasing the spent fuel storage capacity

✓ Technical review aiming at improvement of storage efficiency, diversification of storage systems, etc. is in progress

【Examples of Research Topics】

・Development of aluminum alloy for cask basket

Development of aluminum alloy that is lightweight and has a high thermal conductivity, thereby reducing the thickness of the basket and increasing the number of spent fuel assemblies that can be accommodated in each cask.



Using aluminum alloy

・Overseas survey pertaining to long term soundness of metallic cask

Accumulating the latest overseas knowledge and improving reliability

② Technical review for promoting dry type spent fuel storage

✓ Initiatives towards reviewing the technical standards pertaining to dry type storage facilities

Status of initiatives undertaken by operators in general (2)

③ Study directed towards reinforcing the activities for enhancing the understanding regarding the increase in spent fuel storage capacity

- ✓ PR activities by the FEPC
  - ・ Providing explanation to the Media
  - ・ Newly creating pamphlets regarding the initiatives pertaining to spent fuel storage measures
  - ・ Hosting a special page on the website
- ✓ PR activities by various companies
  - ・ Visiting and providing explanation to municipalities and local communities
  - ・ PR activities using interim storage facilities and dry type storage facilities
  - ・ Activities for increasing public understanding etc. using the pamphlets of the FEPC

Pamphlets of the Federation of Electric Power Companies of Japan
"Initiatives for spent fuel storage measures"
(DL is enabled from HP too http://fepc-dp.jp/)

④ Study for facilitating the construction and use of interim and dry type storage facilities

- ✓ Exchanging information such as sharing good practices pertaining to the activities for increasing understanding in areas which are making a progress

Status of response to spent fuel storage measures

Thursday, October 20, 2016
FEPC

1. Introduction

- In the "Action plan pertaining to spent fuel measures" that was presented by the government in October 2015, the government requested that the operators formulate and officially announce a "Spent fuel measures promotion plan" specifying the initiatives of the operators for securing and increasing spent fuel storage capacity, irrespective of whether it is within or outside the power plant premises.
- In response, we have formulated a "Spent fuel measures promotion plan" the plan was presented in the government's Spent Fuel Measures Promotion Conference.
- This document summarizes the status of initiatives undertaken by the operators based on the "Spent fuel measures promotion plan".

2. Status of initiatives undertaken by each company

- Each company continues to extend support such as guidance, etc. based on the knowledge obtained from the review for ensuring conformance of the nuclear power plants with the New Regulatory Requirements, aimed at early completion of construction of the Rokkasho reprocessing plant and its safe and stable operation thereafter.
- Based on the specific spent fuel measures policy of each company, initiatives are undertaken to increase the spent fuel storage capacity. (Attachment 1)

3. Status of initiatives by the operators in totality

○ Under the Spent Fuel Measures Liaison Council, the following initiatives are being undertaken by the operators in totality for increasing the spent fuel storage capacity.

① Technical study pertaining to increasing the spent fuel storage capacity (Attachment 2)

- Joint research and development
  - ✧ Study of technical challenges for storage of fuel that will need to be stored in the future or for diversification of the storage methods focusing on dry cask storage, is underway.

【Research topics】

- ➢ Development of aluminum alloy for cask baskets
- ➢ Study of technical challenges for storage of high burn-up fuel
- ➢ Study of technical challenges for making practical use of concrete casks
- ➢ Overseas investigation pertaining to long-term soundness of metal casks

② Technical investigation for promoting dry storage of spent fuel

- Initiatives directed towards revising the technical standards of the dry storage facility

③ Status of study directed towards the reinforcement of activities for obtaining understanding about the increase in spent fuel storage capacity (Attachment 3)

- PR activities of the FEPC
  - ✧ Explanation provided to the media
  - ✧ Newly creating pamphlets regarding initiatives pertaining to spent fuel storage measures
  - ✧ Hosting of special page on the website
- PR activities of each company

- ✧ Visiting and providing explanation to the local municipalities
- ✧ PR activities using the intermediate storage facility / dry storage facility
- ✧ Activities for promoting understanding using the FEPC pamphlet, etc.

