

FY2020 3rd Quarter Financial Results (April 1 – December 31, 2020)

Tokyo Electric Power Company Holdings, Inc.



tepcon

Overview of FY2020 3rd Quarter Financial Results

(Released on February 10, 2021)

(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.

< FY2020 3rd Quarter Financial Results >

- Operating revenue decreased due to decreases in electricity sales volume resulting from increased competition for electricity sales and impact of the COVID-19 pandemic.
- Ordinary income decreased due to decreases in operating revenue despite continual efforts on behalf of the entire Group to cut costs.
- Quarterly net income decreased due to a reactionary fall from the extraordinary income posted last fiscal year.

1. Consolidated Financial Results

(Unit: Billion kWh)

	FY2020 Apr-Dec (A)	FY2019 Apr-Dec (B)	Comparison	
			(A)-(B)	(A)/(B) (%)
Electricity Sales Volume	150.2	164.7	-14.5	91.2

(Unit: Billion Yen)

	FY2020 Apr-Dec (A)	FY2019 Apr-Dec (B)	Comparison	
			(A)-(B)	(A)/(B) (%)
Operating Revenue	4,103.9	4,637.9	-534.0	88.5
Operating Income/Loss	152.7	247.1	-94.4	61.8
Ordinary Income/Loss	235.5	309.9	-74.3	76.0
Extraordinary Income/Loss	-95.4	161.8	-257.3	-
Net Income Attributable to Owners of Parent	130.4	434.8	-304.3	30.0

2. Points of Each Company

<TEPCO Holdings>

- Ordinary income decreased due to a decrease in wholesale power sales to TEPCO Energy Partner, Inc. and a decrease in received dividends from core operating companies, etc.

<TEPCO Fuel & Power>

- Ordinary income increased due to a positive turn in the effects of the time-lag from the fuel cost adjustment system and the generation business at JERA, etc.

<TEPCO Power Grid>

- Ordinary income increased due to a decrease in depreciation costs and other factors despite a decrease in area demand because of the impact of COVID-19 pandemic.

<TEPCO Energy Partner>

- Ordinary income decreased due to a decrease in operating revenue caused by increased competition and the impact of COVID-19 pandemic, etc.

<TEPCO Renewable Power>

- Ordinary income increased due to an increase in wholesale power sales to TEPCO Energy Partner, Inc, etc.

3. Overview of Each Company

(Unit: Billion Yen)

	FY2020 Apr-Dec (A)	FY2019 Apr-Dec (B)	Comparison	
			(A)-(B)	(A)/(B) (%)
Operating Revenue	4,103.9	4,637.9	-534.0	88.5
TEPCO Holdings	364.7	※ 453.6	-88.8	80.4
TEPCO Fuel & Power	5.8	6.5	-0.6	89.3
TEPCO Power Grid	1,292.4	1,288.2	4.2	100.3
TEPCO Energy Partner	3,614.3	4,212.2	-597.8	85.8
TEPCO Renewable Power	109.9	※ 94.2	15.6	116.6
Adjustments	-1,283.5	※ -1,416.8	133.3	-
Ordinary Income/Loss	235.5	309.9	-74.3	76.0
TEPCO Holdings	7.0	※ 121.1	-114.1	5.8
TEPCO Fuel & Power	83.4	62.3	21.0	133.8
TEPCO Power Grid	183.6	175.3	8.2	104.7
TEPCO Energy Partner	7.9	54.6	-46.6	14.6
TEPCO Renewable Power	44.1	※ 27.1	16.9	162.4
Adjustments	-90.6	※ -130.7	40.1	-

※ Figures for April through December FY2019 rearranged by TEPCO HD and RP to provide a comparison with this term.

4. Consolidated Extraordinary Income/Loss

(Unit: Billion Yen)

	FY2020 Apr-Dec (A)	FY2019 Apr-Dec (B)	Comparison (A)-(B)
Extraordinary Income	-	※2 367.2	-367.2
Extraordinary Loss	※1 95.4	※3 205.3	-109.8
Expenses for Nuclear Damage Compensation	95.4	81.9	13.5
Other	-	123.4	-123.4
Extraordinary Income/Loss	-95.4	161.8	-257.3

*1 Increase in the estimated amount of compensation for damages due to the restriction on shipping and damages due to reputation, etc

*2 Gain on change in equity, Gain on reversal of provision for loss on disaster and Grants-in-Aid from the Nuclear Damage Compensation and Decommissioning Facilities Corporation.

*3 Fukushima Daini decommissioning loss, Expenses for Nuclear Damage Compensation, special disaster loss, contingent property loss

5. Consolidated Financial Position

- Total liabilities balance decreased by 112.5 billion yen primarily due to decrease in accrue expenses despite an increase in interest-bearing debts.
- Total net assets balance increased by 121.7 billion yen primarily due to the appropriation of net income attributable to owners of parent.
- Equity ratio improved by 0.9 points.

Balance Sheet as of March 31, 2020

Balance Sheet as of December 31, 2020

<p>Total Assets 11,957.8 billion yen</p>	<p>Liabilities 9,040.9 billion yen</p>	<p>Decrease in liabilities -112.5 billion yen</p> <ul style="list-style-type: none"> • Increase in interest-bearing debts +156.2 billion yen • Increase in publicly offered bonds for PG • Decrease in accrue expenses -192.0 billion yen 	<p>Total Assets 11,967.0 billion yen</p> <p>(Increase in Assets +9.2 billion yen)</p>	<p>Liabilities 8,928.4 billion yen</p>
	<p>Net Assets 2,916.8 billion yen</p>	<p>Increase in net assets +121.7 billion yen</p> <ul style="list-style-type: none"> • Appropriation of net income attributable to owners of parent +130.4 billion yen 		<p>Net Assets 3,038.6 billion yen</p>

Equity Ratio: 24.3%

**Improved by
0.9 points**

Equity Ratio: 25.2%

Area Demand

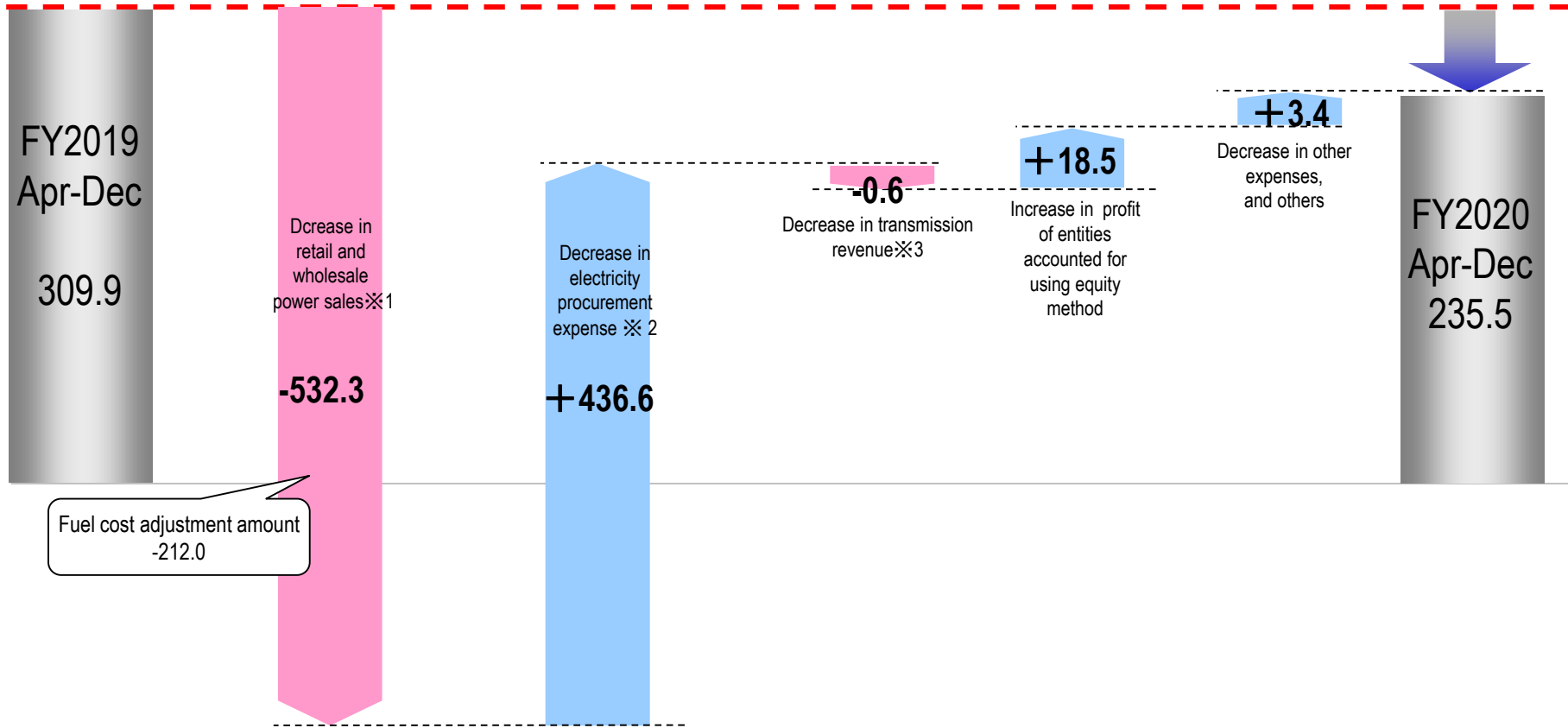
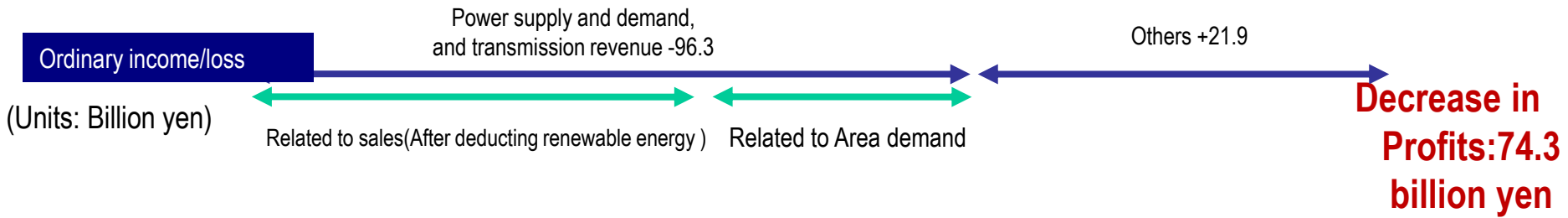
(Unit: Billion kWh)

