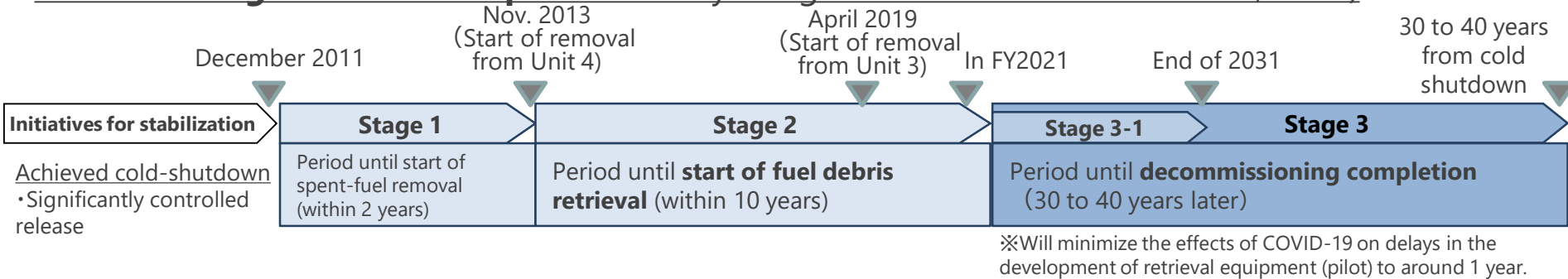


Stakeholder Engagement toward Reconstruction of Local Communities

October 31, 2021

**Shunichi Abe
Vice President
Fukushima Daiichi
Decontamination & Decommissioning
Engineering Company
Tokyo Electric Power Company Holdings, Inc.**

Mid-and-long-term Roadmap (revised by the government on December 27, 2019)



Mid-and-long-term Decommissioning Action Plan 2021

(formulated by TEPCO on March 25, 2021)



Major future work processes

○ Contaminated water treatment

- (Short-term) Reduce R/B stagnant water to around half of end of FY2020 levels (FY2022 to 2024)

○ Pool fuel removal

- (Short-term) Complete installing the Unit 1 large cover (rubble dust scattering prevention) (around FY2023)

○ Fuel debris retrieval

- (Short-term) Start retrieving fuel debris from the first unit (Unit 2)

○ Waste management

- (Short-term) Eliminate rubble temporarily stored outdoors (within FY2028)

○ Other measures (natural disaster measures)

- (Short-term) Install a seawall in preparation for a Japan Trench tsunami

The Fukushima Daiichi Nuclear Power Station, in the confusion immediately after the Accident, had no choice but to focus on troubles as they occurred.

However, now that things have settled down on the field and work can be planned ahead, TEPCO has published these "Promises" along with the Mid-and-long-term Decommissioning Action Plan (March 2020).



復興と廃炉の
両立に向けた
福島の方々へ
のお約束



東京電力ホールディングス株式会社

復興と廃炉の両立に向けた福島の方々へのお約束

ひらく

地域の方々にとって、
もっとひらかれた
廃炉の現場にしていきます

つくる

地域の一員として、
地域の未来づくりに
努めてまいります

やり遂げる

地域の安全・安心を
最優先に、廃炉事業を
やり遂げます

本書の内容は、まずは福島第一原子力発電所を中心に取り組みながら、その知見を踏まえ、福島第二原子力発電所にも拡大してまいります。

To speed up Fukushima recovery, decommissioning-related industries must be stimulated to create jobs and develop technologies in the region so that the effects can spread to other regions and industries.

Open

Create an open decommissioning site for the people in the region

- Actively disclose decommissioning business prospects
- Create an open environment with low barriers to entry

Create

Contribute to creating the future of the region as a member of the region

- Create a foundation for the local economy to thrive
- Foster human resources

See it through

Prioritize safety and a sense of security for the region

- Systematic decommissioning
- Ensure safety and a sense of security for the people in the region