④ Study directed towards promotion of construction and utilization of intermediate storage facilities or dry storage facilities, etc.

- Information exchange pertaining to activities for obtaining understanding in areas where siting is making progress
  - ✧ Sharing of good practices with respect to activities for obtaining understanding, etc.

	Status of actions taken up until now	Future plans
Common between various companies	○ Extending support such as guidance, etc. based on the knowledge obtained from the review for ensuring conformance of the nuclear power plants with the New Regulatory Requirements, aimed at early completion of construction of the JNFL Rokkasho reprocessing plant and its safe and stable operation thereafter. ○ Establishing the design-basis earthquake ground motion for the earthquake / ground investigation at the JNFL Rokkasho reprocessing plant. Consent has by and large been obtained from the regulatory authorities for the remaining investigation of the facility. Investigation is making progress towards construction in the first half of FY 2018. ○ The challenges are being organized and specific study is being carried out for revising the technical standards for promoting dry storage.	○ Support will be continued to be extended for early completion of construction of the Rokkasho reprocessing facility and its safe and stable operation thereafter. ○ Initiatives will be continued to be undertaken for revising the technical standards pertaining to dry storage facilities.
Hokkaido Electric Power Co., Inc.	○ Collecting information on storage measures of other companies, carrying out various investigations and studies pertaining to dry storage casks.	○ Continuing with various investigations and studies.
Tohoku Electric Power Co., Inc.	○ Collecting of information on storage measures, or participation in study conducted by all electric power companies pertaining to dry storage casks, are underway.	○ As for the spent fuel of the company, currently spent fuel can be stored for about 10 years at Onagawa NPP and for 10 years or more at Higashidori NPP. For the moment, the existing storage facilities are being utilized. For future storage, various storage measures such as dry storage facilities, etc. within and outside the site environ will be considered.

	Status of actions taken up until now	Future plans
Tokyo Electric Power Company Holdings Inc.	○ Extending support for starting the RFS business	○ Continuing to extend support for starting the RFS business and its stable operation thereafter.
Chubu Electric Power Co., Inc.	○ The construction plan for the spent fuel dry storage facility was officially announced in December 2008, and in January 2015, an application for permission for change in the reactor installation license for commercial power plants was filed with the Nuclear Regulation Authority.	○ The current measures will be continued, and in addition, considering the status of spent fuel storage, etc., various means of storage such as dry storage facilities within and outside the site environ will be considered (including increasing dry storage facilities). ○ In order to acquire the permission for change in the reactor installation license for commercial power plants, for the spent fuel storage facility, appropriate support will be extended for the review.
Hokuriku Electric Power Co., Inc.	○ Collected information pertaining to storage measures such as by participating in the study conducted by all electric power companies, understanding the storage measures of other electric power companies, etc.	○ Collection of information will be continued.

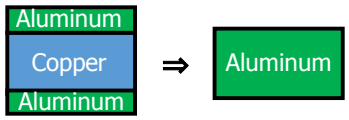
	Status of actions taken up until now	Future plans
Kansai Electric Power Co., Inc.	○ In order to execute the promotion plan "The planned location for the intermediate storage outside Fukui prefecture will be finalized around FY 2020 and the facility will start operation around FY 2030. While executing the plan, efforts will be made to try and be as ahead of the schedule as possible", internal systems were strengthened and activities for obtaining understanding were deployed. Strengthening of the intermediate storage promotion system (on Feb 1 of the this year) ・The Executive Vice President was requested to take on the responsibility of "Intermediate storage promotion in-charge". ・Deployment of full-time General Manager post ・Increase in full-time personnel	○ Various possibilities including joint / collaborative efforts for intermediate storage outside Fukui prefecture, and taking appropriate actions in response, will be continued to be considered.
Chugoku Electric Power Co., Inc.	○ Collects information related to storage measures, participates in the study conducted by all the electric power companies.	○ Studying storage means as required while comprehensively considering the status of the review for ensuring conformance of Shimane Unit 2 with the New Regulatory Requirements, status of progress of decommissioning at Unit 1, status of commissioning of the Rokkasho reprocessing plant.
Shikoku Electric Power Co., Inc	○ Various technical investigations and studies on dry cask storage are underway.	○ Various technical investigations and studies on dry cask storage will be continued.
Kyushu Electric Power Co., Inc.	○ The plan for increasing the storage capacity (re-racking) of the spent fuel storage facility is being studied. (Genkai) ○ In addition, various technical investigations and studies on dry cask storage are underway.	○ The items mentioned on the left will continue to be studied.
Japan Atomic Power Company	○ Extending support for starting the RFS business	○ Continuing to extend support for starting the RFS business and its stable operation thereafter.