	FY2020 Apr-Dec (A)	FY2019 Apr-Dec (B)	Comparison	
			(A)-(B)	(A)/(B) (%)
Area Demand	193.6	198.6	-5.0	97.5

Foreign Exchange Rates / CIF

	FY2020 Apr-Dec (A)	FY2019 Apr-Dec (B)	(A)-(B)
Foreign Exchange Rate (Interbank, yen/dollar)	106.1	108.7	-2.6
Crude Oil Prices (All Japan CIF, dollar/barrel)	39.0	67.8	-28.8

<Reference> Consolidated Year-on-Year performance comparison ① ~Increases/Decreases chart~



※1 Retail and wholesale power sales include the impact of indirect auctions, and the impact of transmission expenses (excluding imbalances) have been deducted
 ※2 Electricity procurement expenses include the impact of indirect auctions
 ※3 Transmission revenue excludes the impact of income/expenditure imbalances but includes transactions within the Group companies

<Reference> Consolidated Year-on-Year performance comparison ② ~Figures~

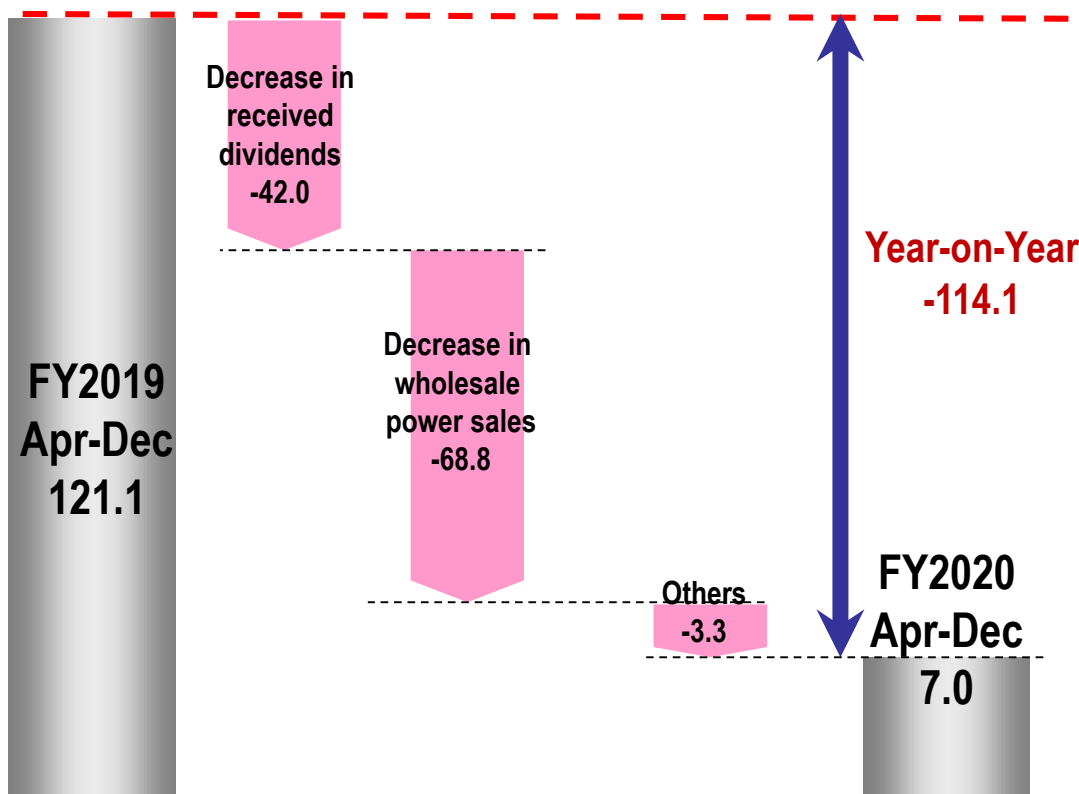
(Units: Billion yen)

	FY2020 Apr-Dec(A)	FY2019 Apr-Dec(B)	(A)-(B)
Ordinary Income	235.5	309.9	-74.3
Power supply and demand, and transmission revenue	1,320.8	1,417.2	-96.3
Retail/wholesale power sales	1,970.3	2,502.6	-532.3
(△) Electricity procurement expense	-1,675.4	-2,112.0	436.6
Transmission revenue※	1,026.0	1,026.6	-0.6
Others	-1,085.2	-1,107.2	21.9
Profit of entities accounted for using equity method	118.0	99.5	18.5
(△) Depreciation costs	-297.8	-305.4	7.6
(△) Facility costs	-180.8	-173.9	-6.9
Other	-724.6	-727.4	2.6

※ Transmission revenue excludes the impact of income/expenditure imbalances but includes transactions within the Group companies

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

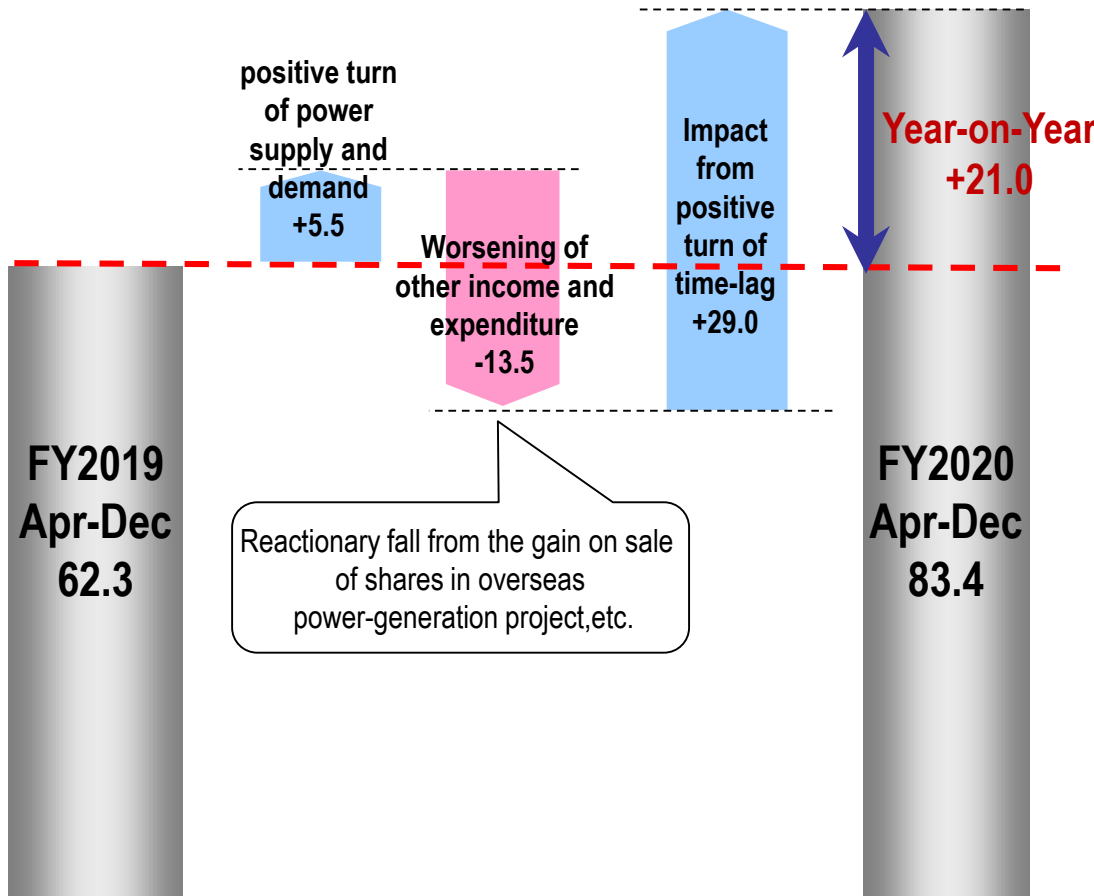
(Units: Billion Yen)

	FY2019	FY2020	Comparison
Apr-Jun	※ 148.2	79.5	-68.7
Apr-Sep	※ 144.2	63.3	-80.9
Apr-Dec	※ 121.1	7.0	-114.1
Apr-Mar	152.9		

※ Figures for April through December FY2019 rearranged by TEPCO HD and RP to provide a comparison with this term.

