

FY2022 1st Quarter Financial Results (April 1 – June 30, 2022)

Tokyo Electric Power Company Holdings, Inc.



tepcon

Overview of FY2022 1st Quarter Financial Results

(Released on August 2, 2022)

(Note)

Please note that the following is an accurate and complete translation of the original Japanese version prepared for the convenience of our English-speaking investors. In case of any discrepancy between the translation and the Japanese original, the latter shall prevail.

<FY2022 1st Quarter Financial Results>

- Operating revenue increased due to an increase in fuel cost adjustments.
- Ordinary income/loss decreased due mainly to a negative turn in the effects of the time-lag from the fuel cost adjustment system at JERA and an increase in the electricity procurement expenses due to a surge in fuel prices despite Group-wide efforts to improve profitability.
- Quarterly net income decreased three consecutive years.

< FY2022 Consolidated Performance Forecast >

- To be determined.

1. Consolidated Financial Results

(Unit: Billion Yen)

	FY2022 Apr-Jun (A)	FY2021 Apr-Jun (B)	Comparison	
			(A)-(B)	(A)/(B) (%)
Operating Revenue	1,476.4	980.0	496.4	150.7
Operating Income/Loss	-44.2	-11.3	-32.9	-
Ordinary Income/Loss	-48.9	18.4	-67.4	-
Extraordinary Income/Loss	-25.2	-20.6	-4.6	-
Net Income Attributable to Owners of the Parent	-67.0	-3.0	-64.0	-

(Unit: Billion kWh)

	FY2022 Apr-Jun (A)	FY2021 Apr-Jun (B)	Comparison	
			(A)-(B)	(A)/(B) (%)
Total Electricity Sales Volume	54.8	52.4	2.5	104.7
Retail Electricity Sales Volume ※1	41.8	42.5	-0.7	98.4
Wholesale Electricity Sales Volume ※2	13.0	9.8	3.2	132.2

※1 Total of EP consolidated (EP/TCS/PinT) and PG (islands, etc.)

※2 Total (excluding indirect auctions) of EP consolidated (EP/TCS/PinT), PG (including inter-regional), and RP consolidated (RP/Tokyo Electric Generation)

Area demand

(Unit: Billion kWh)

	FY2022 Apr-Jun(A)	FY2021 Apr-Jun(B)	Comparison	
			(A)-(B)	(A)/(B) (%)
Area demand	60.8	59.8	1.0	101.7

Foreign Exchange Rate/CIF

	FY2022 Apr-Jun(A)	FY2021 Apr-Jun(B)	(A)-(B)
Foreign Exchange rate (Interbank,yen/dollar)	129.7	109.5	20.2
Crude oil price (All Japan CIF,dollar/barrel)	110.8 ※	67.0	43.8

※Crude oil price for FY2022 Apr-Jun is tentative figure released on July 21, 2022

2. Overview of Each Company

(Unit: Billion Yen)

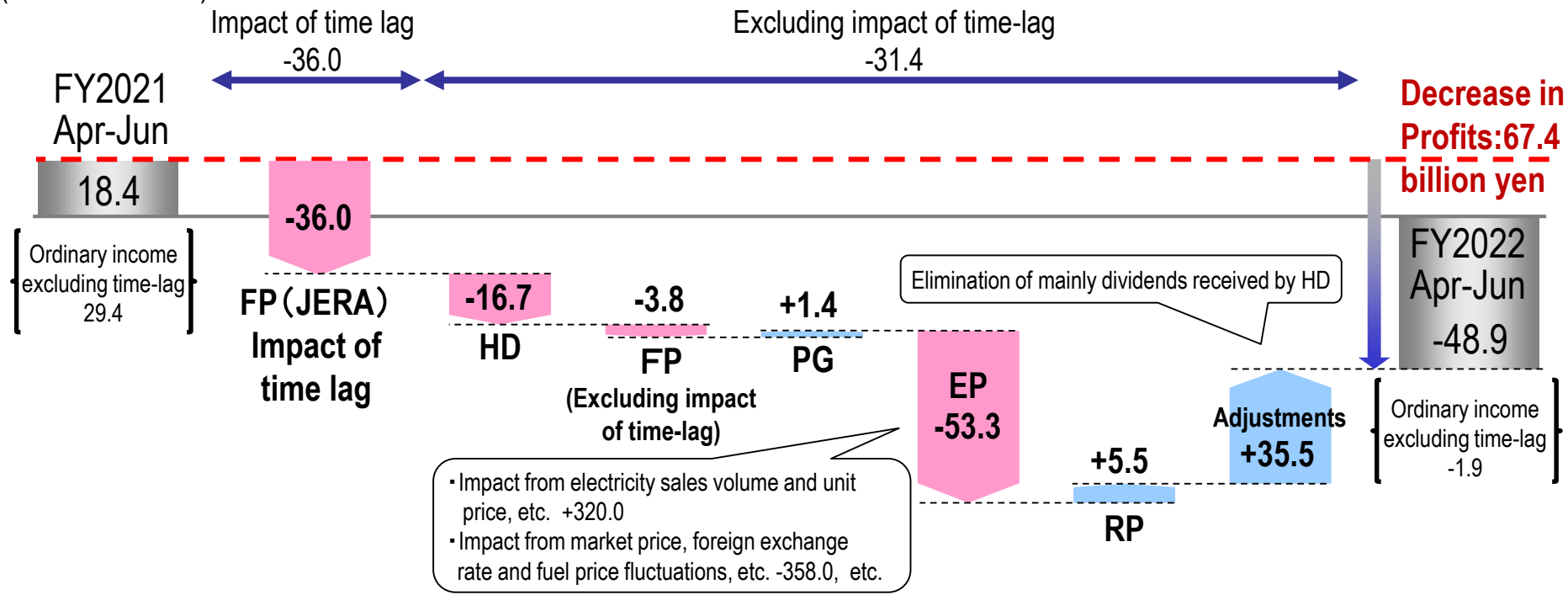
		FY2022 Apr-Jun (A)	FY2021 Apr-Jun (B)	Comparison	
				(A)-(B)	(A)/(B) (%)
Operating Revenue		1,476.4	980.0	496.4	150.7
TEPCO Holdings	(HD)	131.1	117.2	13.8	111.8
TEPCO Fuel & Power	(FP)	0.9	1.3	-0.3	75.5
TEPCO Power Grid	(PG)	529.0	409.3	119.7	129.3
TEPCO Energy Partner	(EP)	1,201.8	808.4	393.4	148.7
TEPCO Renewable Power	(RP)	46.7	41.0	5.6	113.8
Adjustments		-433.2	-397.3	-35.9	-
Ordinary Income/Loss		-48.9	18.4	-67.4	-
TEPCO Holdings	(HD)	109.9	126.7	-16.7	86.8
TEPCO Fuel & Power	(FP)	-9.6	30.1	-39.8	-
TEPCO Power Grid	(PG)	36.1	34.6	1.4	104.2
TEPCO Energy Partner	(EP)	-90.8	-37.4	-53.3	-
TEPCO Renewable Power	(RP)	21.6	16.1	5.5	134.1
Adjustments		-116.1	-151.6	35.5	-

3. Points of Each Companies

- HD :Ordinary income decreased due mainly to a decrease in received dividends from core operating companies.
- FP :Ordinary income decreased due mainly to a negative turn in the effects of the time-lag from the fuel cost adjustment system at JERA.
- PG :Ordinary income increased due mainly to a decrease in depreciation costs despite a significant increase in electricity procurement expenses.
- EP : Ordinary income decreased due mainly to an increase in the electricity procurement expenses due to the impact of a surge in fuel prices.
- RP : Ordinary income increased due mainly to an increase in wholesale electricity sales.

Ordinary income/loss

(Units: Billion Yen)



※ The impact of the time-lag is occurred mainly at JERA
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4. Consolidated Extraordinary Income/Loss

(Unit: Billion Yen)

	FY2022 Apr-Jun (A)	FY2021 Apr-Jun (B)	Comparison (A)-(B)
Extraordinary Income	-	-	-
Extraordinary Loss	25.2	20.6	4.6
Expenses for Nuclear Damage Compensation	※ 25.2	20.6	4.6
Extraordinary Income/Loss	-25.2	-20.6	-4.6

※ Increases due mainly to damage from shipping restrictions and extension of the period for calculating reputational damage estimates.

5. Consolidated Financial Position

- Total assets balance increased by 28.2 billion yen due mainly to an increase in investments and other assets.
- Total liabilities balance decreased by 5.6 billion yen due mainly to decreases in accrued expenses and accounts payable.
- Total net assets balance increased by 33.8 billion yen due mainly to an increase in accumulated other comprehensive income.
- Equity ratio improved by 0.2 points.

Balance Sheet as of March 31,2022

Total Assets 12,853.5 billion yen	Liabilities 9,631.3 billion yen
	Net Assets 3,222.1 billion yen

Equity Ratio:24.9%

Balance Sheet as of June 30,2022

Total Assets 12,881.7 billion yen	Liabilities 9,625.7 billion yen
Increase in assets +28.2 billion yen	Net assets 3,256.0 billion yen
<ul style="list-style-type: none"> - investments and other assets +95.1 billion yen - current assets -81.0 billion yen 	

Equity Ratio:25.1%

Decrease in liabilities
-5.6 billion yen

- decrease in accrued expenses -89.9 billion yen
- decrease in accounts payable -70.5 billion yen
- increase in corporate bonds +150.0 billion yen

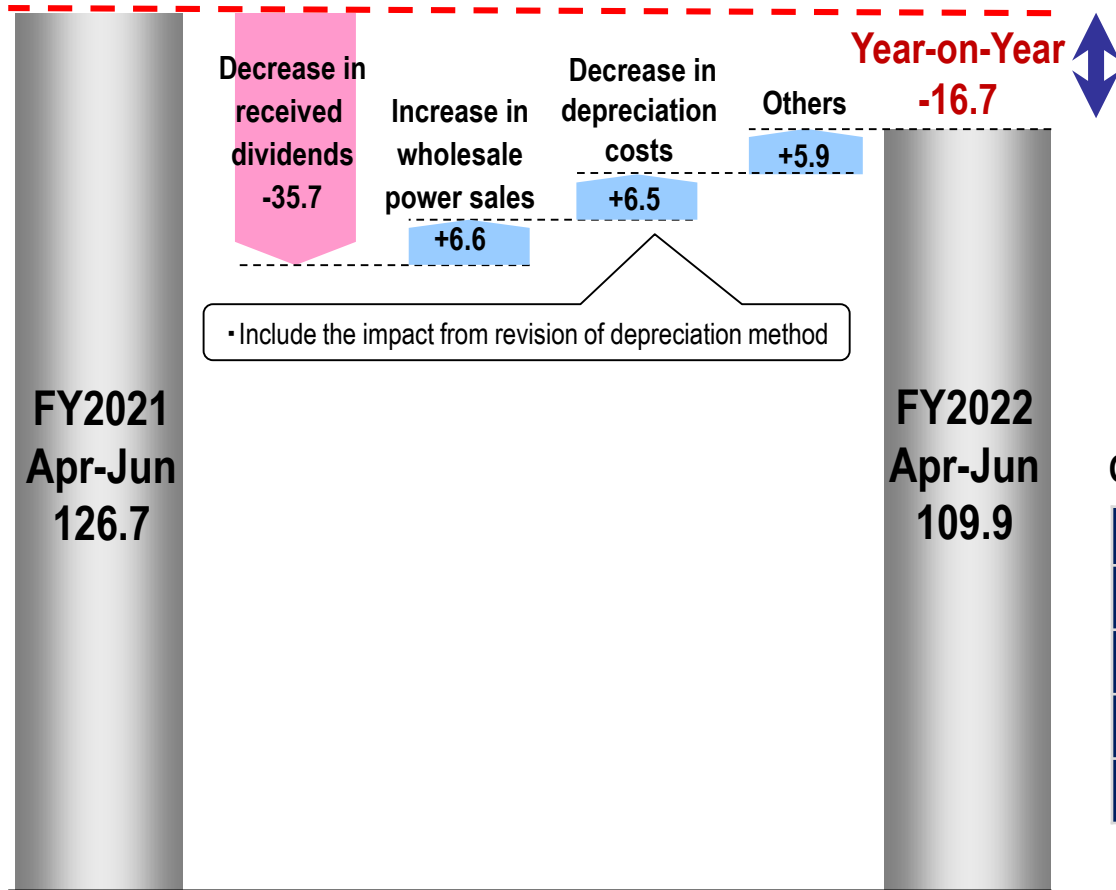
Increase in net assets
+ 33.8 billion yen