Status of initiatives for increasing the spent fuel storage capacity

[Enhancement of storage efficiency]

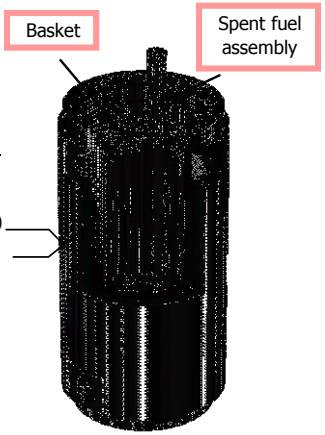
Development of aluminum alloy for cask baskets

- Development of aluminum alloy that is lightweight and has a high thermal conductivity, thereby reducing the thickness of the basket and increasing the number of spent fuel assemblies that can be accommodated in each cask.
  [Development target period: Around FY 2020]



(In the past) (Target)

Basket plate cross sectional image



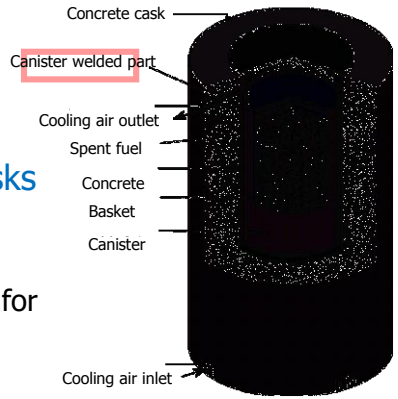
Metal cask

* Basket
Member that supports the spent fuel and maintains distance between the fuels

[Diversification of storage methods]

Studying technical challenges in practically implementing concrete casks

- If there are challenges in practically implementing concrete casks, the soundness of the welded part or means for inspecting it are established and the storage method options are diversified.
  [Development target period: during the mid-2020s]



Concrete cask

[Enhancement of storage efficiency]

Study of technical challenges in storing high burn-up fuel

- Efforts are made to increase the number of spent fuel assemblies that can be accommodated in each cask by revising the restricted temperature of the fuel cladding based on the overseas operational status.
  [Development target period: early 2020s]

	Japan	US
Fuel cladding temperature	≦250 ℃	≦400 ℃

Comparison of US and Japan standards (example of PWR)

[Reliability improvement]

Overseas information research pertaining to the long-term soundness of metal casks

- Regarding the long-term soundness of metal casks and their contents in spent fuel intermediate storage facilities, knowledge from overseas, where storage has been started already is accumulated in an effort to improve reliability.
  [Being implemented on an ongoing basis]

Example: Dry casks that are being stored for research purposes in the Idaho National Laboratory in the US

Status of deliberation for promoting initiatives for understanding associated with the reinforcement of spent fuel storage capacity