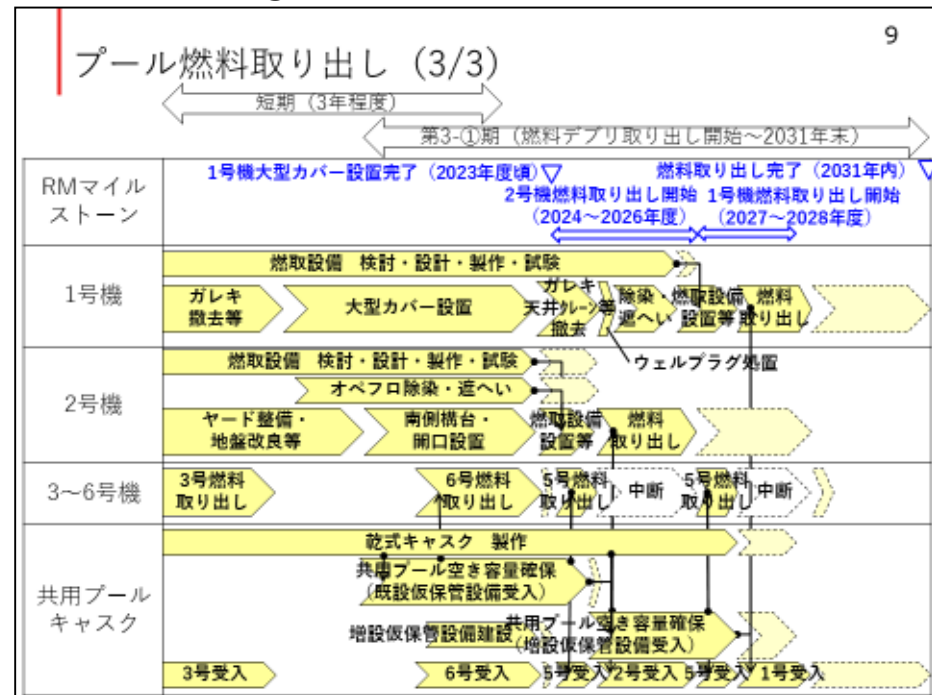
We are meeting with local companies to encourage them to participate in the Fukushima Daiichi decommissioning business.

Briefing on plans for mid-to-long term procurement for decommissioning

- Disclosed major work processes for decommissioning in the next 10 years in the Mid-and-long-term Decommissioning Action Plan 2020

Open

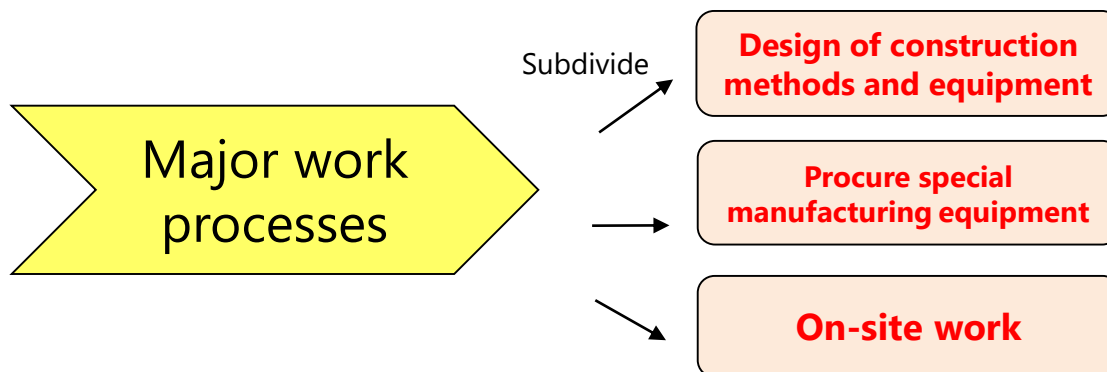
Actively disclose decommissioning business prospects



Major work processes for decommissioning (e.g., fuel removal)

Briefing on plans for mid-to-long term procurement for decommissioning

- Broke down and explained each major work process starting from processes where items to be procured have been identified



- Started holding meetings for primary contractors and commerce and industry associations in FY2020



Sep. 2020 and March 2021
(2 times for primary contractors)



December 2020, May 2021
(6 times for commerce and industry associations)