- Increase in accumulated other comprehensive income +100.9 billion yen
- Net income attributable to owners of the parent -67.0 billion yen

Improved by
0.2 points

Ordinary income/loss

(Units: Billion Yen)



Profit Structure

Profit is dividend income, decommissioning charges profit, management consultation fees, wholesale power sales of nuclear power, etc.

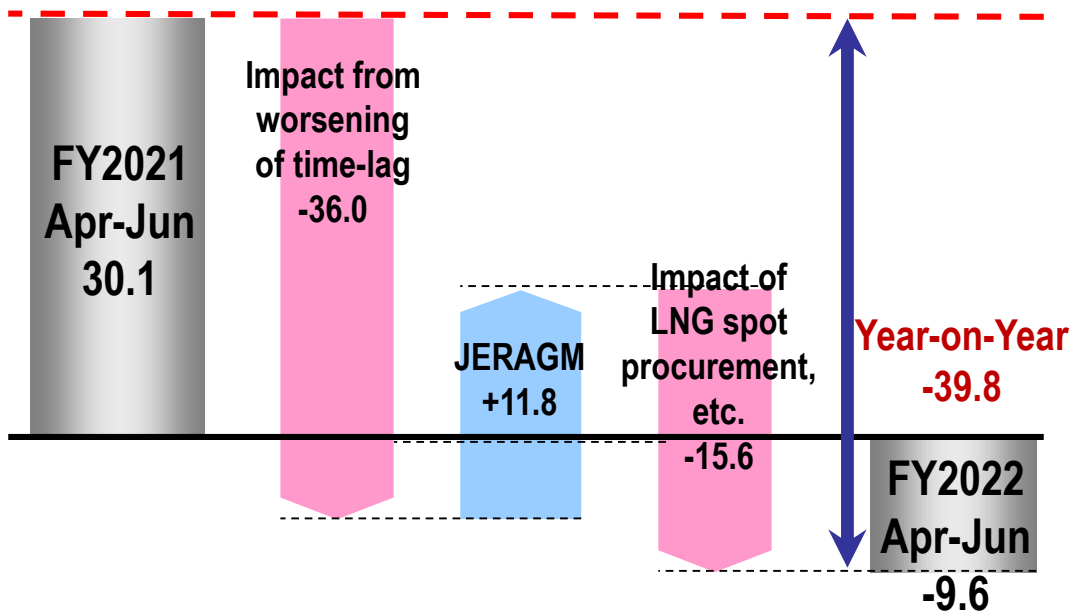
Ordinary income

(Units: Billion Yen)

	FY2021	FY2022	Comparison
Apr-Jun	126.7	109.9	-16.7
Apr-Sep	98.0		
Apr-Dec	72.0		
Apr-Mar	73.0		

Ordinary income/loss

(Units: Billion Yen)



Profit Structure

Main profit is profit of entities accounted for using equity method, such as generation business at JERA.

Timing Impact (JERA equity impact) (Units: Billion Yen)

	FY2021	FY2022	Comparison
Apr-Jun	-11.0	-47.0	-36.0

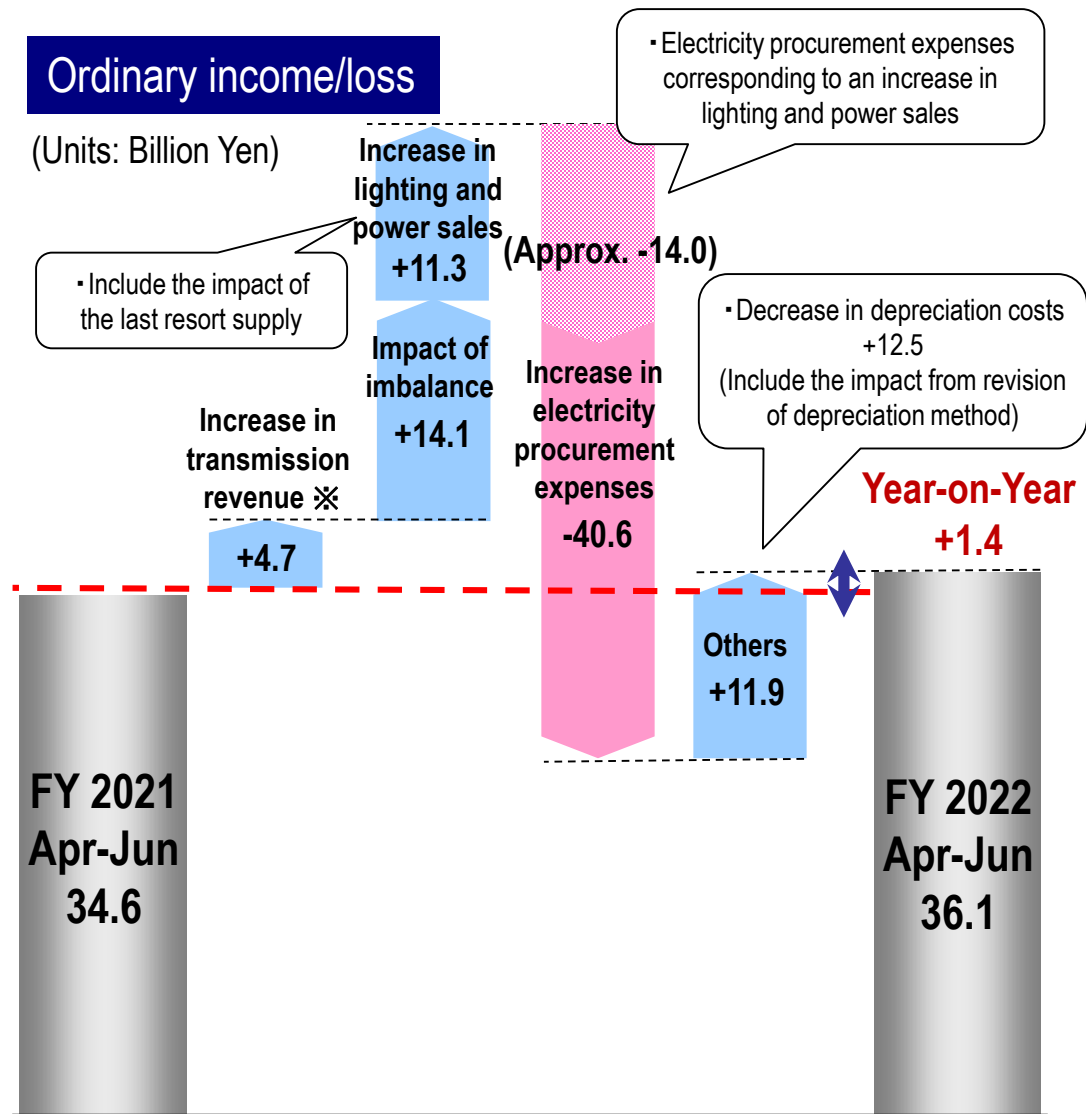
Ordinary income

(Units: Billion Yen)

	FY2021	FY2022	Comparison
Apr-Jun	30.1	-9.6	-39.8
Apr-Sep	7.3		
Apr-Dec	-9.3		
Apr-Mar	9.6		

Ordinary income/loss

(Units: Billion Yen)



Profit Structure

Operating revenue is mainly transmission revenue, and this is fluctuated by area demand. Expenses is mainly for repairs and depreciation costs of transmission and distribution facilities.

Area demand

(Units: Billion kWh)

	FY2021	FY2022	comparison
Apr-Jun	59.8	60.8	+1.0

Ordinary income

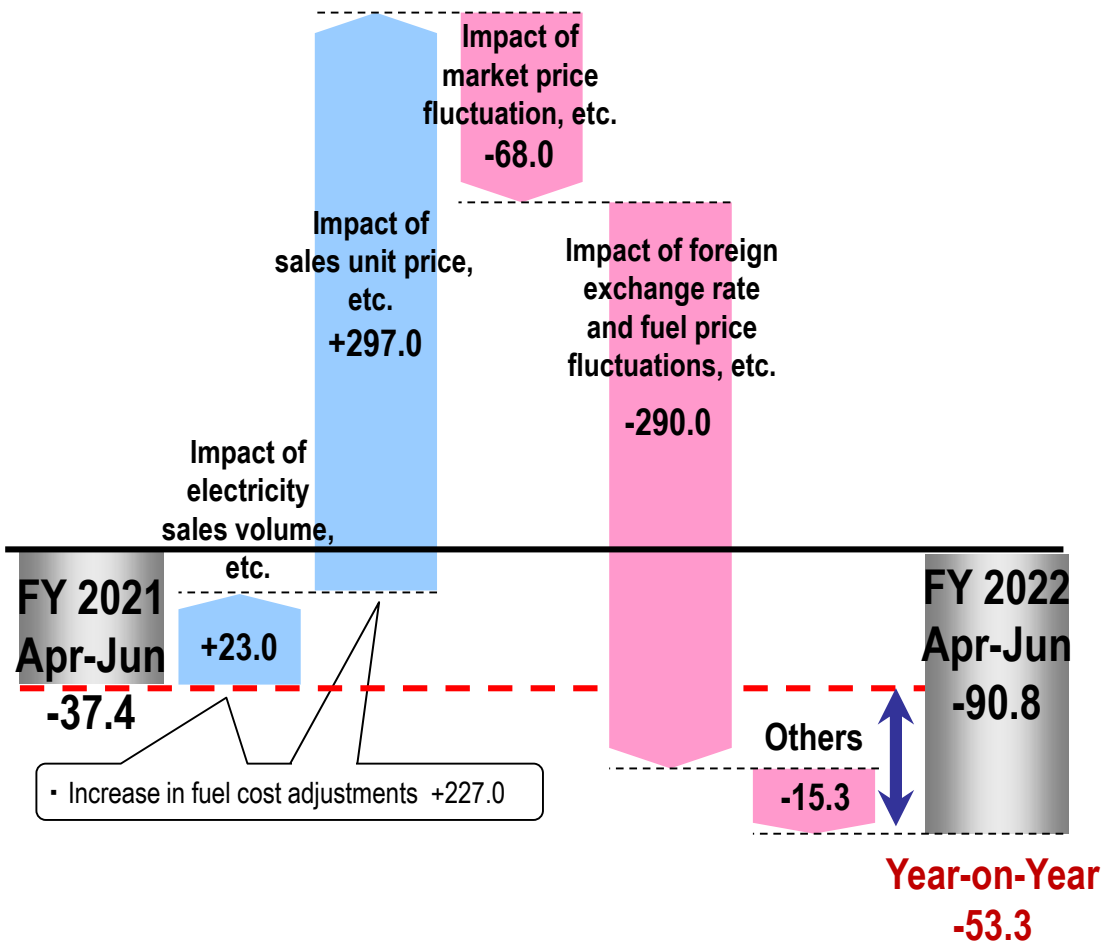
(Units: Billion Yen)