	Status of actions taken up until now	Future plans
Initiatives that are common between the companies	○ Visiting and providing explanation to the local municipalities ○ Providing explanation to the media	○ Activities for promoting understanding regarding the necessity and safety of intermediate storage will be continued to be implemented by visiting and providing explanation to the local municipalities.
	○ Producing the FEPC pamphlet pertaining to spent fuel measures, placing it in the PR facility of each company, distributing it to the visitors and using it while provided explanation outside the company (enclosed) ○ Pro-actively posting information on the website of each company, such as posting the amount of stored spent fuel, etc.	○ Provision of information through publicity materials and web sites, etc. will be continued.
	○ Checking the progress of the activities for obtaining understanding carried out by each company, exchanging information such as good practices	○ Good practices will be continued to be shared.
Initiatives undertaken by individual companies	○ Implementing PR activities using the intermediate storage facilities and Tokai II Power Station dry storage facility (TEPCO HD, JAPC) 【Achievement*】 about 230 times	○ Introductory groups from each of the electric power companies will be received by the dry storage facilities for observation on an ongoing basis.
	○ Providing explanation about spent fuel measures using panels in the power plant caravan (implementing PA for the power plant as a whole at the home center, super market, festivals, etc. (Chubu) 【Achievement *】By and large 1 time / month since December ○ In the December edition of the Power Plant Navi (Paper on nuclear power related topics for those outside the company) there was a post on reinforcement of the initiatives for spent fuel measures (Chubu) ○ In the visits and interactive activities, spent fuel measures, etc. is explained as a topic for interaction (Chubu, Kansai)	○ Transmission of information or interactive activities will be carried out on an ongoing basis at appropriate times through pamphlets or direct mail.
	○ Promoting understanding by utilizing the publicity materials and the web site (Kansai) ・Producing pamphlets and DVDs, using those to provide explanation to the visitors or using those during visits. ・Transmission of information via the web site. ・Transmission of information via Facebook ・Displaying at PR facilities	○ Promoting understanding through utilization of publicity material / web site ・Transmission of information through explanation during the nuclear power field trips, holding lecture meetings, publishing and updated PR tools, HP / SNS, etc. will be continued to be considered.

*: Achievements that each company is aware of, as of the end of September 2016, after the official announcement of the plan in November 2015.

FEPC pamphlet
"Initiatives for spent fuel storage measures" (Produced in March 2016)

(Contents)

○ Nuclear Fuel Cycle and spent fuel
- ・Initiatives for spent fuel storage measures
- ・Necessity of the Nuclear Fuel Cycle
- ・Merits of the Nuclear Fuel Cycle

○ Storage method and measures for increasing the storage capacity
- ・Enhancement of spent fuel measures
- ・Spent fuel storage method
- ・Specific examples of increase in the storage capacity

○ Safety of the dry storage container (cask)
- ・Safety of the cask

○ Results and research & development
- ・Overseas results of spent fuel dry storage
- ・Research and development of spent fuel dry storage

(Installation location, recipient)

○ Within FEPC, within the head office of each company / branch office, PR facility of each company

○ Utilizing / distributing while providing explanation to those outside the company such as the media, etc.

○ Distributing to the visitors at the dry storage facility, etc.

Status of study directed towards the reinforcement of activities for obtaining understanding about the increase in spent fuel storage capacity

The electric power operators are promoting the Nuclear Fuel Cycle in which the spent fuel is reprocessed at the Rokkasho reprocessing plant, based on the policy of the government. Based on this idea, it is presumed that the spent fuel is transported out to the Rokkasho reprocessing plant. The power plants have been systematically taking storage measures while ensuring safety, until the spent fuel is transported out.

In the future as well efforts will be made for the completion of said plant, and in addition, initiatives will be undertaken based on the policy on measures summarized in the table below.