Open

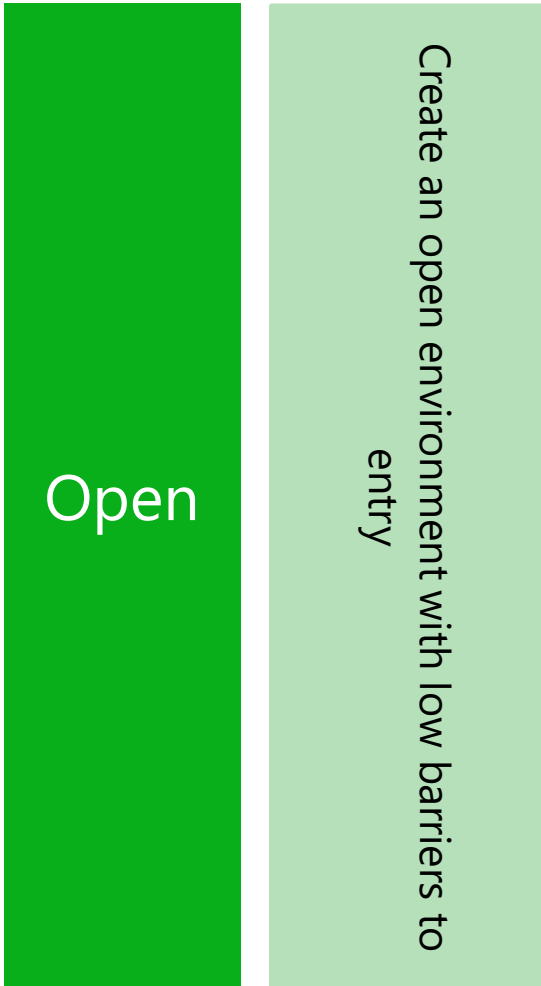
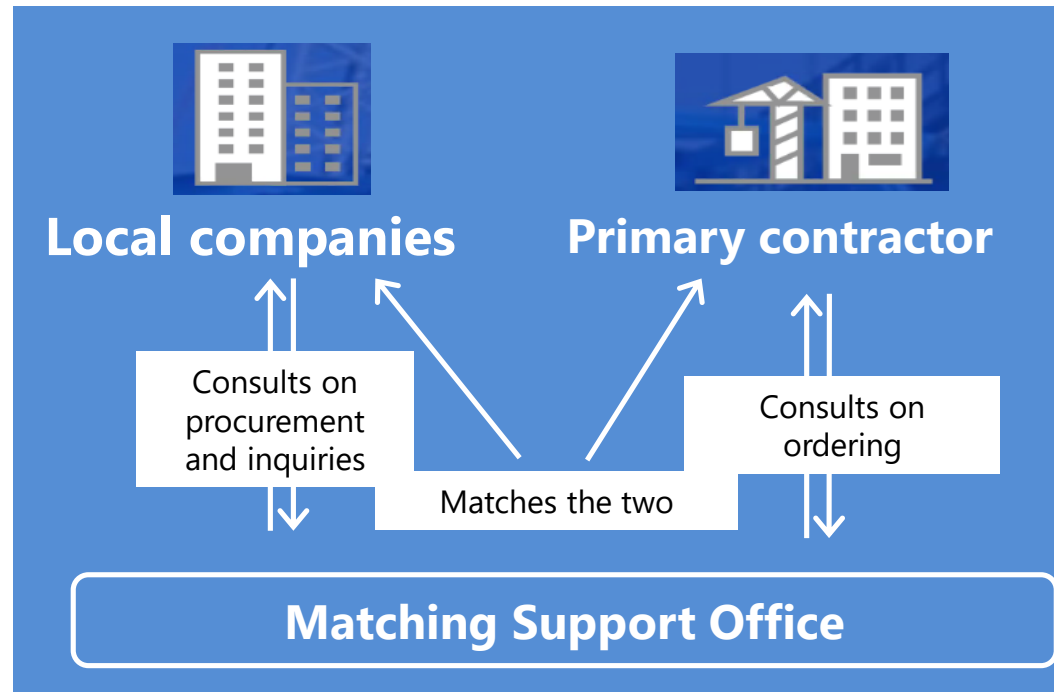
Actively disclose decommissioning business prospects

We established the Fukushima Daiichi Decommissioning Industry-related Matching Support Office in July 2020.

- ✓ Fukushima Innovation Coast Promotion Organization
- ✓ Fukushima Soso Revitalization Organization
- ✓ TEPCO HD

Matching Support Office activities

- The Office provides comprehensive support based on company needs to effectively connect local companies interested in Fukushima Daiichi decommissioning and decommissioning primary contractors



We held business meetings with local companies that are interested in the Fukushima Daiichi decommissioning business to build relationships and talk about specific projects.