	FY2021	FY2022	comparison
Apr-Jun	34.6	36.1	+1.4
Apr-Sep	106.6		
Apr-Dec	163.5		
Apr-Mar	118.3		

※ Transmission revenue excludes impact from imbalanced revenue and expenditure

Ordinary income/loss

(Units: Billion Yen)



Profit Structure

Operating revenue is mainly electricity sales revenue, and this is fluctuated by electricity sales volume. Expenses are mainly power purchasing costs and transmission fees of connected supply.

Electricity sales volume (EP consolidated)

(Units: Billion kWh)

	FY2021	FY2022	comparison
Retail sales	42.5	41.4	-1.1

Competition -1.3, Temperature +0.5, Others -0.3

Gas contracts (EP non-consolidated)

As of March 31, 2022	As of June 30, 2022
Approx. 1.32 million	Approx. 1.35 million

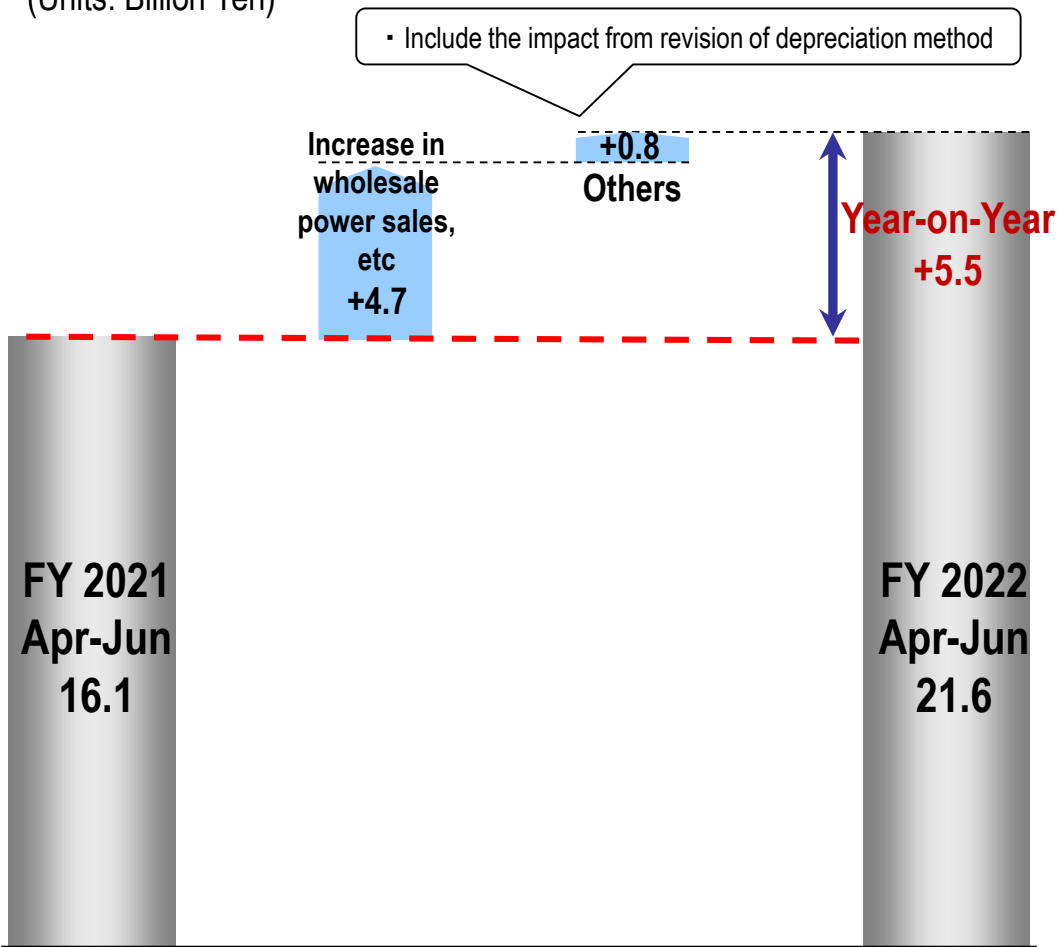
Ordinary income

(Units: Billion yen)

	FY2021	FY2022	comparison
Apr-Jun	-37.4	-90.8	-53.3
Apr-Sep	5.8		
Apr-Dec	-42.3		
Apr-Mar	-66.4		

Ordinary income/loss

(Units: Billion Yen)



Profit Structure

Profit is mainly wholesale power sales of hydroelectric and new energies.
Expenses is mainly for depreciation and repairs.

Flow rate

(Unit: %)

	FY2021	FY2022	comparison
Apr-Jun	97.0	103.0	+6.0

Ordinary Income

(Units: Billion yen)

	FY2021	FY2022	comparison
Apr-Jun	16.1	21.6	+5.5
Apr-Sep	35.0		
Apr-Dec	40.5		
Apr-Mar	45.9		

Supplemental Material

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FY2022 1st Quarter Financial Results

Detailed Information

Consolidated Statements of Income

	(Unit: Billion Yen)			
	FY2022	FY2021	Comparison	
	Apr-Jun(A)	Apr-Jun(B)	(A)-(B)	(A)/(B) (%)
Operating Revenue	1,476.4	980.0	496.4	150.7
Operating Expenses	1,520.7	991.4	529.3	153.4
Operating Income / Loss	-44.2	-11.3	-32.9	—
Non-operating Revenue	8.4	43.4	-35.0	19.4
Investment Gain under the Equity Method	6.4	41.2	-34.8	15.5
Non-operating Expenses	13.1	13.6	-0.4	96.5
Ordinary Income / Loss	-48.9	18.4	-67.4	—
Reserve for Fluctuation in Water Levels	0.2	—	0.2	—
Provision or Reversal of Reserve for Preparation of Depreciation of Nuclear Power Construction	-9.4	0.0	-9.5	—
Extraordinary Income	—	—	—	—
Extraordinary Loss	25.2	20.6	4.6	—
Income Tax, etc.	1.9	0.8	1.1	229.2
Net Income Attributable to Non-controlling Interests	0.0	-0.0	0.0	—
Net Income Attributable to Owners of Parent	-67.0	-3.0	-64.0	—

The status of Grants-in-aid from Nuclear Damage Compensation and Decommissioning Facilitation Corporation and Expenses for Nuclear Damage Compensation

(Unit: Billion Yen)

Item	FY2010 to FY2021	FY2022 Apr-Jun	Cumulative Amount
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◆Grants-in-aid from Nuclear Damage Compensation and Decommissioning Facilitation Corporation

○Grants-in-aid based on Nuclear Damage Compensation and Decommissioning Facilitation Corporation Act	* 7,553.6	—	* 7,553.6
------------------------------------------------------------------------------------------------------	-----------	---	-----------

Note: Journal Entry: Grants-in-aid receivable from Nuclear Damage Compensation and Decommissioning Facilitation Corporation is debited on the balance sheet.

* Numbers above are those after deduction of a governmental indemnity of 188.9 billion yen, and Grants-in-aid corresponding to decontamination and other expenses of 4,843.9 billion yen respectively.

◆Expenses for Nuclear Damage Compensation

● Compensation for individual damages • Expenses for radiation inspection, Mental distress, Damages caused by voluntary evacuations, and Opportunity losses on salary of workers etc.	2,083.4	0.9	2,084.3
● Compensation for business damages • Opportunity losses on businesses, Damages due to the restriction on shipment, Damages due to groundless rumor and Package compensation etc.	3,305.7	17.8	3,323.5
● Other expenses • Damages due to decline in value of properties, Housing assurance damages, Decontamination and other expenses etc.	7,197.3	6.4	7,203.7
● Amount of indemnity for nuclear accidents from the Government	-188.9	—	-188.9
● Grants-in-aid corresponding to decontamination and other expenses	-4,843.9	—	-4,843.9
Total	7,553.5	25.2	7,578.8

Consolidated Balance Sheets

15

(Unit: Billion Yen)

<Interest-bearing debt outstanding>

(Unit: Billion Yen)

	Jun. 30 2022 (A)	Mar. 31 2022 (B)	Comparison	
			(A)-(B)	(A)/(B) (%)
Total Assets	12,881.7	12,853.5	28.2	100.2
Fixed Assets	10,931.9	10,822.6	109.2	101.0
Current Assets	1,949.7	2,030.8	-81.0	96.0
Liabilities	9,625.7	9,631.3	-5.6	99.9
Long-term Liability	5,677.5	5,617.1	60.4	101.1
Current Liability	3,947.8	4,004.7	-56.8	98.6
Reserve for Fluctuation in Water Levels	0.2	—	0.2	—
Reserve for Preparation of the Depreciation of Nuclear Plants Construction	—	9.4	-9.4	—
Net Assets	3,256.0	3,222.1	33.8	101.1
Shareholders' Equity	3,062.2	3,129.3	-67.0	97.9
Accumulated Other Comprehensive Income	168.4	67.5	100.9	249.6
Share Acquisition Rights	0.0	0.0	—	—
Non-controlling Interests	25.2	25.3	-0.0	99.8

	Jun. 30 2022 (A)	Mar. 31 2022 (B)	(A)-(B)
Bonds	3,250.4	3,100.4	150.0
Long-term Debt	163.2	169.4	-6.1
Short-term Debt	2,174.0	2,170.3	3.6
Total	5,587.7	5,440.2	147.4

<Reference>

	FY2022 Apr-Jun (A)	FY2021 Apr-Jun (B)	(A)-(B)
ROA(%)	-0.3	-0.1	-0.2
ROE(%)	-2.1	-0.1	-2.0
EPS(Yen)	-41.86	-1.89	-39.97