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)

	FY2019	FY2020	Comparison
Apr-Dec	+37.0	+66.0	+29.0

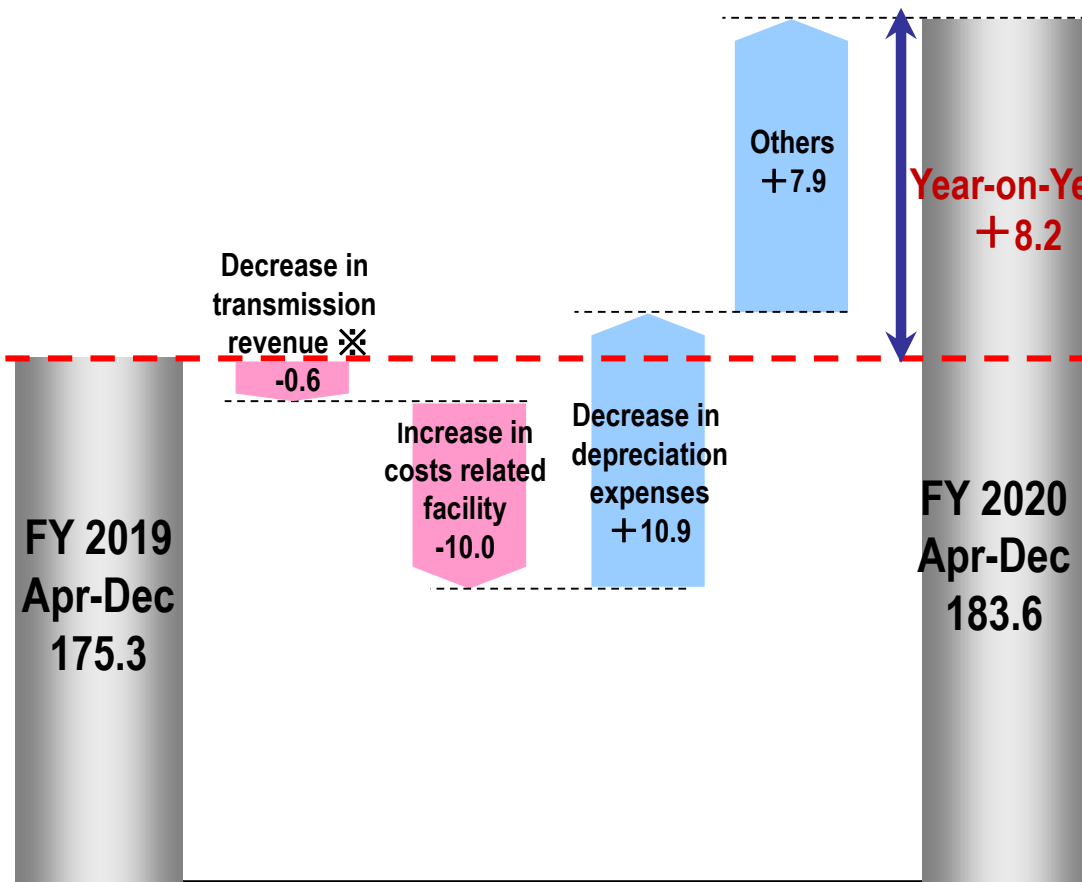
Ordinary income

(Units: Billion Yen)

	FY2019	FY2020	Comparison
Apr-Jun	45.8	9.2	-36.5
Apr-Sep	58.4	45.3	-13.1
Apr-Dec	62.3	83.4	+21.0
Apr-Mar	64.7		

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 of transmission and distribution facilities.

Area demand

(Units: Billion kWh)

	FY2019	FY2020	comparison
Apr-Dec	198.6	193.6	-5.0

Ordinary income

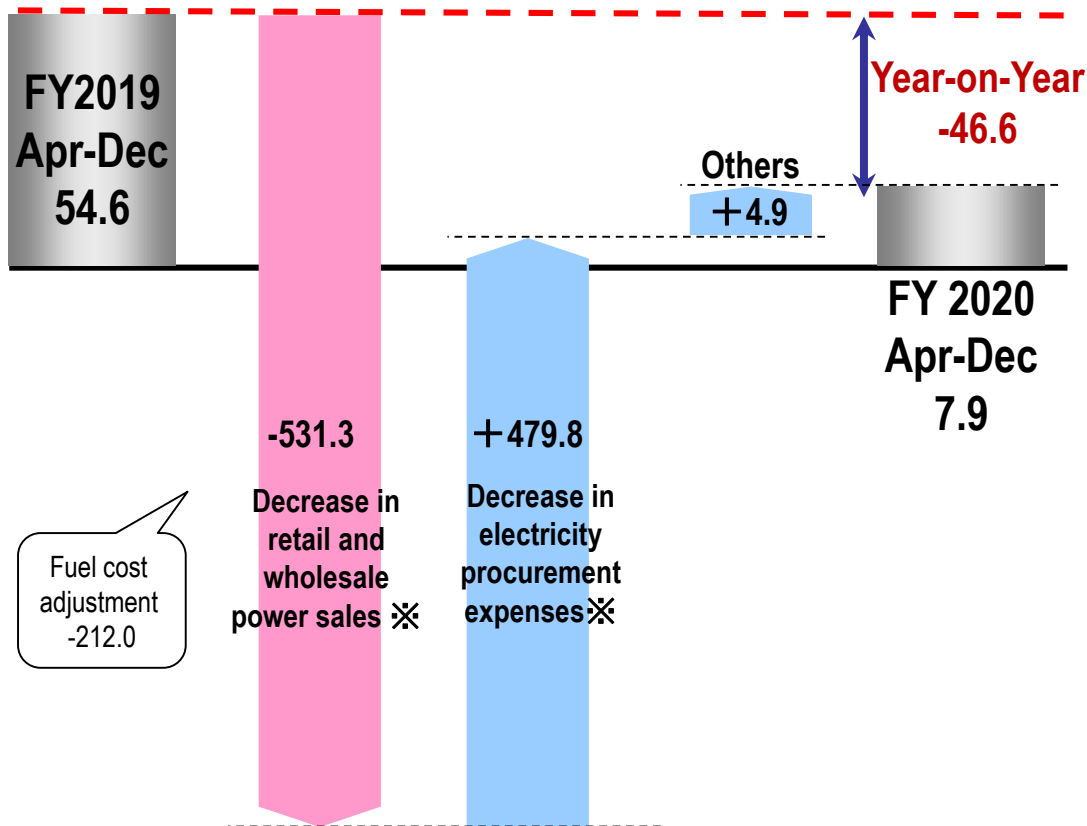
(Units: Billion Yen)

	FY2019	FY2020	comparison
Apr-Jun	42.6	40.7	-1.8
Apr-Sep	119.9	123.8	+3.9
Apr-Dec	175.3	183.6	+8.2
Apr-Mar	116.6		

※ 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

(Units: Billion kWh)

	FY2019	FY2020	comparison
Apr-Dec	164.7	150.2	-14.5

Gas contracts (Non-consolidated basis of EP)

As of March 31, 2020	As of December 31, 2020
Approx. 1.13 million	Approx. 1.21 million