Business meetings with local companies

Open

Create an open environment with low barriers to entry



Dec. 2019
Signed contract with 3 companies for manufacturing square containers



Feb. 2020.
Registered 4 companies for installing distribution boards



Oct. 2020
Made an informal offer for 1 company on 2 projects involving machine processing of large cans (as of April 2021)



March 2021
Made an informal offer to 1 company to procure steel bars for seewall reinforcing walls (as of April 2021)

We are opening up the decommissioning site as a field for research for academic institutions and universities to conduct decommissioning-related research and contribute to fostering technologies and people that can thrive on the global stage.

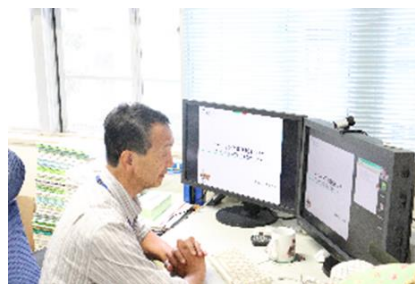
Industry-academia collaboration

Create Foster human resources	Universities	<ul style="list-style-type: none">• University of Tokyo, Tokyo Institute of Technology, Tohoku University, Fukushima University
	Major research topics	<ul style="list-style-type: none">• Methods to estimate the shape of fuel debris• Analyze, reduce and solidify radioactive solid waste• Surface-decontamination technology and technology to sever steel components• Separation of and measuring radioactive materials
	Research activities	<ul style="list-style-type: none">• Determine the research topic by comparing on-site needs to technologies held by universities through discussions between TEPCO engineers and university experts and students• Foster mutual understanding and stimulate research through dialogue with TEPCO engineers• Make students feel familiar with engineers working on decommissioning, work environments and actual facilities

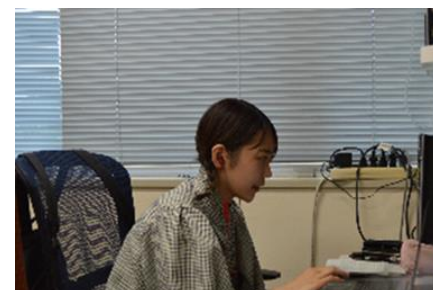
Through research activities, we are encouraging experts and students to have interest in decommissioning work.

Industry-academia collaboration

- Conducted online report meetings remotely at the end of FY2020 with each university



Presentation by an expert



Presentation by a student

Create

Research activities

Fostering human resources

1 F site visit

【Number of visitors】

86,417 visitors (cumulative, April 2011 to July 2021)

**Tours of the site and
roundtable discussions
for the people of
Fukushima prefecture**

We have held roundtables and site tours for 13 municipalities in the Hamadori region starting in FY2019. We will expand efforts to the all of Fukushima prefecture in FY2021.

Site tour



Roundtable (dialogue)



【地域の皆さまへのご案内】

東京電力ホールディングス主催
福島第一原子力発電所
視察・座談会

廃炉って何？デブリって？汚染水??
そんな皆さまの疑問を解決するために、廃炉資料館の見学、福島第一原子力発電所構内の視察、質疑応答・座談会を開催いたします。

ぜひ、福島第一原子力発電所最新状況を直接ご覧頂き皆さまの廃炉に関する疑問・見をお聞かせください。

◎日時	◎スケジュール (予定)
観覧 2021年11月20日 (土)	12:30 廃炉資料館 (富岡町) 集合・見学
座談会 2022年 1月15日 (土)	14:10 福島第一原子力発電所 視察
観覧 2022年 3月12日 (土)	15:50 質疑応答・座談会 16:50 解散 (廃炉資料館)

※申し込みを希望される方は裏面をご覧ください。
※新型コロナウイルスの感染状況等により、スケジュールの変更または中止となる可能性がありますので、予めご了承ください。

See it
through

Site tours
Roundtable

Schedule
for
FY2021

- Oct. 16, 2021: For municipalities outside of the 13 Hamadori municipalities
- November 20, 2021: for the 13 Hamadori municipalities
- January 15, 2022: For the 13 Hamadori municipalities
- March 12, 2022: For the 13 Hamadori municipalities

【Number of participants】
188 people over 6 sessions
**(October 2019
to July 2021)**

In the site tours and roundtables, we received various comments, including praise and thoughts on the decommissioning work, as well as opinions and requests.