ROA: Operating Income / Average Total Assets

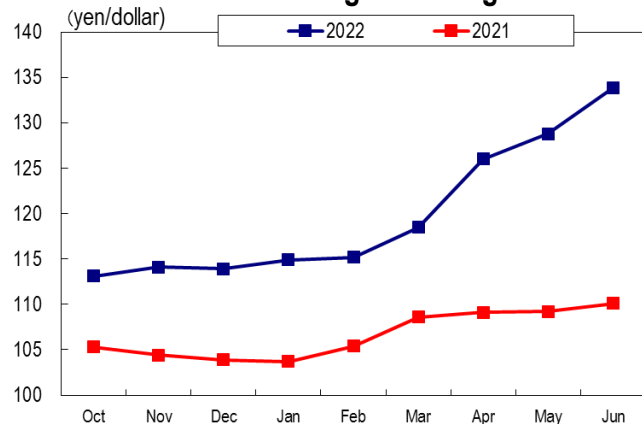
ROE: Net Income attributable to owners of parent / Average Equity Capital

Key Factors Affecting Performance (Results)

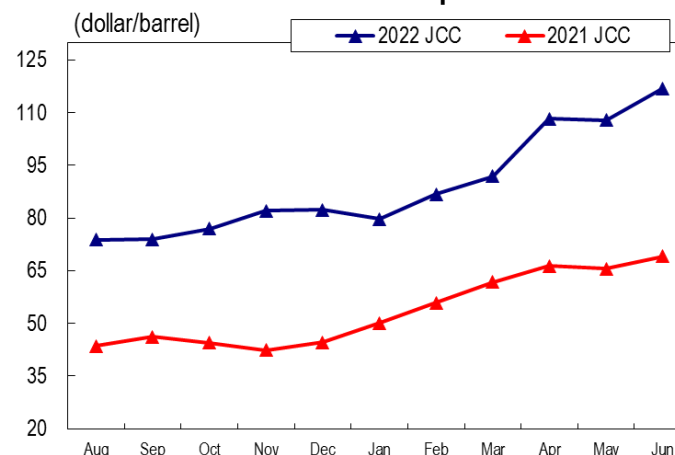
- ※1 Total of EP consolidated (EP/TCS/PinT) and PG (islands, etc.)
- ※2 Total (excluding indirect auctions) of EP consolidated (EP/TCS/PinT), PG (including inter-regional), and RP consolidated (RP/Tokyo Electric Generation)
- ※3 Crude oil price for FY2022 Apr-Jun is tentative figure released on July 21, 2022

	FY2022 Apr-Jun	FY2021 Apr-Jun	[Reference] FY2021
Total Electricity Sales Volume (Billion kWh)	54.8	52.4	233.8
Retail Electricity Sales Volume (Billion kWh) ※1	41.8	42.5	186.5
Wholesale Electricity Sales Volume (Billion kWh) ※2	13.0	9.8	47.3
Gas Sales Volume (Million ton)	0.58	0.46	2.71
Foreign Exchange Rate (Interbank; yen per dollar)	129.7	109.5	112.4
Crude Oil Price (All Japan CIF; dollars per barrel) ※3	110.8	67.0	77.2
Nuclear Power Plant Capacity Utilization Ratio (%)	-	-	-

<Fluctuation of Foreign Exchange Rate>



<Fluctuation of All Japan CIF>



Retail Electricity Sales Volume (EP consolidated)

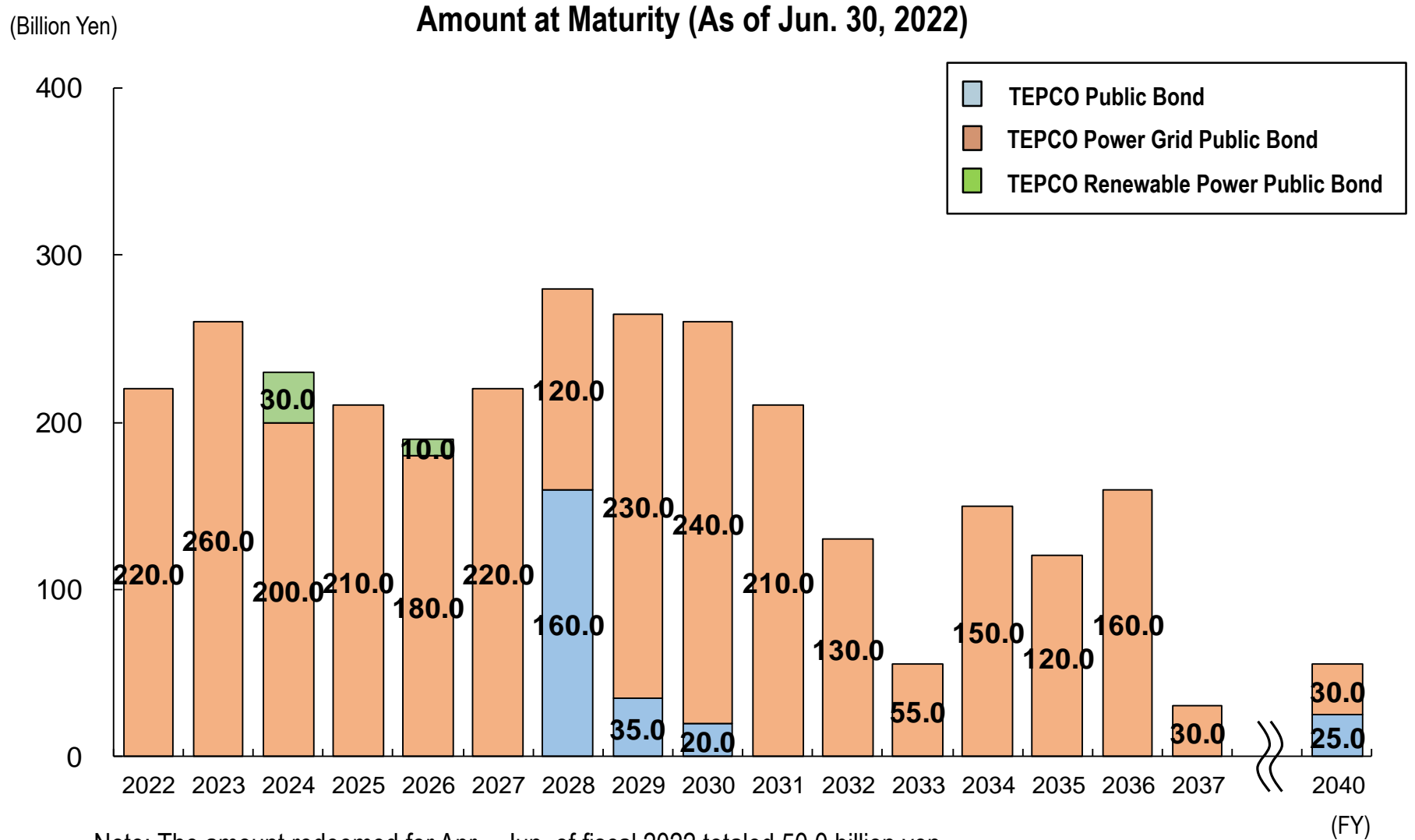
Unit: Billion kWh					
FY2022					
	Apr	May	Jun	Apr-Jun	
Lighting	4.90	3.94	3.78	12.62	
Power	9.58	9.17	10.02	28.77	
Total	14.48	13.11	13.80	41.39	
FY2021					[Ref.]Year-on-year Comparison (Apr-Jun)
	Apr	May	Jun	Apr-Jun	
Lighting	4.81	4.17	3.91	12.89	97.9%
Power	9.95	9.34	10.31	29.60	97.2%
Total	14.76	13.52	14.22	42.49	97.4%

Total Power Generated

Unit: Billion kWh					
FY2022					
	Apr	May	Jun	Apr-Jun	
Hydroelectric	1.29	1.38	1.32	3.99	
Thermal	0.01	0.01	0.01	0.03	
Nuclear	-	-	-	-	
Renewable etc.	0.01	0.00	0.01	0.02	
Total	1.31	1.40	1.33	4.04	
FY2021					[Ref.]Year-on-year Comparison (Apr-Jun)
	Apr	May	Jun	Apr-Jun	
Hydroelectric	1.20	1.38	1.11	3.69	108.1%
Thermal	0.01	0.01	0.01	0.03	102.1%
Nuclear	-	-	-	-	-
Renewable etc.	0.01	0.01	0.00	0.02	87.4%
Total	1.22	1.40	1.13	3.74	107.9%

※Total power generated includes part of consolidated subsidiaries.

Schedules for Public Bond Redemption



Status of response to address the series of incidents including a nuclear material protection incident

- ✓ Recurrence prevention measures are being implemented according to the Improvement Measures Report for the unauthorized use of an ID card and the partial loss to function of nuclear material protection equipment at the Kashiwazaki-Kariwa Nuclear Power Station. We are also appropriately dealing with additional inspections by the NRA.
- ✓ In addition to swiftly implementing the steps to address the series of incidents, we aim to become a “trusted company (station)” by implementing nuclear reforms according to the items outlined in the Fourth Comprehensive Special Business Plan

<Nuclear Reform Framework>

The significance of nuclear reforms = Becoming a "trusted company"

(Urgent)

**Cultivating peace of mind
 【Trusted】 state**

Normal times

- Rule compliance, safe work methods, suitable information disclosure, etc.

Times of emergency

- Quickly convey transparent (convincing) information, and quickly make repairs

(Short-term/mid-term)

**Building relationships where value is shared
 【Mutual dependence】 state**

- Grow along with local companies (employment) through our electricity business

(mid/long-term)

【Assimilation】 awareness

- Remain a local company that shares the same sense of values as local residents, local employment (regional revitalization)

Reforms put forth in the Fourth Comprehensive Special Business Plan

Reform 1 Unify management of Headquarters and power station

Reform 2 Introduce mechanisms and systems for completing projects

Reform 3 Drastic strengthening of physical protection / enlargement of resources and improvements in quality

Reform 4 Personnel deployment / rotation revisions and leveraging of external experts

Reform 5 Motivation improvements and office environment improvements

Concrete measures (Reform ①, ②)

Reform 1 Unify management of Headquarters and power station

- Headquarter functions necessary for the Kashiwazaki-Kariwa Nuclear Power Station were relocated near the station. Some of the functions were transferred on May 1, 2022. 64 people in total are currently working at Kashiwazaki-Kariwa Nuclear Power Station and in Kashiwazaki City.
- Headquarter functions left in Tokyo was also reorganized. Nuclear Power Planning Office and Plant Siting and Regional Relations Office were established as of July 1, 2022.

<Overview of the transfer of head office functions>

	November 2021	May 1, 2022
Number of people transferred (total)	16	64
Assigned location	Power station	Power station, offices in Kashiwazaki City
Transferred functions	Reform promotion, project analysis, Cost analysis, training, etc.	Quality/safety, schedule management, equipment diagnostics, etc.