Ordinary income

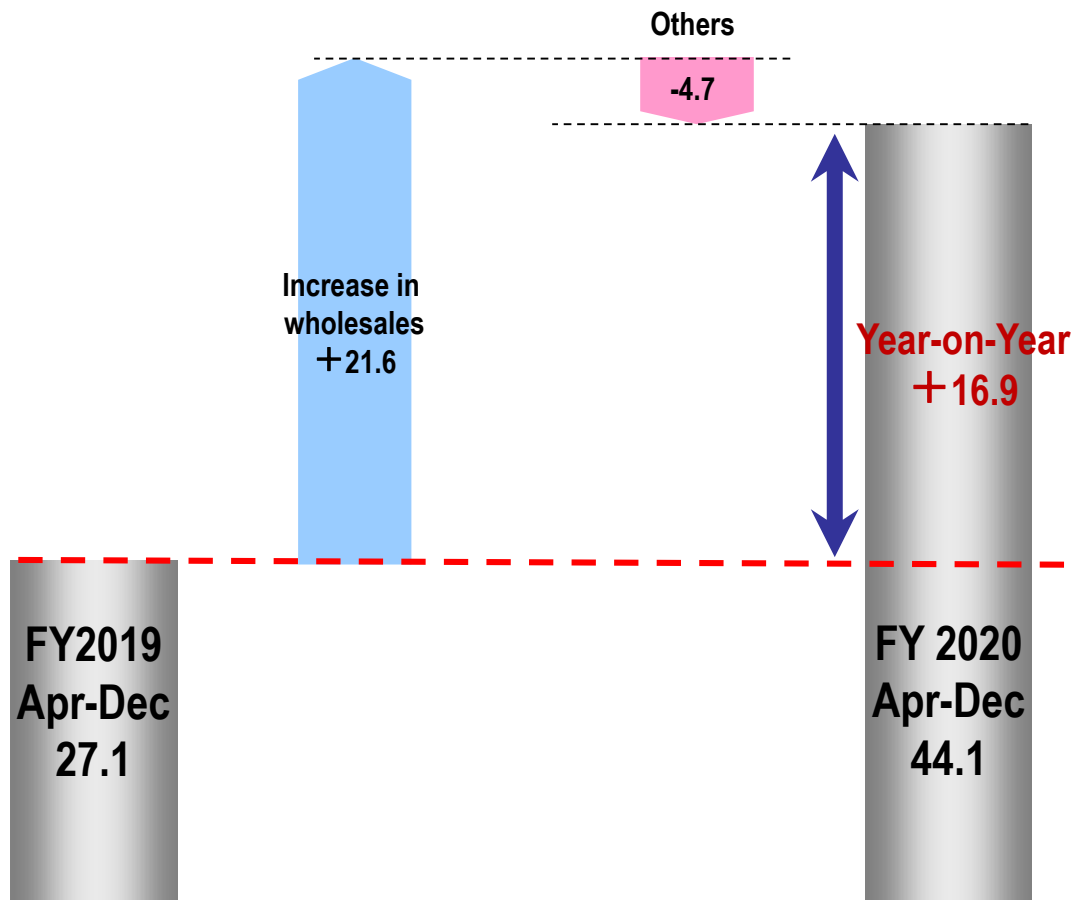
(Units: Billion yen)

	FY2019	FY2020	comparison
Apr-Jun	-12.0	11.2	+23.2
Apr-Sep	43.4	45.9	+2.4
Apr-Dec	54.6	7.9	-46.6
Apr-Mar	60.0		

※ Retail and wholesale power sales, and electricity procurement expenses both include the impact from indirect auctions. The impact of imbalance on transmission costs has been added to the electricity procurement costs after deducting the impact excluding the imbalance from retail and wholesale power sales.

Ordinary income/loss

(Units: Billion Yen)



Profit Structure

Main profit is wholesale power sales of hydroelectric and new energies.
Main expense is for depreciation and repairs.

Flow rate

(Unit: %)

	FY2019	FY2020	comparison
Apr-Dec	104.4	99.6	-4.8

Ordinary Income

(Units: Billion yen)

	FY2019	FY2020	comparison
Apr-Jun	※ 8.1	17.8	+9.6
Apr-Sep	※ 18.1	36.7	+18.5
Apr-Dec	※ 27.1	44.1	+16.9
Apr-Mar	-	-	-

※ Figures for April through December FY2019 rearranged by TEPCO HD and RP to provide a comparison with this term.

Supplemental Material

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FY2020 3rd Quarter Financial Results

Detailed Information

Consolidated Statements of Income

	(Unit: Billion Yen)			
	FY2020	FY2019	Comparison	
	Apr-Dec (A)	Apr-Dec (B)	(A)-(B)	(A)/(B) (%)
Operating Revenue	4,103.9	4,637.9	-534.0	88.5
Operating Expenses	3,951.1	4,390.8	-439.6	90.0
Operating Income / Loss	152.7	247.1	-94.4	61.8
Non-operating Revenue	120.9	103.5	17.4	116.9
Investment Gain under the Equity Method	118.0	99.5	18.5	118.7
Non-operating Expenses	38.1	40.7	-2.5	93.6
Ordinary Income / Loss	235.5	309.9	-74.3	76.0
Reserve for Fluctuation in Water Levels	0.0	—	0.0	—
Reserve for Preparation of Depreciation of Nuclear Power Construction	0.3	0.2	0.1	151.0
Extraordinary Income	—	367.2	-367.2	—
Extraordinary Loss	95.4	205.3	-109.8	—
Income Tax, etc.	8.5	36.0	-27.4	23.8
Net Income Attributable to Non-controlling Interests	0.6	0.7	-0.0	88.3
Net Income Attributable to Owners of Parent	130.4	434.8	-304.3	30.0

Consolidated Balance Sheets

16

(Unit: Billion Yen)

	Dec. 31 2020 (A)	Mar. 31 2020 (B)	Comparison	
			(A)-(B)	(A)/(B) (%)
Total Assets	11,967.0	11,957.8	9.2	100.1
Fixed Assets	10,183.6	10,171.8	11.8	100.1
Current Assets	1,783.3	1,786.0	-2.6	99.9
Liabilities	8,928.4	9,040.9	-112.5	98.8
Long-term Liability	5,441.5	4,858.6	582.9	112.0
Current Liability	3,478.9	4,174.7	-695.8	83.3
Reserve for Fluctuation in Water Levels	0.0	—	0.0	—
Reserve for Preparation of the Depreciation of Nuclear Plants Construction	7.8	7.5	0.3	104.1
Net Assets	3,038.6	2,916.8	121.7	104.2
Shareholders' Equity	3,071.0	2,940.4	130.5	104.4
Accumulated Other Comprehensive Income	-49.6	-40.2	-9.3	—
Share Acquisition Rights	0.0	0.0	0.0	458.0
Non-controlling Interests	17.2	16.6	0.5	103.0

<Interest-bearing debt outstanding> (Unit: Billion Yen)

	Dec. 31 2020 (A)	Mar. 31 2020 (B)	(A)-(B)
Bonds	2,675.4	2,214.6	460.7
Long-term Debt	451.7	727.5	-275.8
Short-term Debt	1,943.9	1,972.6	-28.7
Total	5,071.1	4,914.9	156.2

<Reference>

	FY2020 Apr-Dec (A)	FY2019 Apr-Dec (B)	(A)-(B)
ROA(%)	1.3	2.0	-0.7
ROE(%)	4.4	14.0	-9.6
EPS(Yen)	81.44	271.40	-189.96

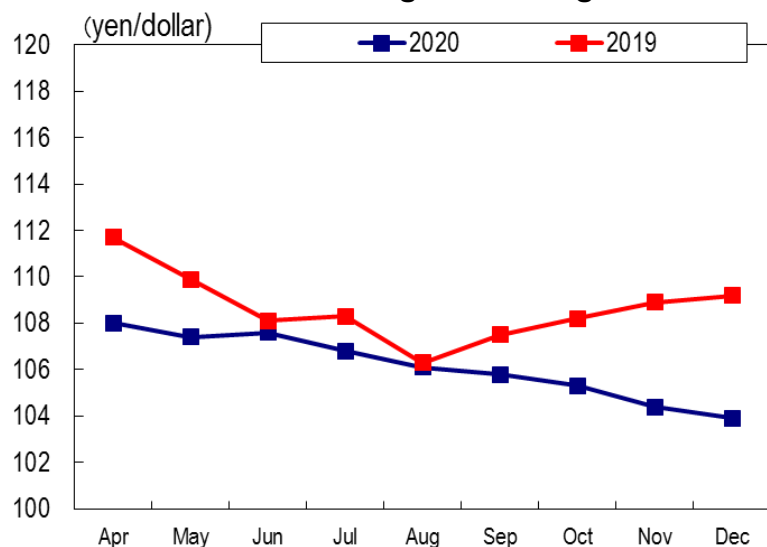
ROA: Operating Income / Average Total Assets

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

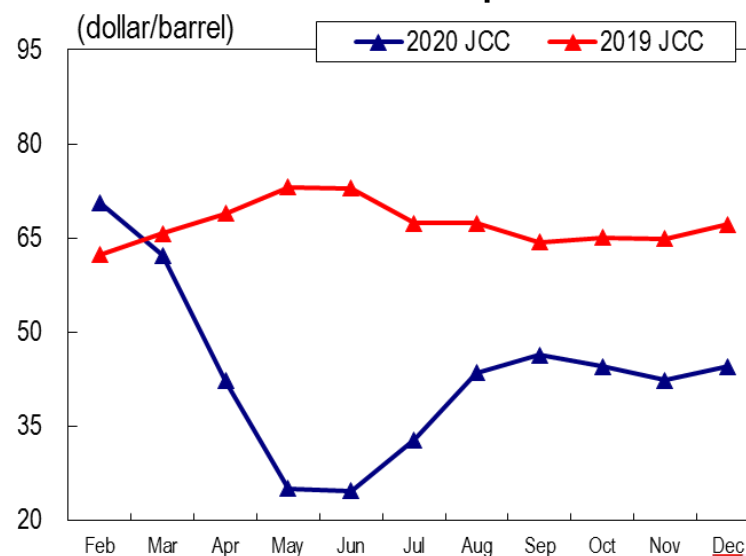
Key Factors Affecting Performance (Results)