Voices of participants in the site tours and roundtables

See it through

Praise

- To be honest, I was surprised that I didn't have to change into protective clothes.
- I enjoyed checking out the safety measures such as the two-step weirs for the tanks and ground-facing, that aren't reported in the media.

Thoughts

- Having these kinds of opportunities for residents to visit the site is very meaningful.
- It's so different from watching it on TV!
- Getting people, especially younger folks, interested is the first and most important step.

Opinions

- The state of the site is not coming through in communications from TEPCO. That could be improved.
- You should test if you can keep fish in the treated water.
- Reputational damage is bound to happen unless the challenges and safety of treated water are understood on a nationwide level.

In response to COVID-19, we now offer virtual tours using web-conferencing software to have tour guides conduct a tour of the site for visitors at home.



Virtual tour

Online tours

See it
through

Online
visitors

509 visitors
over 16
sessions

(Aug. 2020
to Aug. 2021)

- Visitors can watch, from home or school, video of the Fukushima Daiichi site from the perspective of a bus entering the area



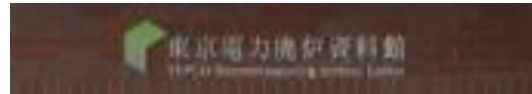
- In the online tours, visitors can see areas they would not be able to view in person



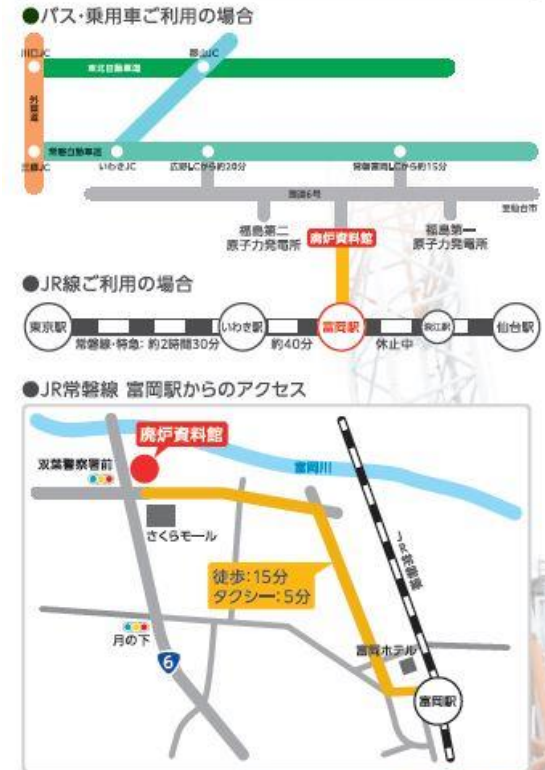
Inside the PCV

TEPCO Decommissioning Archive Center was opened as a place where visitors can learn about the facts of the Fukushima Daiichi Nuclear Power Station accident and the current status of the decommissioning project.

Number of visitors
71,740 people
 (November 30, 2018 - October 6, 2021)



アクセス



施設概要

名称	東京電力廃炉資料館
所在地	福島県双葉郡富岡町大字小浜字中央378番地 (旧エネルギー館)
電話番号	0120-502-957
開館情報	開館時間: 9:30~16:30 休館日: 毎月第3日曜日・年末年始 入館料: 無料(駐車場無料)

People both in Japan and overseas can find updates about the decommissioning business via the TEPCO website and social media.