Work/living environments need to be secured along with new preparedness centers

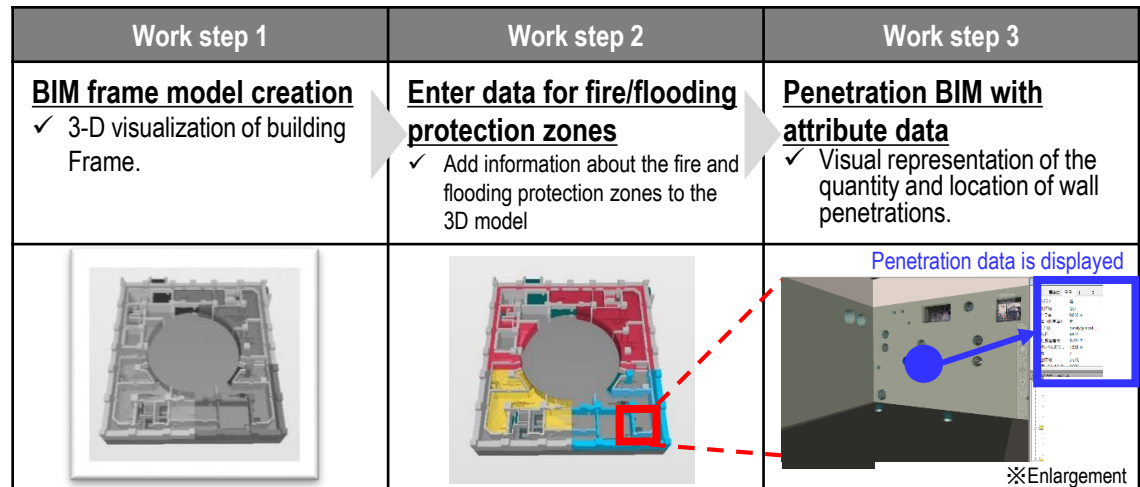
Out of the approximate 770 people at Headquarters, ultimately a total of approximately 300 people will be transferred to the Kashiwazaki-Kariwa Nuclear Power Station in the future

Unified management of Headquarters and the power station shall be strengthened to address weaknesses discovered in the wake of the series of inappropriate incidents

Reform 2 Introduce mechanisms and systems for completing projects

- Closely examine penetrations during the general inspection through three steps: inspection of individual penetrations, inspection of surfaces (looking at entire walls of penetrations) and inspection of spaces (looking at all the penetrations in entire rooms). Gather/organize data collected from the field, and use 3-D maps to begin systemizing buildings/equipment data (use 3-D mapping for unified management of field attribute data).
- This system will be used in the future for the maintenance of penetrations that have been protected from fire and flooding.

<BIM : Building Information Modeling concept diagram>



Concrete measures (Reform ③)

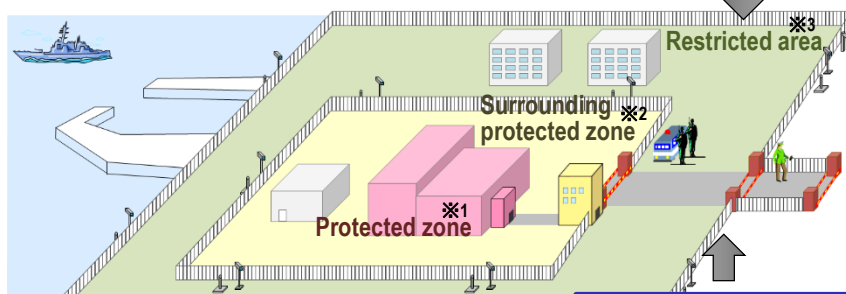
Reform 3 Drastic strengthening of physical protection / enlargement of resources and improvements in quality

- 36 countermeasures included in an improvement measure plan to address the physical protection incidents are being successfully implemented and underway (refer slide 22).
- Further improvement of equipment reliability is vital, so we will continue to steadily renovate equipment and continuously improve nuclear security.
- We shall secure an equipment budget scale of over ¥20 billion (over three years).

Primary equipment countermeasures

- ✓ Projects to address the long-term issues of the Improvement Measure Plan (Revision of restricted area demarcations and False alarm countermeasures*) are still being deliberated.
 - *False alarms are alarms that are triggered by weather, vehicles, animals, plants, or other causes other than the original purpose of intruder detection.
- ✓ New technologies that will reduce the burden on the guards and improve security such as upgrading and replacement of intrusion detectors, entry control and monitoring system updates, mechanization of people and vehicle identification are being planned.

<Primary equipment countermeasures (Concept diagram)>



【Long-term issue】

- Revision of restricted area Demarcations
- Improve/replace intruder detectors as false alarm countermeasures

【Countermeasure already Implemented】

- Introduction of additional biometric authentication equipment
- Increase the number of equipment maintenance personnel (from 2 people to 6 people)

【New】 (Not included in the Improvement Measures Plan)

- Entry/exit management/monitoring system renovations
- Mechanization of personnel/vehicle checks

- ※ 1 Protected zone: Zone in which equipment for using/storing specified nuclear material is located
- ※ 2 Surrounding protected zone: Zone around the protected zone established to ensure that specified nuclear material in the protected zone is protected
- ※ 3 Restricted area: Restricted area around the surrounding protected zone

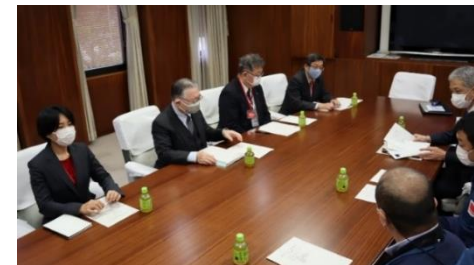
Management checking the field

- ✓ To correct weaknesses in management's knowledge of what is going on in the field, the Site Superintendent and other station senior management will extract challenges by actively visiting the field and talking to workers



Establishment of an Expert Nuclear Security Assessment Committee

- ✓ Have external experts assess TEPCO's security initiatives and performance every 6 months
- ✓ Committee meetings, including field visits, have been held five times. TEPCO received a report on the assessment of the initiatives on July 25 from the Committee. TEPCO was evaluated that the improvement was progressed steadily while the series of inappropriate incidents were pointed out



Concrete measures (Reform ③ Reference)

36 countermeasures included in the improvement measure plan to address physical protection incidents

➤ All to be put in place by September 2022 with the exception of two long-term countermeasures (③⑩, ③⑪)

Improvement measure	Improvement measure
① Reconstruction of physical protection governance	⑲ Create equipment maintenance system
② Monitoring process improvements	⑳ Revise change management processes, create educational programs
③ Strengthening of physical protection education (upper management, etc.)	㉑ Create maintenance plans (inspection plans, replacement plans)
④ Strengthening of physical protection education (Protection Division)	㉒ Clarify rules pertaining to substitute measures
⑤ Strengthening of physical protection education	㉓ Clarify time periods for function repairs
⑥ Revision of nuclear security culture cultivation plan	㉔ Create basic manuals, etc.
⑦ Messages from upper management and activities to help those messages permeate throughout the company	㉕ Increase the number of Physical Protection Department personnel
⑧ Sitting circle meetings/upper management dialogue sessions	㉖ Revise security functions/responsibilities, etc.
⑨ Improve the ability to ascertain work conditions by having managers inspect the field and field conditions	㉗ Create policy for disclosing information on inappropriate incidents
⑩ Listen to opinions about nuclear security	㉘ Continue peer reviews with other electric companies
⑪ Initiatives to ascertain understanding/improvement of nuclear security	㉙ Improve communication between the Protection Division and the rest of the power station
⑫ Confirm the competency of operators/watchmen	③⑩ Revise restricted area demarcations
⑬ Confirm ID when reregistering biometric data in the field	③⑪ Implement countermeasures for false alarms from intruder detectors
⑭ Introduce additional biometric authentication equipment	③⑫ Improve manuals so that they reflect actual field conditions
⑮ Random training for watchmen	③⑬ Create a "purpose" for Kashiwazaki-Kariwa
⑯ Alleviate congestion at each gate	③⑭ Develop/strengthen risk management
⑰ Strengthen system for providing support to the Protection Division	③⑮ Conduct study sessions on the Fukushima Daiichi Nuclear Power Station Accident
⑱ Ensure that ID cards are kept locked	③⑯ Self-assessment/third-party assessments

※Progress and operation status in the improvement measure plan are being verified and assessed based on additional inspections by the NRA (Phase II).

Reform 4 Personnel deployment / rotation revisions and leveraging of external experts

- To further promote nuclear reform, Toshihiko Fukuda, formerly of TEPCO, was appointed to the role of General Manager of Nuclear Power and Plant Siting Division, and Ryosuke Mizutani, formerly of Chubu EPCO, was appointed to directly assist the Site Superintendent.
- 9 experts in each field, who have previously worked in the police, the self-defense force, other electricity utilities, and the fire department were newly appointed to various roles.

<Site Superintendent, In charge of Nuclear Reform>



Takeyuki Inagaki



<Nuclear Power & Plant Siting Division General> 2022.4~



Toshihiko Fukuda

【Role】

- General command of the entire Nuclear Power Division

【CV】

- TEPCO
- Nuclear Damage Compensation And Decommissioning Facilitation Corporation

<Assistant to the Site Superintendent, Kashiwazaki-Kariwa Nuclear Power Station> 2022.4~



Ryosuke Mizutani

【Role】

- Conduct awareness reform, reform in the way work is done, and in station frameworks, support the Site Superintendent in technical fields

【 CV】

- Chubu EPCO
- Formerly the Director of the Hamaoka Nuclear Power General Office

Reform 5 Motivation improvements and office environment improvements

- The station executives listened closely to the opinions of station personnel and put together the “The Purpose of Kashiwazaki-Kariwa Nuclear Power Station” (May 2022).
- The “purpose” is being embodied in various activities as the station aims to become a trusted plant.

“The Purpose of Kashiwazaki-Kariwa Nuclear Power Station” (announced in May 2022)

Engage in understanding/empathy activities for all workers at the power station (through the end of September 2022)

Have all power station workers fulfill their "purpose"

Repeatedly fulfill our purpose and become a trusted power station

For example...

- ✓ Have station personnel participate in regional events to directly hear the opinions of regional residents, and deliberate how they can contribute in times of regional disaster.