	FY2020 Apr-Dec	FY2019 Apr-Dec	[Reference] FY2019
Electricity Sales Volume (Billion kWh)	150.2	164.7	222.3
Gas Sales Volume (Million ton)	1.40	1.44	2.17
Foreign Exchange Rate (Interbank; yen per dollar)	106.1	108.7	108.7
Crude Oil Prices (All Japan CIF; dollars per barrel)	39.0	67.8	67.8
Nuclear Power Plant Capacity Utilization Ratio (%)	-	-	-

<Fluctuation of Foreign Exchange Rate>



<Fluctuation of All Japan CIF>



Seasonal Breakdown of Electricity Sales Volume and Total Power Generated

Electricity Sales Volume

Unit: Billion kWh

FY2020						
	Apr-Sep	Oct	Nov	Dec	Oct-Dec	Apr-Dec
Lighting	31.51	4.54	4.59	5.54	14.66	46.17
Power	71.00	11.26	10.63	11.15	33.04	104.04
Total	102.51	15.80	15.21	16.68	47.70	150.21

FY2019						
	Apr-Sep	Oct	Nov	Dec	Oct-Dec	Apr-Dec
Lighting	32.25	4.92	4.82	5.92	15.66	47.91
Power	79.53	12.92	11.99	12.38	37.29	116.81
Total	111.78	17.84	16.81	18.30	52.95	164.73

[Ref.] Year-on-year Comparison	
Oct-Dec	Apr-Dec
93.6%	96.4%
88.6%	89.1%
90.1%	91.2%

Total Power Generated

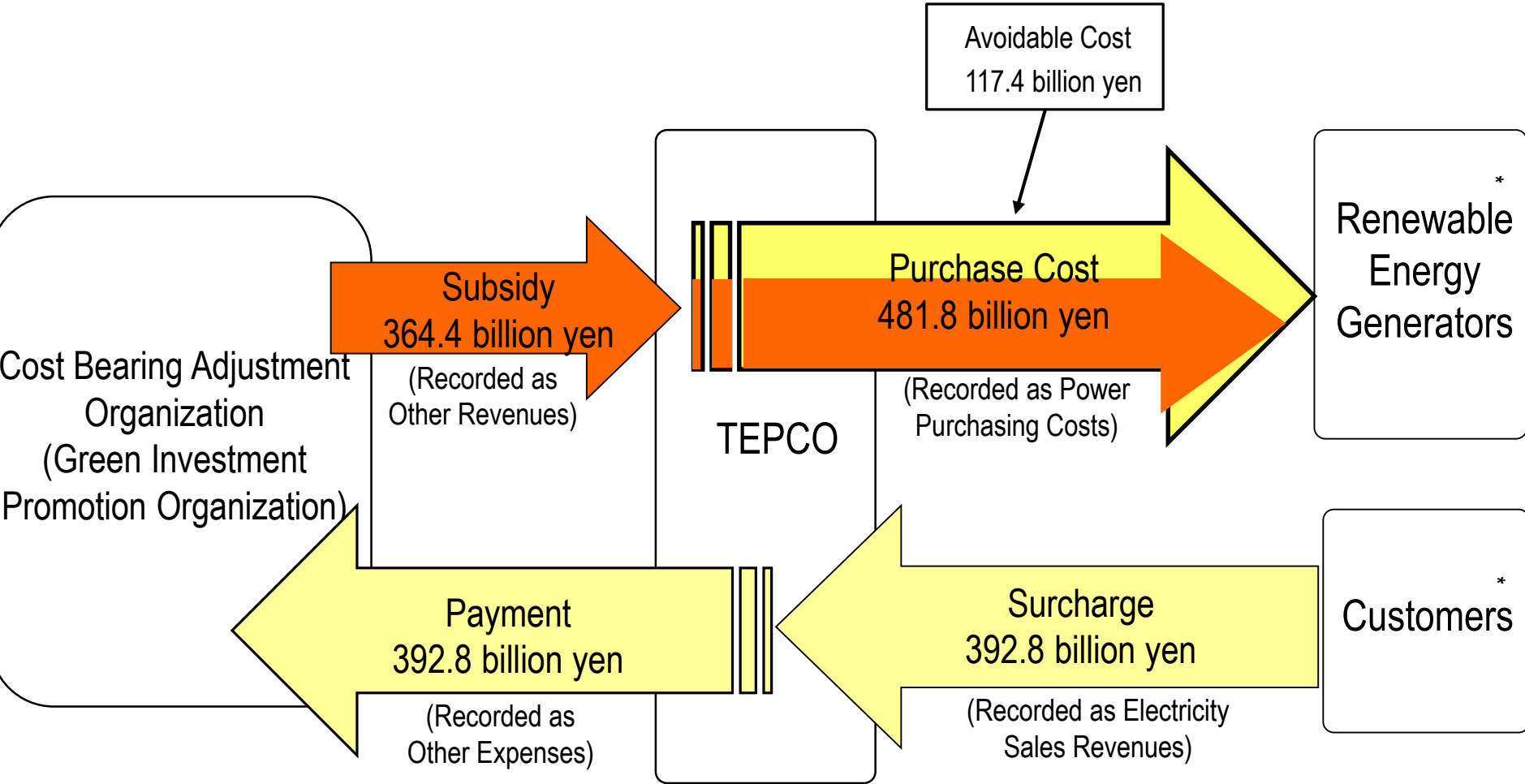
Unit: Billion kWh

FY2020						
	Apr-Sep	Oct	Nov	Dec	Oct-Dec	Apr-Dec
Hydroelectric	7.17	0.75	0.64	0.87	2.26	9.42
Thermal	0.08	0.01	0.01	0.01	0.04	0.12
Nuclear	-	-	-	-	-	-
Renewable etc.	0.03	0.00	0.00	0.00	0.01	0.04
Total	7.28	0.76	0.65	0.89	2.30	9.58

FY2019						
	Apr-Sep	Oct	Nov	Dec	Oct-Dec	Apr-Dec
Hydroelectric	6.04	0.84	0.87	0.75	2.46	8.50
Thermal	0.08	0.01	0.01	0.01	0.04	0.12
Nuclear	-	-	-	-	-	-
Renewable etc.	0.04	0.01	0.00	0.00	0.01	0.05
Total	6.16	0.86	0.88	0.77	2.51	8.67

[Ref.] Year-on-year Comparison	
Oct-Dec	Apr-Dec
91.6%	110.8%
98.7%	99.0%
-	-
87.7%	83.2%
91.7%	110.5%

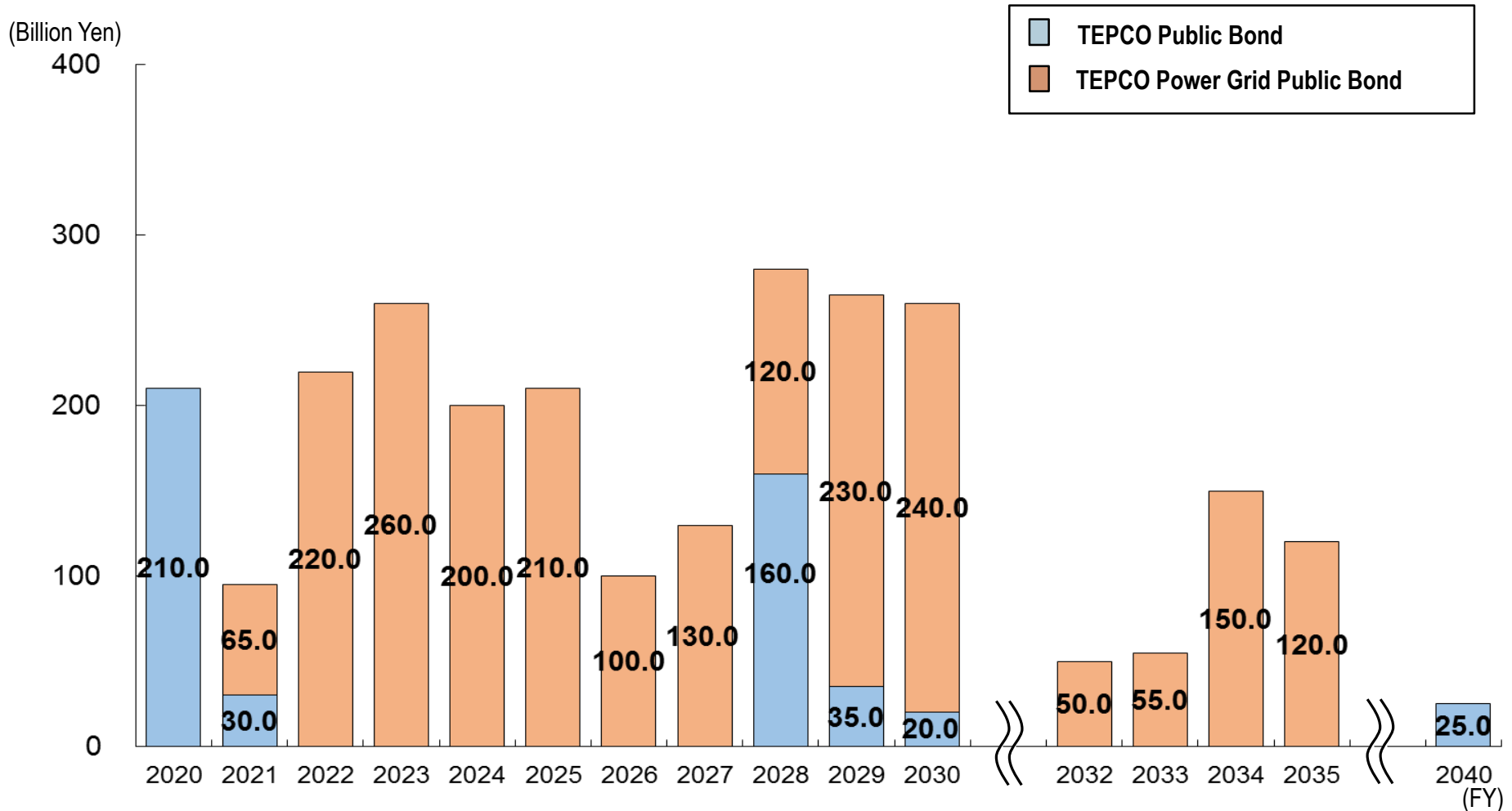
(FY2020 Apr. – Dec.)



