

# Response Status of Measures Taken to Store Spent Fuel (Overview)

## October 24, 2017 The Federation of Electric Power Companies of Japan

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OInitiatives related to the policy of measures to be taken with respect to spent fuel ➤ Initiatives "Common" to every company

✓ Cooperation and support given in terms of offering advice related to validity and effectiveness of the results of examination of measures by Japan Nuclear Fuel Ltd based on experience related to generation of power with reference to the response given by JNFL to the report collection directive and matters pointed out with respect to violation of safety regulations by Nuclear Regulatory Commission.

>Initiatives by every company

✓ Announcement of study related to installation of dry storage facility on the site by Shikoku Electric Power Co. Inc. in December 2016.

OEfforts taken by all operators

Technical study to promote dry storage of spent fuel

- ✓ Study of organization and utilization of technical standards to enable streamlining of the seismic design assuming that the basic safety functions related to casks are ensured.
- Study for strengthening activities related to understanding of expansion of storage capacity of spent fuel
  - Strengthening of PR activities of The Federation of Electric Power Companies of Japan

(Producing video contents related to the initiatives for measures taken to store spent fuel)



(Example) Ensuring safety and application of a cask (5 minutes 34 seconds)

HP Address: https://www.youtube.com/user/fepcchannel

### Status of initiatives related to policy of measures to be taken with respect to spent fuel

	2017	2018	2019			Around 2020
TEPCO HD The Japan Atomic Power Company (Recycled fuel stockpiling center) (3,000 tons)	Plan to start the work in the second half of 20 Implementing conforma countermeasures work	18 ince review and				For all operators, the aim is to take
Chubu Electric Power Co., Ltd. (400 tons) Storage capacity at the time of application in January 2015	Review of facility dry storage facility examined	design for R is being d	eview and constru ry storage facility	uction of the on the site		measures for storing spent fuel to the extent of 4,000 tons by
Kyushu Electric Power Company, Inc. (480 tons) Storage capacity at the time of application in February 2010	Whether the storag conforms to the Ne Requirements is be	e facility Re w Regulatory rac ing examined Ge	view and construc king of Unit 3 of nkai nuclear powe	etion of re-	$\int \mathbb{D}^{\mathbf{k}}$	around 2020 Plan and promote
The Japan Atomic Power Company (70 tons)	Pre-operation test dry storage facility	and manufacturing r y on the site (Installa	elated to utilization tion of dry casks)	n of existing	5 De	measures related to spent fuel
Kansai Electric Power Co., Inc. (2.000 tons)	Study of every po coordination with Fukui prefecture,	ossibility including th respect to intermedi and the response giv	at of cooperation a ate storage outside en	and e		Plan points will be decided around 2020

Note) The value shown inside brackets ( ) is the increased capacity of the existing facility in case of Kyushu

Electric Power Company, Inc. and The Japan Atomic Power Company.

# Initiatives by Shikoku Electric Power Company: A specific plan related to the dry storage facilities on the site is being examined and the details will be compiled within the current fiscal year

## Status of Initiatives by Chubu Electric Power Co., Ltd.



#### Status of dry storage facility of spent fuel

#### [Background]

- Regarding the dry storage facility the construction plan of which was disclosed in 2008, the application for permission to change the installation was submitted on January 26, 2015, and safety review is underway.
- During the exchange of opinions between Nuclear Regulatory Commission and the President of Chubu Electric Power Co. Ltd. on July 27, 2016, there was a comment that there should be discussion by the Nuclear Regulatory Commission regarding the facilities when storage building and seismic requirements (Ss) was considered unnecessary.
- The Nuclear Regulatory Commission held the 3rd meeting through the "inspection team related to the storage of spent fuel transport cum storage casks", the approach to regulatory requirements was consolidated, and opinions sought in the "2017 43rd Nuclear Regulatory Commission Meeting" held on October 11.
- In the future, it is expected that specific regulations and a review guide will be formulated based on the approach to the regulatory requirements.

[Future response] Chubu Electric Power Co. Ltd. will continuously carry out studies regarding the design review for the spent fuel dry		Current Design [Application base for permission for change in reactor installation license]	
	Storage method	Dry storage method	
	Storage capacity	About 400 ton Uranium (About 2,200 in fuel assemblies)	
storage facility while taking into account the trends in the regulatory requirements.	Overview of facility	Storage building (Semi subterranean) (East-West) About 51m×(South-North) About 54 m × (Height above the ground) About 13m	
	Construction period	About 3 years	

### **Status of Initiative by Kyushu Electric Power Company, Inc.**

#### Re-racking of Unit 3 Genkai Power Station, Kyushu Electric Power Company, Inc.

Overview of re-racking work at Unit 3 Genkai Power Station (Applied in February 2010) •Increasing the storage capacity of the spent fuel storage equipment of Unit 3 (from 1,050 to 2,084)

•Sharing of the spent fuel storage equipment of Unit 3 by Units 1, 2, 3, and 4



Schematic drawing of the facility related to re-racking

Schematic drawing of re-racking

Currently, response given to the New Regulatory Requirements is being examined

 <u>Tokai Daini Power Station - Response to the inspection of spent fuel dry storage facility</u>
 Inspection: more than 100 cases in a year, and more than 1,500 people (November 2015 ~ the end of September 2017 Total 290 times)



• Working on carefully explaining the mechanism of dry storage and safety functions and activities to understand the same.

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• Actually feeling the safety of dry storage through the experience of natural convection cooling of cask by air.

Experiencing the air that comes in naturally from the air supply inlet

- Experiencing the heat of the cask surface in the vicinity

Experiencing scale of the cask and the building

Supporting the intermediate storage project for storage of recycled fuel

- Understanding the status of review of conformance to New Regulatory Requirements of storage of recycled fuel and providing support
- Technical cooperation related to review of type certification and type designation of storage container manufacturer



### Status of initiatives related to policy of measures to be taken with respect to spent fuel (Reproduced)

	2017 2018	2019		Around 2020
TEPCO HD The Japan Atomic Power Company (Recycled fuel stockpiling center) (3,000 tons)	Plan to start the work in the second half of 2018 Implementing conformance review and countermeasures work			For all operators, the aim is to take
Chubu Electric Power Co., Ltd. (400 tons) Storage capacity at the time of application in January 2015	Review of facility design for dry storage facility is being examined	Review and construct dry storage facility of	ction of the on the site	measures for storing spent fuel to the extent of 4,000 tons by
Kyushu Electric Power Company, Inc. (480 tons) Storage capacity at the time of application in February 2010	Whether the storage facility conforms to the New Regulato Requirements is being examine	Review and construct ry racking of Unit 3 of ed Genkai nuclear power	ion of re-	around 2020 Plan and promote
The Japan Atomic Power Company (70 tons)	Pre-operation test and manufa dry storage facility on the site	cturing related to utilization (Installation of dry casks)	of existing	measures related to spent fuel
Kansai Electric Power Co., Inc. (2.000 tons)	E Study of every possibility inc coordination with respect to i Fukui prefecture, and the resp E	luding that of cooperation and ntermediate storage outside ponse given	nd	Plan points will be decided around 2020

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