Greeting people by the bus stop to work (Site Superintendent stands to the right of the picture)



Picking up trash during the local Enma Festival (Nuclear Power & Plant Siting Division General)

- ✓ The reform team established in light of the partially incomplete safety measures renovations is conducting general inspections for not only the incomplete renovations but for the following items identified by the NRA.
 - Partially incomplete testing for the technical standards conformance confirmation of the welds
 - Installation of some fire detectors in areas that do not meet requirements

【Status of general inspections】 (as of July 15, 2022)

	General inspection	Title	Status of corrective action works	Pre-service operator inspection
Incomplete construction	Completed (other than the penetrations)	Damper installation (7) announced on January 27, 2021	Completed	To be addressed as soon as the preparations are completed
	Being conducted (penetrations)	Fire detector installation (5 locations) announced on February 15, 2021		
		Protection of the penetration against inundation (1 location) announced on February 26, 2021		
		Protection of the penetration against fires (4 locations) announced on March 3, 2021 (72 locations) announced on June 10, 2021		
		Protection of the penetration against inundation (5 locations) announced on September 22, 2021		
Weld adequacy confirmation	Completed	Expansion joints replacement	Completed	Being conducted
		Adequacy confirmation (documents)		
		Pipe replacements		
		Instrumentation replacements		
Fire detector installation	Completed	Detectors found in February 2021	Completed	To be addressed as soon as the preparations are completed
		Detectors found March to September 2021		

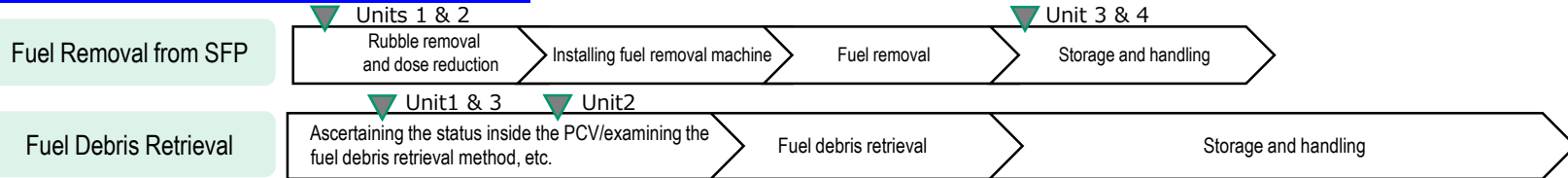
The Current Status of Fukushima Daiichi Nuclear Power Station and Future Initiatives

Current Situation and Status of Units 1 through 4

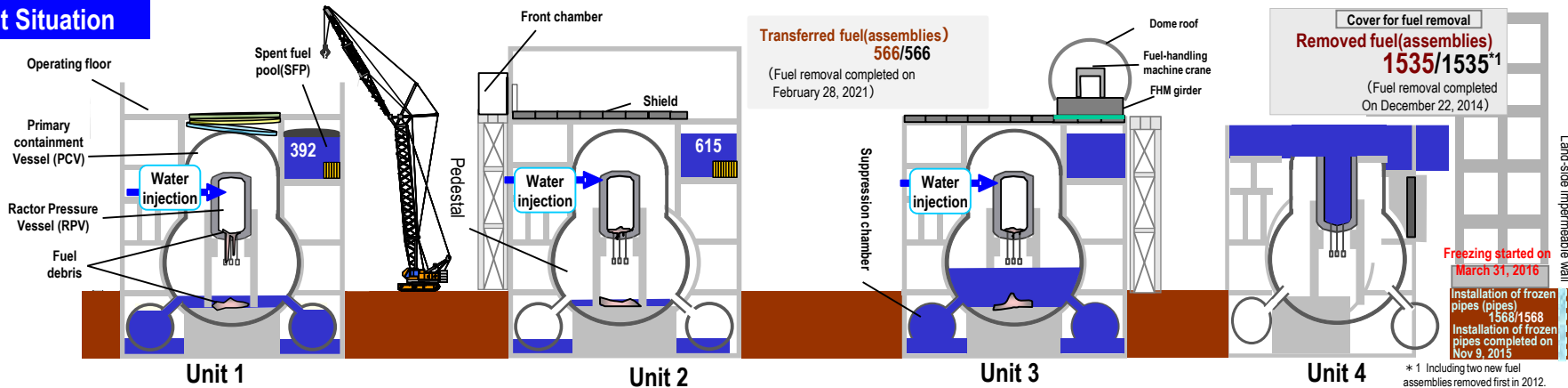
- ✓ Spent fuel removal from Units 3 & 4 is complete.
- ✓ Currently, preparation for Units 1 & 2 spent fuel removal and Units 1-3 fuel debris retrieval is being conducted.

Main decommissioning work and steps

✓ Please visit our website for latest information about the progress of decommissioning, etc



Current Situation

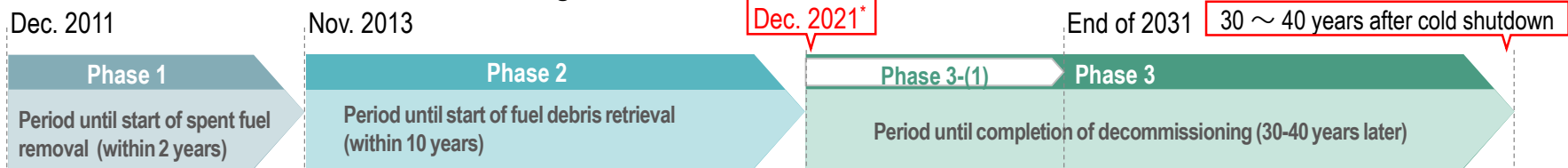


<p>Works towards removal of spent fuel</p>	<ul style="list-style-type: none"> -Started assembling the steel frames to install the large cover in the yard outside of the premises to install the large cover in late April 2021 and started construction work on installing the large cover in April 2022. We will steadily work on removing rubble with safety as the top priority in preparation for the fuel removal work scheduled to start in FY2027 to FY2028. 	<ul style="list-style-type: none"> - Shielding was installed in the refueling floor including the area above the reactor well where the dosage is the highest in May 2022. - The mock-up of interfering objects removal was started in June 2022 in preparation for the removal of Fuel Handling Machine operating room. - Foundation excavation on the south side yard of the building in preparation for the installation of the gantry foundation was completed in early June 2022. 	<ul style="list-style-type: none"> -Spent fuel removal work was completed for Unit 3, the first among units in which the core had melted. (February 2021) 	<ul style="list-style-type: none"> - Fuel removal from the SFP was completed in December, 2014. - The status of high dose equipment stored in the spent fuel pool was confirmed and a dose survey was conducted in May 2022 to verify that no new concerns have materialized. Detail has been discussed to start high-dose equipment retrieval in the second half of FY2024.
<p>Works towards removal of fuel debris</p>	<ul style="list-style-type: none"> - After the Fukushima-oki Earthquake on March 16, 2022, the PCV water level was found to have declined, and the survey of the fuel debris was halted. The survey was restarted in May 2022 once PCV water levels were increased to previous levels and measures were implemented to secure camera footage quality. The survey established the distribution of deposits and the level of exposure of rebars in the pedestal. - From June 7 to 11, 2022, the thickness of the deposits was measured using an underwater ROV-C for a remote-controlled robot. 	<ul style="list-style-type: none"> - Points that could be improved were verified in the trial retrieval device performance test. - Improvements to be made in the device include improving the accuracy of robot arm movements and dual arm manipulator jig structure. 	<ul style="list-style-type: none"> -As decommissioning progresses, samples are now able to be taken during the containment vessel internal investigation, similarly to the investigations in Units 1 and 2. Analysis of the samples taken from the containment vessel found information that may be helpful in accident progression analysis. 	

Milestones and progress in the 5th revision of Mid-and-Long-Term Roadmap(December 2019)

Maintain Overall Framework of Decommissioning Schedule

*To be delayed by around a year due to the effects of COVID-19



Major milestones

Field	Details		Period	Status
Contaminated Water management	Amount of contaminated water generated	Reduce to about 150m ³ /day	Within 2020	Completed
		Reduce to about 100m ³ / day or less	Within 2025	Have reduced the amount to approx. 130m ³ / day (FY2021)
	Stagnant water treatment	Complete stagnant water treatment in buildings ^{※1}	Within 2020 ^{※1}	Completed
		Reduce the amount of stagnant water in buildings to about a half of that in the end of 2020	FY2022-2024	Ongoing
Fuel removal	Complete of fuel removal from Unit 1 – 6		Within 2031	Completed removing fuel from Units 3 and 4
	Complete of installation of the large cover at Unit 1		Around FY 2023	Working on installing the large cover
	Start fuel removal from Unit 1		FY2027-2028	Same as above
	Start fuel removal from Unit 2		FY2024-2026	Completed ground improvement work
Fuel debris retrieval	Start fuel debris retrieval from the first Unit (Start from Unit 2, expanding the scale gradually)		Within 2021 *To be delayed by around a year due to the effects of COVID-19	Conducting performance verification tests for the trial retrieval device
Waste management	Technical prospects concerning the processing/ disposal policies and their safety		Around FY2021	Completed ^{※3}
	Eliminating temporary storage areas outside for rubble and other waste ^{※2}		Within FY2028 ^{※2}	Working on based on the storage maintenance plan

※1:Excluding the reactor buildings of Units 1-3, process main buildings, and High temperature incineration building. ※2:Excludes water treatment secondary waste and items that will be reused .

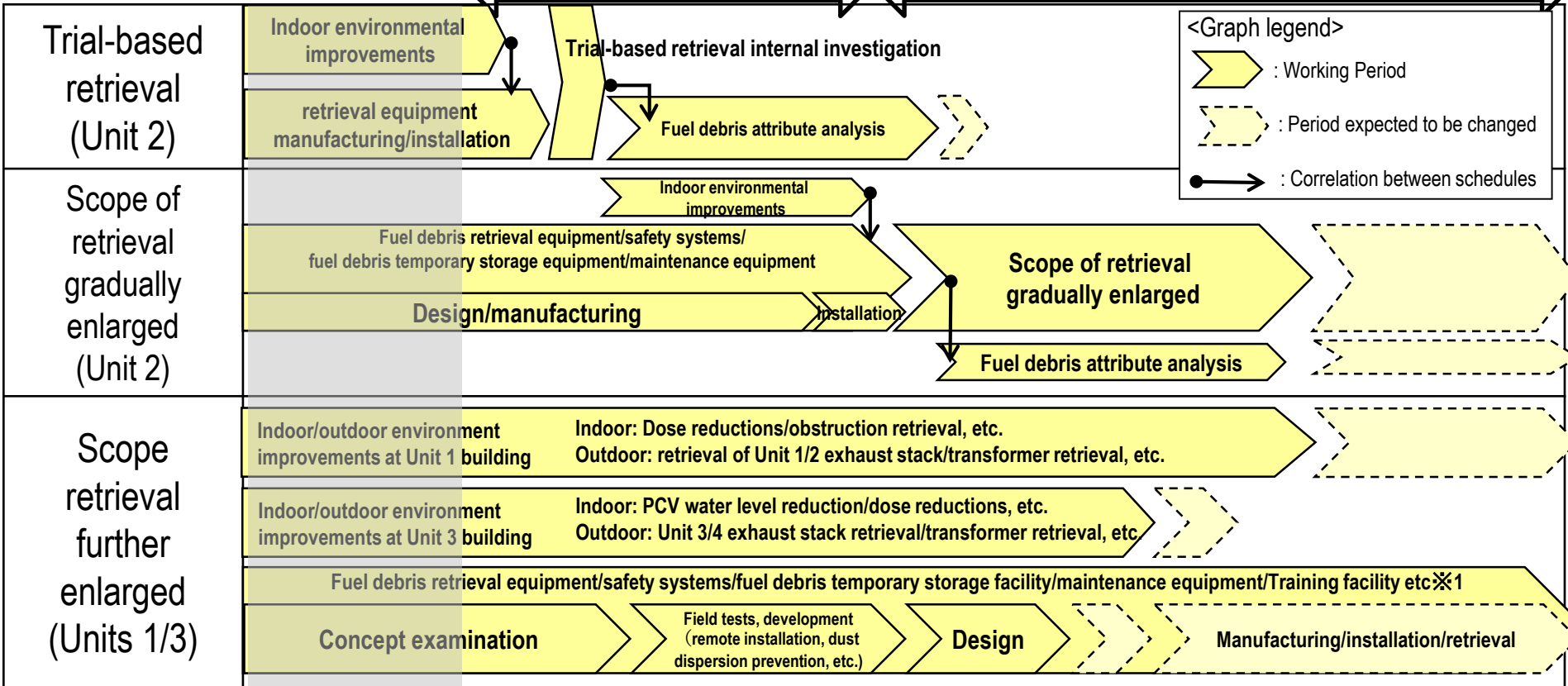
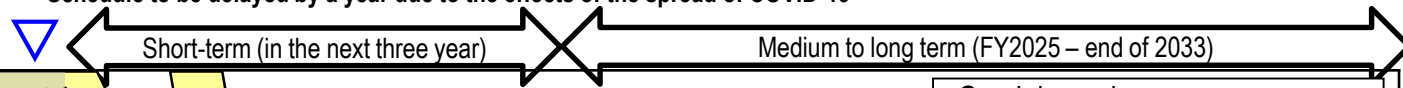
※3: Considered finalized as “Technical outlook on methods for treatment and disposal of solid waste, and their safety” was included in the “2021 Technical Strategy for Decommissioning of TEPCO Holdings’ Fukushima Daiichi Nuclear Power Station” published by the Nuclear Damage Compensation and Decommissioning Facilitation Corporation (published on October 29, 2021).