* Including TEPCO Group Companies

Schedules for Public Bond Redemption

Amount at Maturity (As of Dec. 31, 2020)



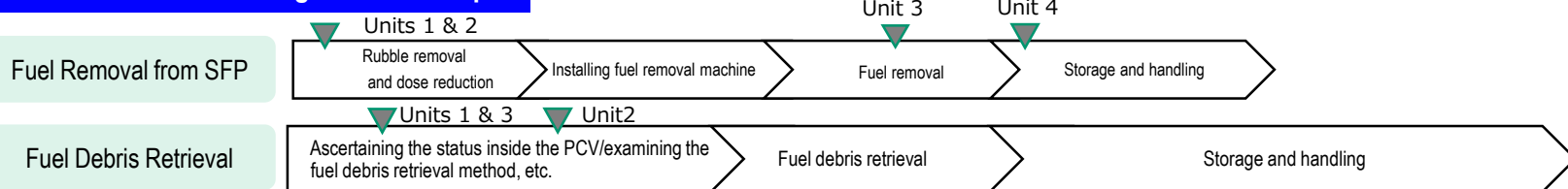
Note: The amount redeemed for Apr. - Dec. of fiscal 2020 totaled 210.0 billion yen.

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

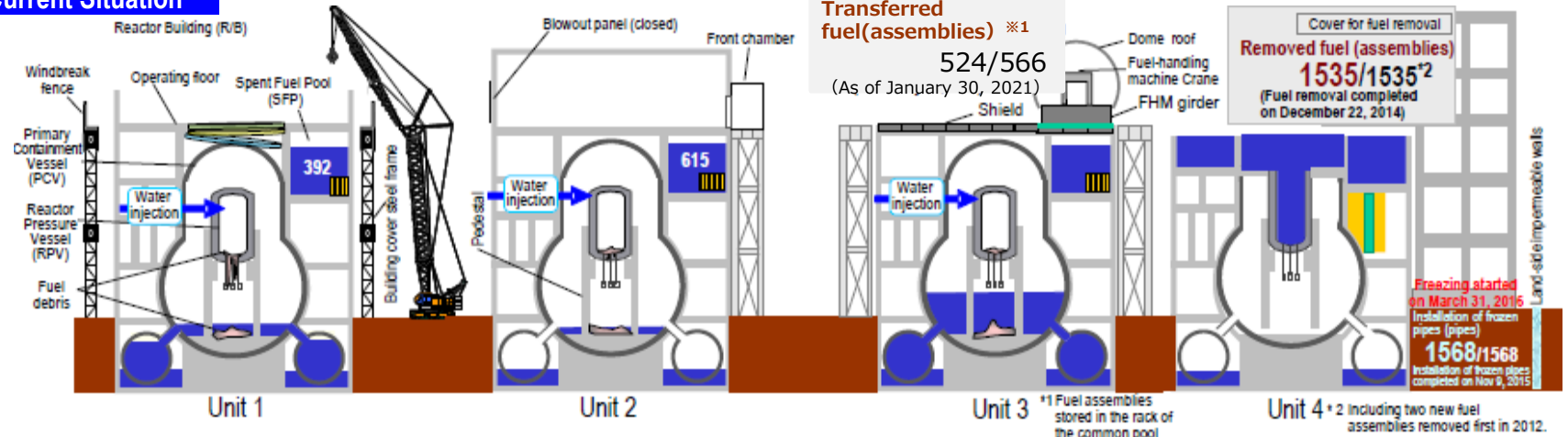
Current Situation and Status of Units 1 through 4

- At Units 1, 2 and 3, it was evaluated that the comprehensive cold shutdown condition had been maintained, judging from the temperatures of the reactors and spent fuel pools as well as the density of radioactive materials. Currently working on removing fuel from Unit 3 while also preparing for fuel removal from Units 1 and 2 and fuel debris retrieval from Units 1-3.

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 and fuel debris</p>	<p>[Spent fuel removal] -Completed implementing overhead crane falling prevention measures in November 2020. -Started dismantling leftover objects that interfere with the installation of the large cover for the reactor building in December 2020. [Fuel debris removal] -Planning on checking the route by which the robot for the internal investigation can be inserted by using cameras to investigate for interfering objects.</p>	<p>[Spent fuel removal] -Completed carrying out leftover objects and cleaning up the refueling floor of the reactor building in December 2020. [Fuel debris removal] -Due to the effects of the spread of COVID-19, development of the fuel debris retrieval testing device in the UK was delayed. Performance confirmation tests that can be conducted in Japan originally scheduled to be conducted in the UK will be conducted in Japan. We will be working to limit the delay in the retrieval of fuel debris on a trial basis to around a year.</p>	<p>[Spent fuel removal] -Fuel debris retrieving work had been temporarily halted due to crane malfunctions in November 2020. However, the crane was repaired and operations confirmed, and retrieval work was restarted in December. [Fuel debris removal] -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.</p>	<p>[Spent fuel removal] - Fuel removal from the SFP was completed in December, 2014.</p>
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● Please visit the company webpage for the revised Mid-and-Long-Term Roadmap.

- ✓ **Setting out a basic principle of “coexistence of reconstruction and decommissioning”**, while there has been gradual progress of **residents’ return** and **reconstruction efforts** in surrounding area.
(giving priority on early risk reduction and ensuring safety)
 - **Coexist with local communities.**
 - **“Optimize the whole decommissioning tasks”**, by reviewing the work process of 10 years.
- ✓ **Total period of decommissioning is unchanged: “within 30-40 years”**

① Fuel debris retrieval



Determine first implementing Unit and the method for fuel debris retrieval.

Start trial retrieval at Unit 2 within 2021, by partial submersion method and side access

The scale of the retrieval will be gradually enlarged.

② Fuel removal from pool



Change in the methods to suppress the dust dispersion at Unit 1 and 2

Postpone fuel removal for 4-5 years at Unit 1, and for 1-3 years at Unit 2

Aim at the completion of fuel removal from all Units 1-6, within 2031

③ Contaminated water countermeasures

- The volume of contaminated water generated has been significantly suppressed.

(540m³/day (May 2014) → 170m³/day (average of FY2018))



Keep current target of reducing the contaminated water generation **to 150m³/d within 2020.**

Set new target of reducing the contaminated water generation **to 100m³/d within 2025.**

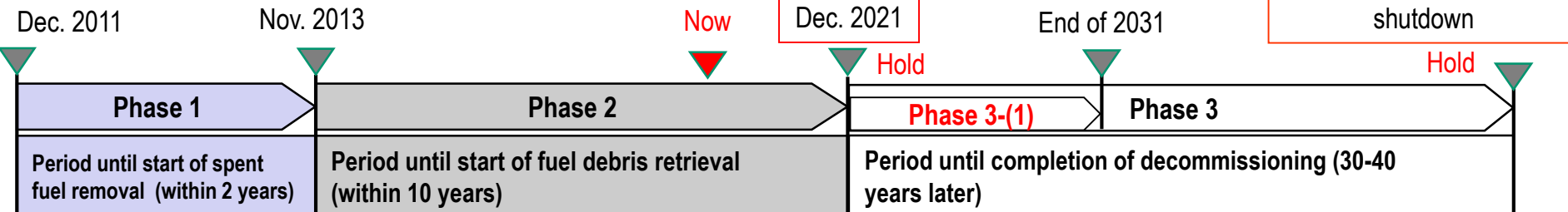
* Handling of ALPS treated water will be continuously discussed in a comprehensive manner

【Source】 Decommissioning/contaminated water countermeasures Fukushima Council Meeting Materials (December 27, 2019)

Note: This material was created based on the “Decommissioning/contaminated water countermeasures Fukushima Council Meeting Materials ” published on December 27, 2019. However, there has been a delay in retrieving fuel debris from Unit 2 because of a delay in the development of the fuel debris retrieval testing device in the UK due to the effect of the spread of COVID-19. We will be working to ensure that delays in the schedule for retrieval on a trial basis will be limited to around a year with safety as the top priority.