(e.g.,) Treated Water Portal Site

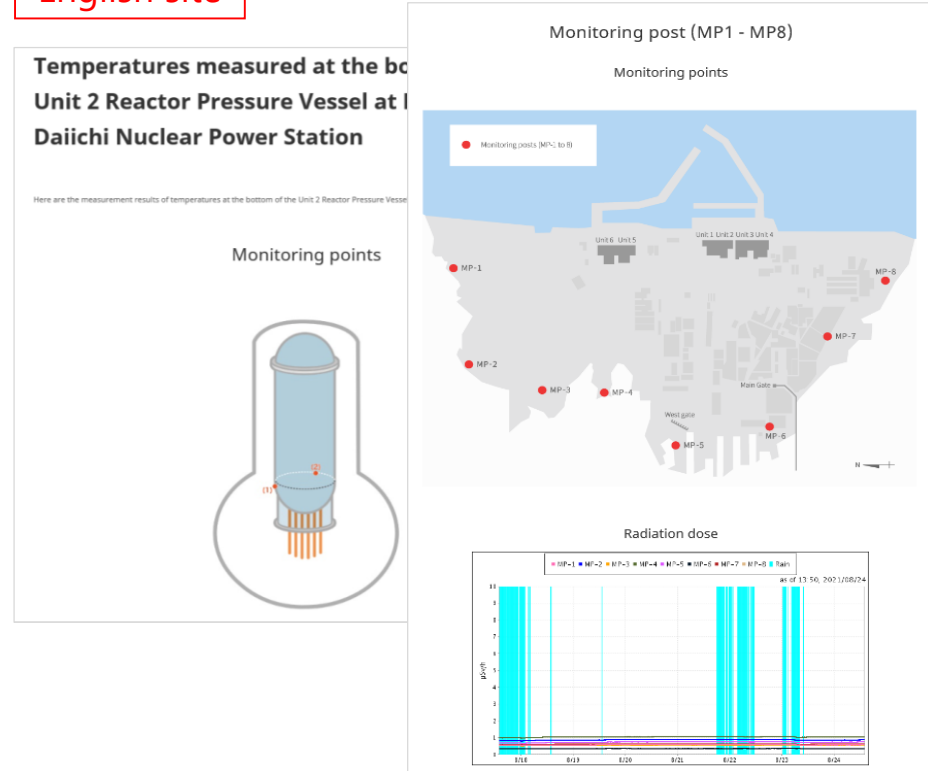
- Answering questions about the current status of treated water and societal concerns -

Japanese site



Analysis of plant data and radioactive materials from the surrounding area

English site



Decommissioning magazine "Hairo Michi"

- ◆ Reports on progress made in the decommissioning project and the thought of people involved in decommissioning.



- ◆ Issue: first published in April 2017. Issued every other month
- ◆ Distributed to: **Every home in the surrounding regions**, visitors, contractors, government agencies, schools, and etc.
- ◆ Number of copies : **60,000**

Please access the magazine through this code



Thank you for your kind attention

- **Core technologies and products** that had been made in Tokyo or overseas will be **developed and manufactured in the Hamadori area** for it to serve as a **pillar in the mid-to-long term of the local economy**.
- TEPCO will take leadership in **attracting companies outside of the prefecture with sophisticated technologies** and **closely cooperate with local companies** to create jobs, develop human resources and a foundation for industries and the economy of the region.

[Decommissioning flowchart]



[Areas involved]

Currently	Tokyo / Overseas	Hamadori (on-site)	Not implemented
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Future

All processes to be conducted in Hamadori in an integrated manner as a principle

- To develop an integrated implementation system in Hamadori, the following **decommissioning-facilities will be built in the 2020s.**
- The **economic impact** of building and operating these facilities in the Hamadori region is calculated to be as follows:

【In building】 Total invested: approx. 500 billion yen;

number of construction workers: 300 per day on average and 1,000 per day at the peak

【In operation】 Economic impact on Hamadori: 20 to 30 billion per year; jobs created: 300 per year