Fuel Debris Retrieval Schedule and Process Based upon the Mid-to-Long Term Decommissioning Implementation Plan 2022

- ✓ The Decommissioning Long-term Implementation Plan 2022 was published on March 31, 2022 with the progress made in decommissioning work and new challenges identified in FY2021.
- ✓ Regarding Unit 2, to gradually expand the scale of retrieval from experimental retrieval, discussions for an RPV internal investigation in FY2024 will be conducted.

Commencement of fuel debris retrieval from first reactor (during 2021)
 *Schedule to be delayed by a year due to the effects of the spread of COVID-19

FY2021
(actual)



<Graph legend>

- : Working Period
- : Period expected to be changed
- : Correlation between schedules

※ These tasks shall be carried out for Unit 3 first and then expanded for Unit 1

Contaminated Water Measures

✓ Progress is being made on the three contaminated water initiatives detailed in the 5th revision of the Mid-and-long-term Roadmap (December 2019).

(1) Initiative to promote contaminated water measures following the three basic policies

(1) Remove the contamination source, (2) don't let water near the contamination source, (3) don't let contaminated water leak out

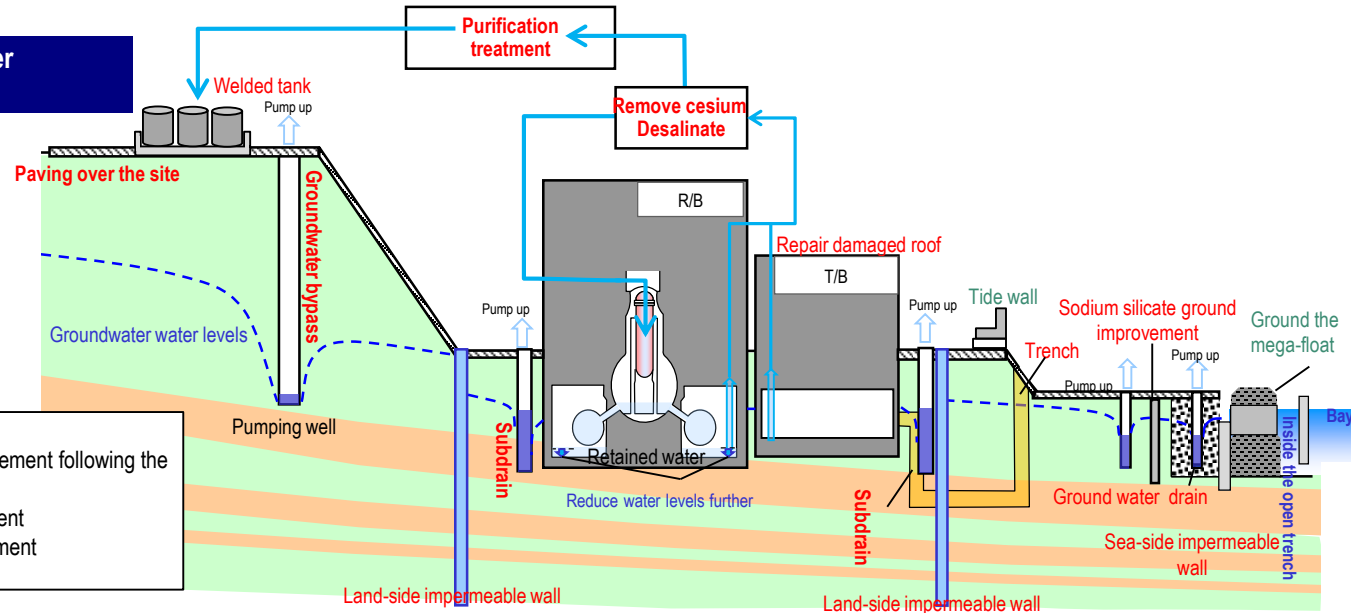
- The strontium treated water treated using equipment other than multi-nuclide removal equipment, is treated again using multi-nuclide removal equipment and stored in welded tanks.
- Groundwater levels around the building have been kept stable at low levels through the use of land-side impermeable walls, subdrains and other multi-layered contaminated water management measures. The amount of contaminated water generated in a rain storm has also been falling as a result of repairs of building roofs and the paving over of the site premises. The amount of contaminated water generated has fallen from approx. 540 m³ /day (May 2014) from before the measures were implemented to 130m³ /day in FY2021.
- More contaminated water reduction measures will be implemented to reduce levels to below 100 m³ /day within 2025.

(2) Initiatives for the completion of retained water treatment

- Construction to build another retained water transfer equipment is underway to reduce building retained water levels according to plan.
- In 2020, treatment of retained water in buildings other than the reactor buildings for Units 1-3, main processing building, and high temperature incinerator building was completed.
- Going forward, water levels in the reactor building will be halved by FY2022 to FY2024 compared to end of 2020 levels.
- Measures to reduce dose levels in and stabilize the zeolite sandbags that were installed in the basement of the main processing building and high temperature incinerator building immediately after the Accident as part of contaminated water measures, are being discussed.

(3) Initiative for the stable contaminated water management

- As a tsunami countermeasure, the openings of buildings were closed and a tide wall is being built. As a countermeasure for torrential rain, sand bags will be installed to reduce the amount of water that will directly flow into the building and drainage channels will be fortified in a planned manner.



- Red : (1) Promote contaminated water management following the three basic policies
- Blue : (2) Completion of retained water treatment
- Green : (3) Stable contaminated water management

TEPCO Holdings' Response Regarding the Handling of ALPS Treated Water

- 1 TEPCO Holdings' Approach to the Discharge of ALPS Treated Water

- ✓ The “Basic Policy on handling of ALPS treated water at the Tokyo Electric Power Company Holdings’ Fukushima Daiichi Nuclear Power Station” (hereinafter government policy) was decided at the 5th Inter-Ministerial Council for Contaminated Water, Treated Water and Decommissioning Issues held on April 13, 2021.
- ✓ TEPCO will work to ensure that responses based on this government policy will be implemented.

<TEPCO Holdings' Approach to the Discharge of ALPS Treated Water >

Basic position

- In discharging ALPS treated water*¹ into the sea, we will ensure that the discharged water is safe by conforming to safety standards based on laws, and relevant international laws and practices, while conducting radiation impacts assessments on people and the environment*². Thus we will secure the safety of the public, the surrounding environment as well as agricultural, forestry and fishery products.

Strengthening and enhancing the scope of monitoring

- In discharging ALPS treated water into the sea, we will further expand and strengthen our sea area monitoring efforts to minimize the adverse impacts on reputation.
- Objectivity and transparency of monitoring will be secured by asking for the cooperation of experts and the people in the agricultural, forestry, and fishery industry.

Preventing leaks from tanks

- On-site tank that store ALPS treated water will be continuously monitored for leaks and will be maintained and managed appropriately in preparation for natural disasters.

Information dissemination and minimizing rumors

- To dispel concerns and foster understanding domestically and internationally, we will continuously provide accurate information in a highly transparent manner, regarding the impacts on the environment such as the results of measurements/analysis on the concentration of radioactive materials in the ALPS treated water before discharge; status of the discharge and the results of sea area monitoring; as well as the results of assessment of the radiation impact on the public and the environment.
- To minimize the adverse impacts on reputation, we will do our utmost in supporting industries that may be subject to potential adverse impacts on reputation at each stage from production, processing, distribution, and consumption (cultivating new markets).

Appropriate compensation

- If reputational damage is incurred as a result of the discharge of ALPS treated water despite these efforts, we will provide swift and appropriate compensation.

*¹ Water that has been purified and treated in ALPS until levels of radioactive materials excluding tritium is lower than the regulatory standard value for safety.