Power companies	Name of the Nuclear Power Plant	Present spent fuel measures policies	Future spent fuel measures policies
The Hokkaido Electric Power Co., Inc.	Tomari	Utilizing the existing storage facility	Various storage methods including dry storage facility will be studied considering the status of spent fuel storage, etc.
Tohoku Electric Power Co., Inc.	Onagawa Higashidori	Utilizing the existing storage facility	Various storage methods within and outside the site environ, such as dry storage facilities, etc. will be studied.
Tokyo Electric Power Company Holdings Inc.	Fukushima Daiichi	Transportation to the dry cask temporary storage facility is being planned.	Transportation to the dry cask temporary storage facility is being planned. (Will be considered during the Fukushima Daiichi decommissioning schedule)
	Fukushima Daini	Stored using the existing storage facility.	Stored using the existing storage facility. (Henceforth, the future storage methods will be studied)
	Kashiwazaki-Kariwa	Transportation to the Recyclable Fuel Storage Company is being planned. (under construction, 3,000tU, business operations are scheduled to start in the second half of FY 2018)	Transportation to the Recyclable Fuel Storage Company is being planned. (Final storage quantity 5,000tU)
Chubu Electric Power Co., Inc.	Hamaoka	Transportation to the dry storage facility is being planned. (400tU increased capacity, application for permission for change in reactor installation license filed in January 2015, safety review underway)	The current measures will be continued, and in addition, considering the status of spent fuel storage, etc., various means of storage such as dry storage facilities within and outside the site environ will be considered. (including increasing dry storage facilities)
Hokuriku Electric Power Co., Inc.	Shika	Utilizing the existing storage facility	Various storage methods within and outside the site environ, such as dry storage facilities, etc. will be studied.
Kansai Electric Power Co., Inc.	Mihama Takahama Ohi	For intermediate storage outside Fukui prefecture, activities for obtaining understanding, feasibility studies, etc. will be systematically carried out and around FY 2020 the planned location will be finalized, and around FY 2030 operations will start at a scale of 2000 ton U. ・ Around FY 2020, finalization of the planned location ・ Around FY 2030 start of operations (2000 ton U) In light of the importance of the spent fuel measures, during actual execution of the plan, actions should be taken quickly and precisely and attempts should be made to be as ahead of the schedule as possible.	In addition to the present measures, based on the status of the progress of the measures or the estimation of generation of spent fuel, as per the Basic Energy Plan or the action plan of the government, all kinds of possibilities, such as joint and collaborative efforts between the operators, etc. will be studied and appropriate actions will be taken.
Chugoku Electric Power Co., Inc.	Shimane	Utilizing the existing storage facility	Considering the status of spent fuel storage, etc. ,various storage methods such as dry storage facilities, etc. within and outside the site environ will be studied.
Shikoku Electric Power Co., Inc.	Ikata	Utilizing the existing storage facility	Transportation to storage facilities within and outside the site environ will be considered. Various technical investigations and studies on dry cask storage are underway.
Kyushu Electric Power Co., Inc.	Genkai	Increasing the storage capacity (re-racking) of the spent fuel storage facility is being planned. (Applicable has been filed for Unit 3, 480tU increased capacity)	Transportation to storage facilities within and outside the site environ will be considered. As a part of this, dry storage facility within the site environ is being reviewed considering safety improvement measures.
	Sendai	Utilizing the existing storage facility	
The Japan Atomic Power Company	Tsuruga	Transportation to the Recyclable Fuel Storage Company is being planned. (under construction, 3,000tU, business operations are scheduled to start in the second half of FY 2018)	Transportation to the Recyclable Fuel Storage Company is being planned. (Final storage quantity 5,000tU)
	Tokai II	Utilization of the existing dry storage facility within the site environ (70tU increased capacity) and transportation to the Recyclable Duel Storage Company is being planned. (under construction, 3,000tU, business operations are scheduled to start in the second half of FY 2018)	Transportation to the Recyclable Fuel Storage Company is being planned. (Final storage quantity 5,000tU)