Major milestones of Mid-and-Long-Term Roadmap

Maintain Overall Framework of Decommissioning Schedule



Major milestones

		Roadmap (Sept. 2017)	Revised Roadmap		
Contaminated water management	Reduce to about 150 m ³ /day <u>Reduce to about 100m³/day or less</u>	Further reduction of generation	Within 2020 —	Within 2020 <u>Within 2025</u>	<u>NEW</u>
	Stagnant water treatment	Complete stagnant water treatment in buildings* <u>Reduce the amount of stagnant water in buildings to about a half of that in the end of 2020</u>	Within 2020 —	Within 2020(*) <u>FY2022 - 2024</u>	<u>NEW</u>
Fuel removal	<u>Complete of fuel removal from Unit 1-6</u>		—	<u>Within 2031</u>	<u>NEW</u>
	<u>Complete of installation of the large cover at Unit 1</u>		—	<u>Around FY2023</u>	<u>NEW</u>
	Start fuel removal from Unit 1 Start fuel removal from Unit 2	Methods have changed to ensure safety and prevent dust scattering	Around FY2023 Around FY2023	<u>FY2027 – 2028</u> <u>FY2024 - 2026</u>	<u>REVISED</u> <u>REVISED</u>
Fuel debris retrieval	Start fuel debris retrieval from the first Unit <u>(Start from Unit 2, expanding the scale gradually)</u>		Within 2021	Within 2021	
Waste management	Technical prospects concerning the processing/disposal policies and their safety		Around FY2021	Around FY2021	
	<u>Eliminating temporary storage areas outside for rubble and other waste</u>		—	<u>Within FY2028</u>	<u>NEW</u>

※ Excluding the reactor buildings of Units 1-3, process main buildings, and High temperature incineration building.

【Source】 Decommissioning/contaminated water countermeasures Fukushima Council Meeting Materials (December 27, 2019)

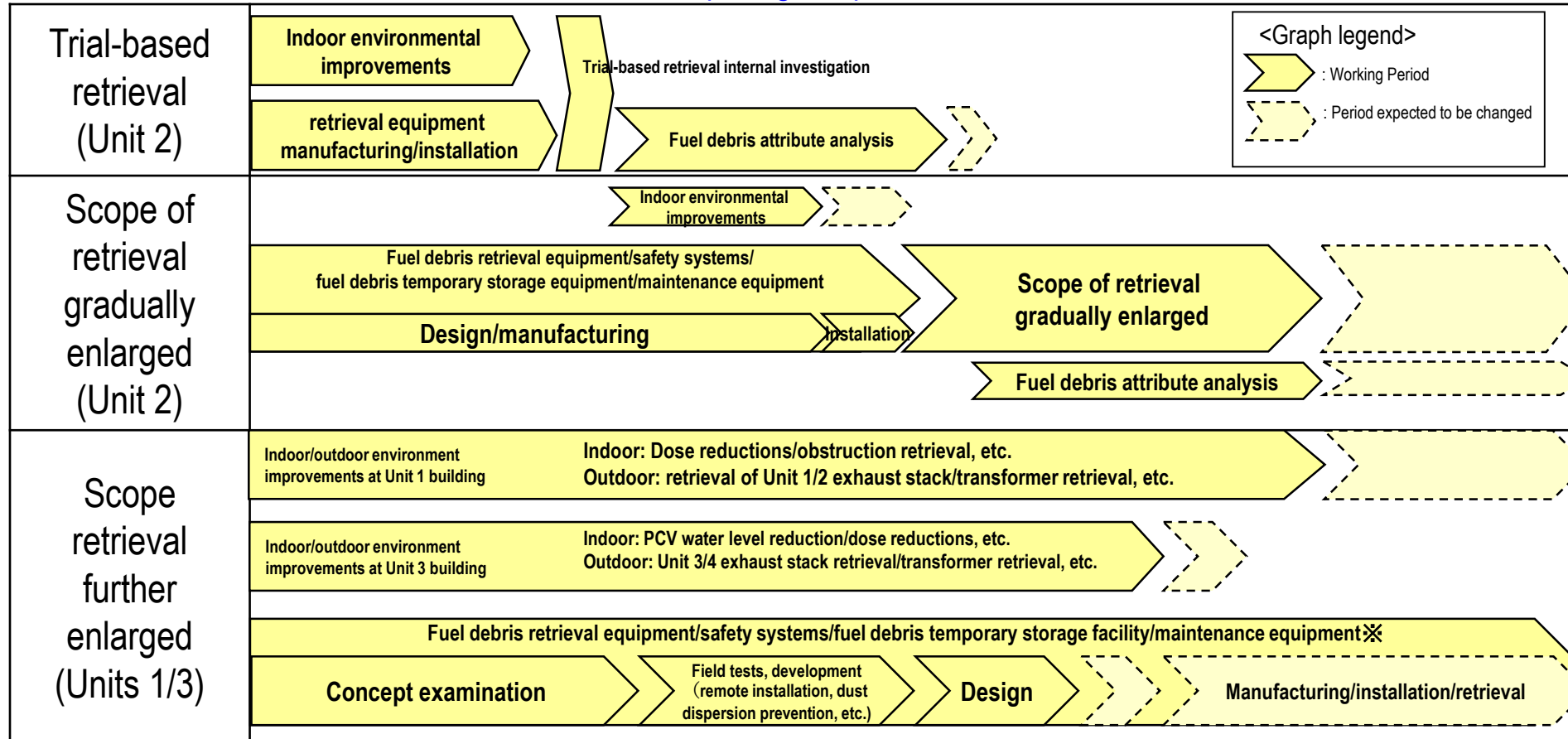
Note: This material was created based on the “Decommissioning/contaminated water countermeasures Fukushima Council Meeting Materials ” published on December 27, 2019. However, there has been a delay in retrieving fuel debris from Unit 2 because of a delay in the development of the fuel debris retrieval testing device in the UK due to the effect of the spread of COVID-19. We will be working to ensure that delays in the schedule for retrieval on a trial basis will be limited to around a year with safety as the top priority.

Fuel Debris Retrieval Schedule and Process Based upon the Mid-to-Long Term Decommissioning Implementation Plan 2020

- By 2031, the scale of retrieval will be gradually enlarged at Unit 2 and preparations will be made to further enlarge the scale of retrieval.

▽ Commencement of fuel debris retrieval from first reactor (during 2021)

End of 2031



※These tasks shall be carried out for Unit 3 first and then examined with the intention doing the same for Unit 1

Note: This material is created based on the “The Mid-to-Long Term Decommissioning Implementation Plan 2020” published on March 27, 2020. However, there has been a delay in retrieving fuel debris from Unit 2 because of the delay in the development of the fuel debris retrieval testing device in the UK due to the effect of the spread of COVID-19. We will be working to ensure that delays in the schedule for retrieval on a trial basis will be limited to around a year with safety as the top priority.

- In December 2013, the government's Nuclear Disaster Response Headquarters arranged a set of preventative and multi-tiered measures based on the three basic policies for addressing contaminated water issues.

<Main countermeasures>

Eliminate contamination sources

- Multi-nuclide removal equipment, etc.
- Remove contaminated water from the trench

Isolate water from contamination

- Pump up groundwater by groundwater bypass
- Pump up groundwater near buildings
- Land-side frozen impermeable walls
- Waterproof pavement

Prevent leakage of contaminated water

- Enhance soil by adding sodium silicate
- Sea-side impermeable walls
- Increase the number of (welded-joint) tanks

Treatment of stagnant water in buildings

- Additional work on the stagnant water transfer device

< Major Progress >

✓ Please visit our website for the latest information.

Subdrain operation

- Groundwater pumped up through wells near reactor building (Subdrain system) are discharged after purification by dedicated facilities and quality test. (A cumulative total of 1,041,617 tons of groundwater has been discharged as of 15:00 on February 4, 2020).
- Construction work for reinforcement and restoration of the subdrain pit is being conducted so that pumping amount of the subdrain can be stably secured. The reinforced pits began to be used, starting from pits whose construction work was completed. In regard to the restored pits, construction work planned for 3 pits has been completed and the pits began to be used on December 26, 2018. Started operating an additional pit on October 9, 2020.