*² Includes any latent effects the ALPS treated water may have on the marine environment

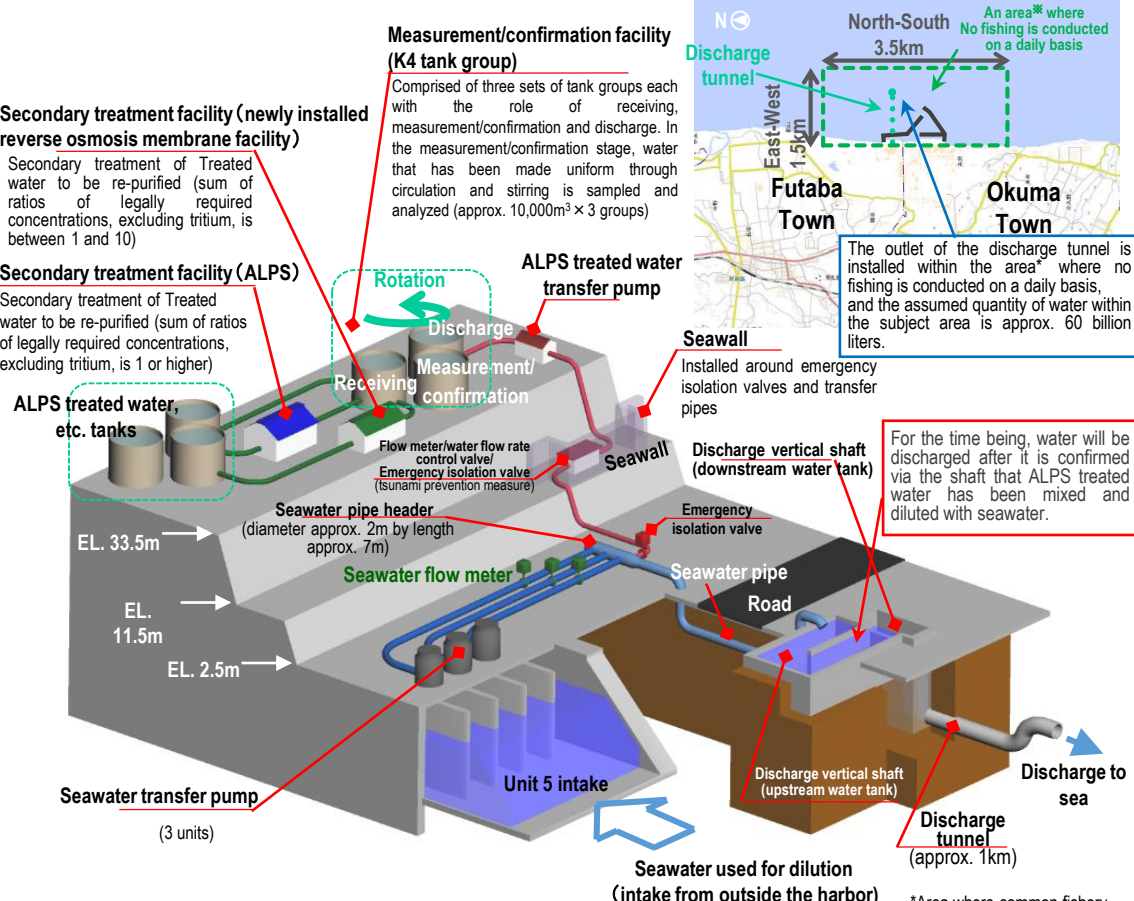
TEPCO's Response on the Handling of ALPS Treated Water

- 2 Status of Review Regarding Design and Operation of Necessary Facilities and plan going forward

- ✓ In August 2021, TEPCO released status of review regarding the handling of ALPS treated water at the Fukushima Daiichi NPS. In December of the same year, the "Application Documents for Approval to Amend the Implementation Plan for Fukushima Daiichi Nuclear Power Station Specified Nuclear Facilities" that summarized the details was submitted to the NRA.
- ✓ The Implementation Plan Review Committee, under which NRA had been reviewing the design/operation of facilities for discharging the treated water into the sea, held its last meeting in April 2022. TEPCO submitted amendments to the above application to the NRA based on conclusions reached by the Review Committee and this application was approved on July 22, 2022.
- ✓ To initiate discharge around spring of 2023 as set forth in the Basic Policy, we will proceed with the review by continuing to listen to opinions from people in the region and parties concerned carefully and reflecting them onto facility design and operations as appropriate.

Overview of facilities for securing safety

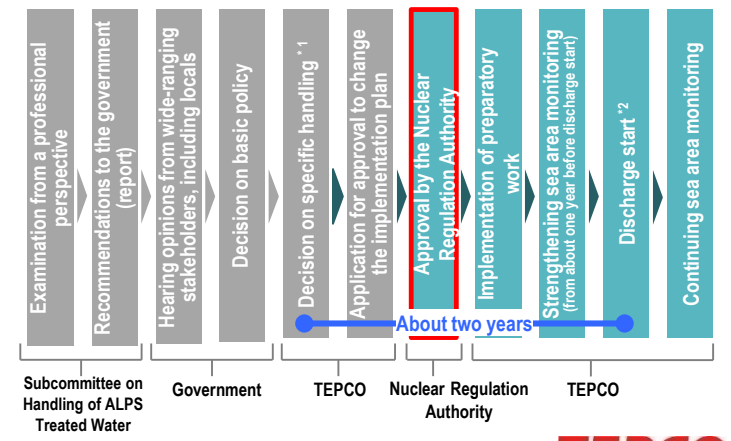
Source: Developed by Tokyo Electric Power Company Holdings, Inc. based on the map developed by the Geospatial Information Authority of Japan (electronic territory web) <https://maps.gsi.go.jp/#13/37.422730/141.044970/&base=std&ls=std&disp=1&vs=c1j0h0k0l0u0i0z0r0s0m0f1>



Operation Method

- ✓ Ensure that radioactive materials other than tritium are purified before diluted discharge so that their concentration level sufficiently satisfies the regulatory standards. And ALPS treated water is diluted by more than 100 times with a large amount of seawater so that the concentration of tritium falls below the regulatory standards, and discharged through a discharge tunnel stretching 1 kilometer out to the sea.
- ✓ In the event of an abnormality, discharge will be stopped immediately by closing the emergency isolation valve and shutting down the pump.
- ✓ An assessment of the impact of radiation on people and the environment from ALPS treated water discharged into the sea based on the TEPCO's facility design and operation has found that impact would be minimal.

Plan going forward



*1 Including radiation impact assessment on human beings and the environment
 *2 Discharges into the sea will be conducted gradually during the initial phase



Other Initiatives

<TEPCO Holdings>

April, 22, 2022	Decided to invest in Solar Rooftop CE 9 Co., Ltd. through the intermediary holding company TEPCO Global Energy Pte. Ltd. established in Singapore in March 2022 to advance the rooftop photovoltaic generation corporate power purchase agreement (PPA) business in Thailand.
April, 28, 2022	Announced our plans for “Business Structure Reforms to Achieve Balancing Long-term Stable Supply and Carbon Neutrality.”
June, 15, 2022	Started the demonstration test for using distributed energy resources. This is part of the demonstration project funded by METI’s FY2022 Subsidy for Demonstration Projects to Build Next Generational Technology Using Storage Battery and Other Distributed Energy Resources. Projects are public sought and chosen through the Sustainable open Innovation Initiative. This particular demonstration project is in collaboration with 16 other companies including Goal connect, enestone Co., Ltd, SANIX INCORPORATED, TEPCO Power Grid, Inc., TAKAOKA TOKO CO., LTD., Japan Weather Association, HONDA MOTOR CO.,LTD., OKI Crosstech Co., Ltd., Kyocera Corporation, TEPCO Energy Partner, Incorporated, and NEC Corporation.
June 20, 2022	A project planned jointly with TEPCO PG was chosen for R&D Item 1 “Commercialization of pseudo-inertia PCS” in the “More advanced generational electricity grid stabilization R&D to turn renewables into the main power source” grant program run by NEDO through a public solicitation process.
June 24, 2022	Signed a “Cooperative Agreement to Efforts to Supply Electricity Stably and Achieve Carbon Neutrality Given the Recent Energy Market” with Tokyo Prefecture to promote measures to circumvent outages in large area across Tokyo when demand and supply is tight.
June 24, 2022	“Power Grid Stabilization Project to Expand the Use of Renewable Energies in Mongolia” started. JICA commissioned the Project to a consortium of three companies comprised of TEPCO Holdings, TOKYO ELECTRIC POWER SERVICES CO. LTD., and TEPCO Power Grid, Inc. (commissioned June 1, 2022, started June 23, 2022).
June 30, 2022	TEPCO Holdings and TEPCO EP’s application to the METI Minister to become a specialized wholesale operator (aggregator) as stipulated by the specialized wholesale business framework was approved.

<TEPCO Power Grid>

June 23, 2022	A project planned jointly with Waseda University, Mitsubishi Research Institute, Inc., Kansai Transmission and Distribution, Inc., KYOCERA Corporation, University of Tokyo, Chubu Electric Power Grid Co., Inc., TEPCO Energy Partner, Incorporated, TEPCO Holdings, Inc, Mitsubishi Heavy Industries, Ltd. was chosen by NEDO in its open call to apply for its grant program for Distributed Energy Resource Controlling Technology for Mitigating Congestion on the Electricity Grid (chosen June 3, 2022, project is scheduled to run from June 2022 to March 2025)
June 30, 2022	Established a company, GDBL, together with Chubu Electric Power Co., Inc., Kansai Transmission and Distribution, Inc., and NTT DATA CORPORATION. GDBL obtained certification from the Association of Certified Users Who Use Electricity User Information.
July 1, 2022	Established and started operating a new company, Rakuten Mobile Infrastructure Solutions, with Rakuten Mobile, Inc. that builds new cellphone base stations (established May 31, 2022, started operations on July 1, 2022).

<TEPCO Energy Partner>

- May 18, 2022 Started the Virtual Mega-Solar Project where solar panels are deployed to Proud Season-branded houses sold by Nomura Real Estate Holdings, Inc. in the Tokyo metropolitan area to generate solar powered electricity on a scale commensurate to that of mega-solar plants (total generating output 1000 kW) through the solar power PPA service Enerkari +.
- May 20, 2022 Held a ceremony to celebrate the completion of the Nanohana Pipeline that transports natural gas over 31 km from JERA's Futtsu LNG Base to Anegasaki Thermal Power Station. The Pipeline was built together with Keiyo Gas Company, Otaki Gas Co., Ltd., JERA Co., Inc, and Nanohana Pipeline Inc. (The Pipeline started operations in June 2022)
- May 30, 2022 Started offering the 'TEPCO Protects You (TEPCO Mihariban)' service which leases gas alarms with LTE transmission functionality, the first service of its kind in the industry (started May 31, 2022).
- June 1, 2022 Launched a new electricity rate plan "Off-site Corporate PPA" for corporate customers. Under this plan, customers can secure environmental value with additionality in the long-term without having to own a solar power plant. TEPCO builds a new solar power plant outside of the customer's premises and supplies environmental value from solar power generation in the long-term. This new plan was adopted by Sumitomo Mitsui Banking Corporation.
- June 8, 2022 The 2022 TEPCO Energy Conservation Program was started to support households in conserving energy. As part 1 of this Program, we are encouraging customers who are using specific rate plans to take part in the 2022 Summer Energy Conservation Challenge and the Our Energy Conservation Declaration. We also provide tips on conserving energy and ways to conserve energy according to the season on the website, Kurashi TEPCO web.
- June 17, 2022 Signed a basic agreement on investigating the potential of using P2G systems, which manufacture hydrogen using renewable electricity, to balance demand and supply in the power grid at the Electricity Storage Technology R&D Site in Komekurayama, Kofu-shi, with Yamanashi Prefecture and Energy Pool Japan
- June 22, 2022 Enekari +, Ohisama EcoCute, and demand response that use storage batteries were chosen as services subject to the MOE's Green Life Point Promotion Project in Food and Living, where points are issued to consumers who act for the environment. (Scheduled to start around August 2022)
- July 4, 2022 The name of the Renewables Promotion Department that was in the Sales Unit was changed to the Carbon Neutral Marketing and Sales Department. A new Carbon Neutrality Consulting Group (CN Consulting Group) was established as a one-stop shop for carbon neutrality solutions. The carbon neutrality solutions service TEPCO CN Design for corporate customers was begun in earnest.

<TEPCO Renewable Power>

- June 13, 2022 Signed an agreement with the Mitsui Oil Exploration Co., Ltd. to study geothermal generation that leverages new heat recovery technology.