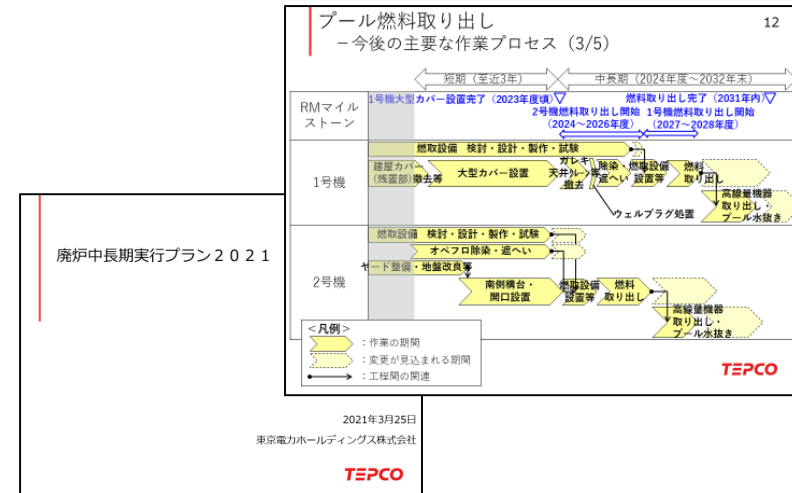
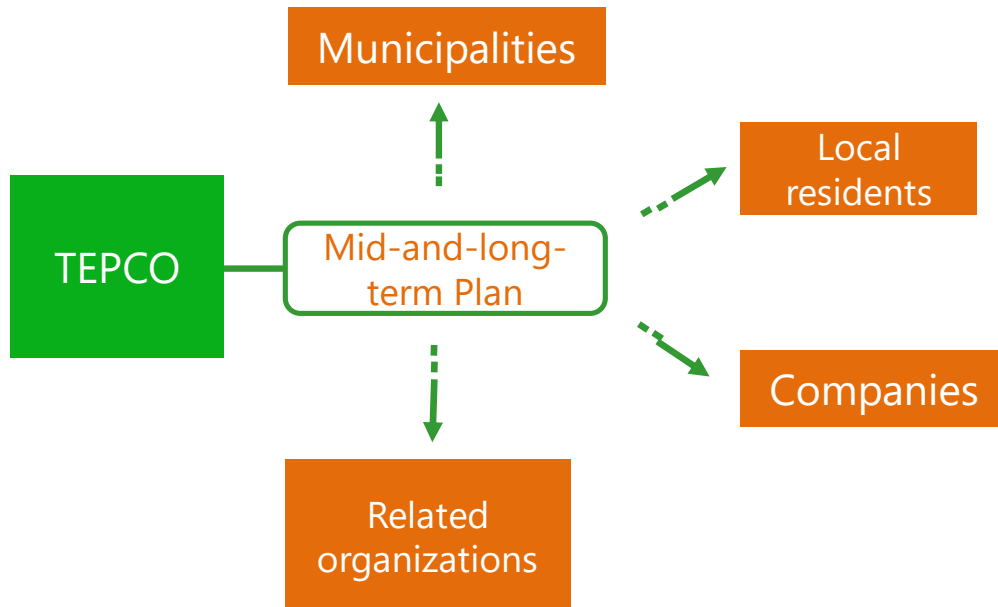
Process	Facility	Facility overview	Date to be built	Location
Development /design	Technology development and radiation analysis facility	<ul style="list-style-type: none"> ● Facility for conducting technological development necessary for future decommissioning, and radiation analysis of a wide range of samples 	Mid-2020s	On the premises of or nearby Fukushima Daiichi and Daini
Manufacturing	Factory for decommissioning related products	<ul style="list-style-type: none"> ● Factory that manufactures decommissioning-related products required in Fukushima Daiichi and Daini *see next slide for details 	Mid-2020s	
Operation	Fuel debris retrieval building/maintenance facility	<ul style="list-style-type: none"> ● Facility for installing fuel debris retrieval cells/ facility for conducting maintenance of fuel debris retrieval devices 	Late 2020s	
Storage	Fukushima Daini spent fuel dry storage facility	<ul style="list-style-type: none"> ● Facility for temporarily storing spent fuel removed from the Fukushima Daini fuel pool 	Late 2020s	
Storage /recycling	Molten metal/waste related facility	<ul style="list-style-type: none"> ● Facility for decontaminating and reducing the volume of contaminated metal, facility for severing and crushing solid waste, storage facility for various waste 	Mid-to-late 2020s	

※Only major facilities are listed

- **To manufacture highly technical products**, which have had to be manufactured outside of Fukushima, **in Hamadori in the mid-to-long term, TEPCO will aim to build and operate factories for decommissioning-related products in the siting region.**
- In construction and operation, we will **establish a consortium with manufacturers who have a track record of working in nuclear power who also sympathize with our ideas.** We are also prepared to cooperate in whatever way possible from **jobs, collaborations to procurement with people from the siting region.**
- We are now publicly selecting partners for our consortiums. Details will be published as soon it is completed.



- The Fukushima Daiichi Nuclear Power Station had to deal with troubles as they occurred immediately after the accident, but now that the site has stabilized, TEPCO can plan for the future in more detail. The Fukushima Daini Nuclear Power Station is also going to be decommissioned, and plans for decommissioning are also being created.
- We believe that the journey of decommissioning will be more important than ever for the local residents and companies.
- We will continue to create and update our plans to steadily and safely decommission these plants. We will keep you informed as we systematically tackle each project.



Mid-and-long-term Decommissioning Action Plan 2021
Published in March 2021
(e.g., fuel removal)