Reference material

Power companies	Name of Nuclear Power Plant	As of end of September 2016				Estimated value #1		
		1 core (tU)	1 re-loading (tU)	Management capacity (tU)	Quantity of stored spent fuel (tU)	Management capacity (A) (tU)	Spent fuel Stored quantity (B) (tU)	Storage ratio (B)/(A)x100 (%)
The Hokkaido Electric Power Co., Inc.	Tomari	170	50	1,020	400	1,020	600	59
Tohoku Electric Power Co., Inc.	Onagawa	260	60	790	420	790	660	84
	Higashidori	130	30	440	100	440	220	50
Tokyo Electric Power Company Holdings Inc.	Fukushima Daiichi	580	140	2,260	2,130	2,260	2,130	94
	Fukushima Daini	520	120	1,360	1,120	1,360	#3 1,120	82
	Kashiwazaki-Kariwa	960	230	2,910	2,370	#4 2,920	#5 2,920	#5 100
Chubu Electric Power Co., Inc.	Hamaoka	410	100	#6 1,300	1,130	#7 1,700	1,530	90
Hokuriku Electric Power Co., Inc.	Shika	210	50	690	150	690	350	#8 51
Kansai Electric Power Co., Inc.	Mihama	70	20	760	470	#8 620	550	89
	Takahama	290	100	1,730	1,220	1,730	1,620	94
	Ohi	360	110	2,020	1,420	2,020	1,860	92
Chugoku Electric Power Co., Inc.	Shimane	100	20	680	460	680	540	79
Shikoku Electric Power Co., Inc	Ikata	120	40	1,020	640	1,020	800	78
Kyushu Electric Power Co., Inc.	Genkai	230	80	1,130	900	#9 ,600	1,220	#9 76
	Sendai	140	50	1,290	890	1,290	1,090	84
The Japan Atomic Power Company	Tsuruga	90	30	920	630	920	750	82
	Tokai II	130	30	440	370	#10 510	490	96
Total		4,770	1,260	20,730	14,830	21,570	18,450	

#1: The quantity of spent fuel stored in each company is an estimated value calculated under conditions assumed as mentioned below. These numbers do not presuppose specific resumption of operation.

○ All units in each power plant are within the scope. (Except Fukushima Daiichi, Hamaoka Units 1 & 2, Mihama Units 1 and 2, Ikata Unit 1, Shimane Unit 1, Genkai Unit 1, Tsuruga Unit 1, in which decommissioning has been finalized)

○ The amount of spent fuel generated in 4 cycles of operation (4 rounds of re-loading) has been added to the quantity of stored spent fuel as of end of September 2016 to obtain the stored quantity (Only quantity that is simply generated is considered)

○ 1 cycle is assumed to be 13 months operating period and 3 months outage period. (In this case, 4 cycles means about 5 years)

#2: The management capacity, in principle, is "the capacity after subtracting 1 core + 1 re-loading from the storage capacity". Further, for plants where the operation has ended, it is considered to be the same as the storage capacity.

#3: For Fukushima Daini, newly generated spent fuel is not considered.

#4: For Kashiwazaki-Kariwa Unit 5, although the work for increasing the storage capacity (re-racking) of the spent fuel storage facility has not yet been implemented, the planned management capacity after completion of work has been mentioned.

#5: For Kashiwazaki-Kariwa, the management capacity is reached in about 2.5 cycles (about 3 years) (The operation time is not considered)

#6: Hamaoka Units 1, 2 are under decommissioning, and hence have been excluded from the fuel pool management capacity.

#7: For Hamaoka Unit 4, an application for installing a dry storage facility has been filed, and the planned management capacity after completion has been mentioned.

#8: For Hamaoka Unit 3, an application for changing the storage capacity (re-racking) of the spent fuel storage facility has been filed, and the planned management capacity after completion has been mentioned.

#9: For Genkai Unit 3, an application for increasing the storage capacity (re-racking) of the spent fuel storage facility has been filed, and the management capacity after completion has been mentioned.

#10: For Tokai II, management capacity assuming 24 dry storage casks (current + 7 casks) has been mentioned.

Note) The total might not add up to the numerical values calculated for each item as the values have been rounded off.