Land-side frozen impermeable walls

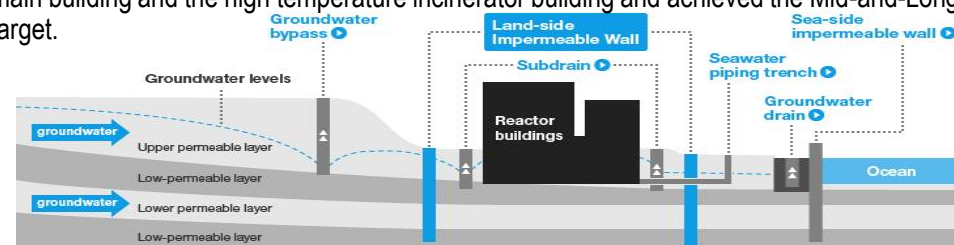
- In March 2018, the land-side impermeable walls were considered completed as the underground temperature had declined below 0°C in almost all areas.
- After auxiliary construction was completed in unfrozen areas deep underground, started maintenance management operation for all areas in February 2019.
- The Committee on Countermeasures for Contaminated Water Treatment clearly recognized the effect of the land-side impermeable walls to shield groundwater and confirmed that a water-level management system, including the functions of subdrains, etc., to stably control groundwater and isolate the buildings from groundwater had been established.
- Investigations and countermeasures will be conducted to further reduce the generated contaminated water.

On the amount of contaminated water generated

- The amount of contaminated water generated in 2020 was approx. 140 m³/day, meeting the Mid-and-Long Term Roadmap target (keep amounts at around 150 m³/day in 2020).

On the treatment of inbuildings stagnant water

- Completed treatment of inbuildings stagnant water in all buildings except the Units 1-3 reactor building, process main building and the high temperature incinerator building and achieved the Mid-and-Long Term Roadmap target.



The Current Status of Kashiwazaki-Kariwa Nuclear Power Station and Future Initiatives

Main Measures to Secure Safety – 1 [Outline]

- ◆ Since the Great East Japan Earthquake, TEPCO has been implementing the following measures to secure higher levels of safety.

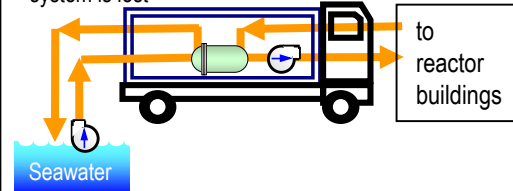
I. Installation of flooding embankment [banks]

- Install flooding embankment (banks) to prevent Tsunami from invading the site and to protect light oil tanks, buildings and other facilities in the power station



III. Further enhancement of heat removal and cooling function

- (5) Installation of alternative submerged pumps and seawater heat exchanging system
- Install alternative submerged pumps and other equipments to continue to operate residual heat removal system even if cooling function of sea water system is lost

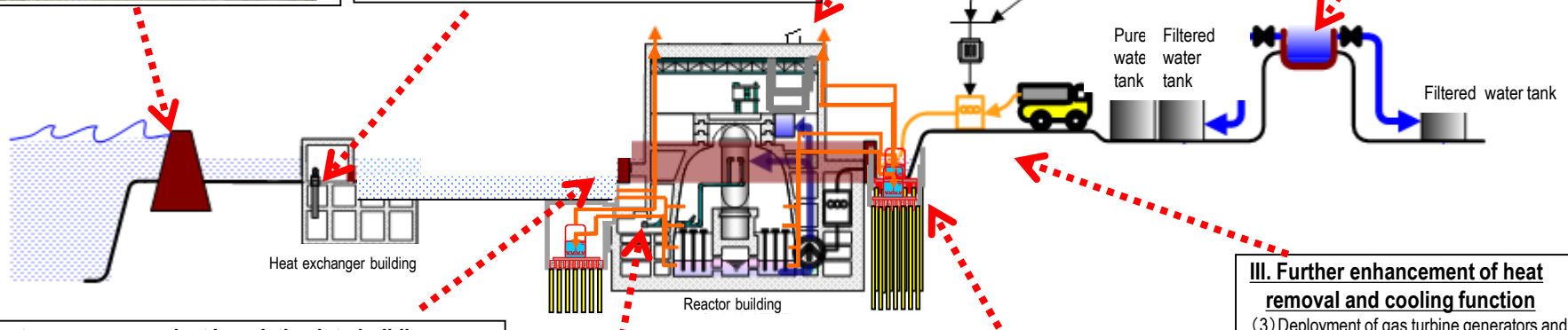


III. Further enhancement of heat removal and cooling function

- (8) Installation of top venting on reactor buildings
- Install top venting system to prevent hydrogen from piling up in a reactor buildings

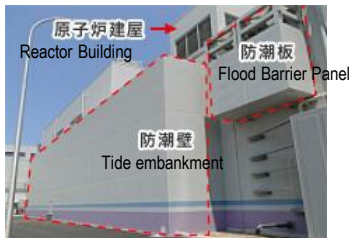
III. Further enhancement of heat removal and cooling function

- (1) Installation of water source
- Install a freshwater reservoir in the power station to secure stable supply of coolant water for reactors and spent fuel pools



II. Countermeasures against inundation into buildings

- (1) Installation of tide embankments (flood barrier panel included)
- Install tide embankments around reactor buildings containing critical equipments in order to prevent Tsunami from damaging power facilities and emergency diesel generators and to secure safety of the power plant



II. Countermeasures against inundation into buildings

- (2) Installation of water tight doors
- Install water tight doors at reactor buildings and turbine buildings to protect equipments from water

III. Further enhancement of heat removal and cooling function

- (12) Installation of warehouses for emergency on high ground
- Install a warehouse for equipments and materials for emergency in case of Tsunami

III. Further enhancement of heat removal and cooling function

- (7) Installation of filtered vent
- Control of radioactive pollution emitted upon containment vessel venting
 - Installation of underground filtered vent for backfitting

III. Further enhancement of heat removal and cooling function

- (11) Additional environment monitoring equipments and monitoring cars
- Prepare additional monitoring cars to continuously measure radiation dose at the site

III. Further enhancement of heat removal and cooling function

- (3) Deployment of gas turbine generators and power supply cars
- Deploy gas turbine generators and power supply cars to ensure that power can be supplied and the residual heat removal system pump operated in a blackout.

(4) Installation of high voltage power distribution board for emergency and permanent cables for reactor buildings

 - Install high voltage power distribution board for emergency and permanent cables for reactor buildings to secure power supply in case of station black out (losing all AC power), and to secure stable supply of power to residual heat removal system

Main Measures to Secure Safety - 2 [Implementation Status]

As of January 13, 2021

Item	Unit 1	Unit 2	Unit 3	Unit 4	Unit 5	Unit 6	Unit 7
I . Installation of flooding embankment [banks]	Completed *2				Completed		
II . Countermeasures against inundation into buildings							
(1) Installation of tide embankments (flood barrier panel included)	Completed	Completed	Completed	Completed	All closed under 15 meters above sea level		
(2) Installation of water tight doors on reactor buildings, etc.	Completed	Under consideration	Under construction	Under consideration	Completed	Completed	Completed
(3) Countermeasures against inundation into heat exchanger buildings	Completed	Completed	Completed	Completed	Completed	-	
(4) Installation of tide barriers for switching stations*1	Completed						
(5) Reliability improvement of inundation countermeasures (countermeasures against flooding inside buildings)	Under construction	Under consideration	Under construction	Under consideration	Under construction	Under construction	Completed
III . Further enhancement of heat removal and cooling function							
(1) Installation of water source	Completed						
(2) Installation of storage water barrier	Completed	Under consideration	Under consideration	Under consideration	Completed	Completed	Completed
(3) Deployment of gas turbine generators and power supply cars	Completed					Completed	Completed
(4)-1 Installation of high voltage power distribution board for emergency	Completed						
(4)-2 Installation of permanent cables for reactor buildings	Completed	Completed	Completed	Completed	Completed	Completed	Completed
(5) Installation of alternative submerged pumps and seawater heat exchanging system	Completed	Completed	Completed	Completed	Completed	Completed	Completed
(6) Installation of alternative high pressure water injection system	Under construction	Under consideration	Under consideration	Under consideration	Under construction	Under construction	Completed
(7) Installation of aboveground filter vent	Under construction	Under consideration	Under consideration	Under consideration	Under construction	Under construction	Completed
(8) Installation of top venting on reactor buildings*1	Completed	Completed	Completed	Completed	Completed	Completed	Completed
(9) Installation of hydrogen treatment system in reactor buildings	Completed	Under consideration	Under consideration	Under consideration	Completed	Completed	Completed
(10) Installation of facilities to fill water up to the top of containment vessels*1	Completed	Under consideration	Under consideration	Under consideration	Completed	Completed	Completed
(11) Additional environment monitoring equipment and monitoring cars	Completed						
(12) Installation of warehouses for emergency on high ground*1	Completed						
(13) Improvement of earthquake resistance of pure water tanks on the Ominato side*1	-				Completed		
(14) Installation of large-capacity water cannons, etc.	Completed						
(15) Multiplexing and reinforcing access roads	Completed				Under construction		Completed
(16) Environmental improvement of the seismic isolated building*1	Under construction						
(17) Reinforcement of the bases of transmission towers*1 and earthquake resistance of the switchboards*1	Completed						
(18) Installation of tsunami monitoring cameras	Under construction				Completed		
(19) Installation of Corium Shield	Under consideration	Under consideration	Under consideration	Under consideration	Under consideration	Completed	Completed

*1 TEPCO's voluntary safety measures *2 Additional measures are under consideration

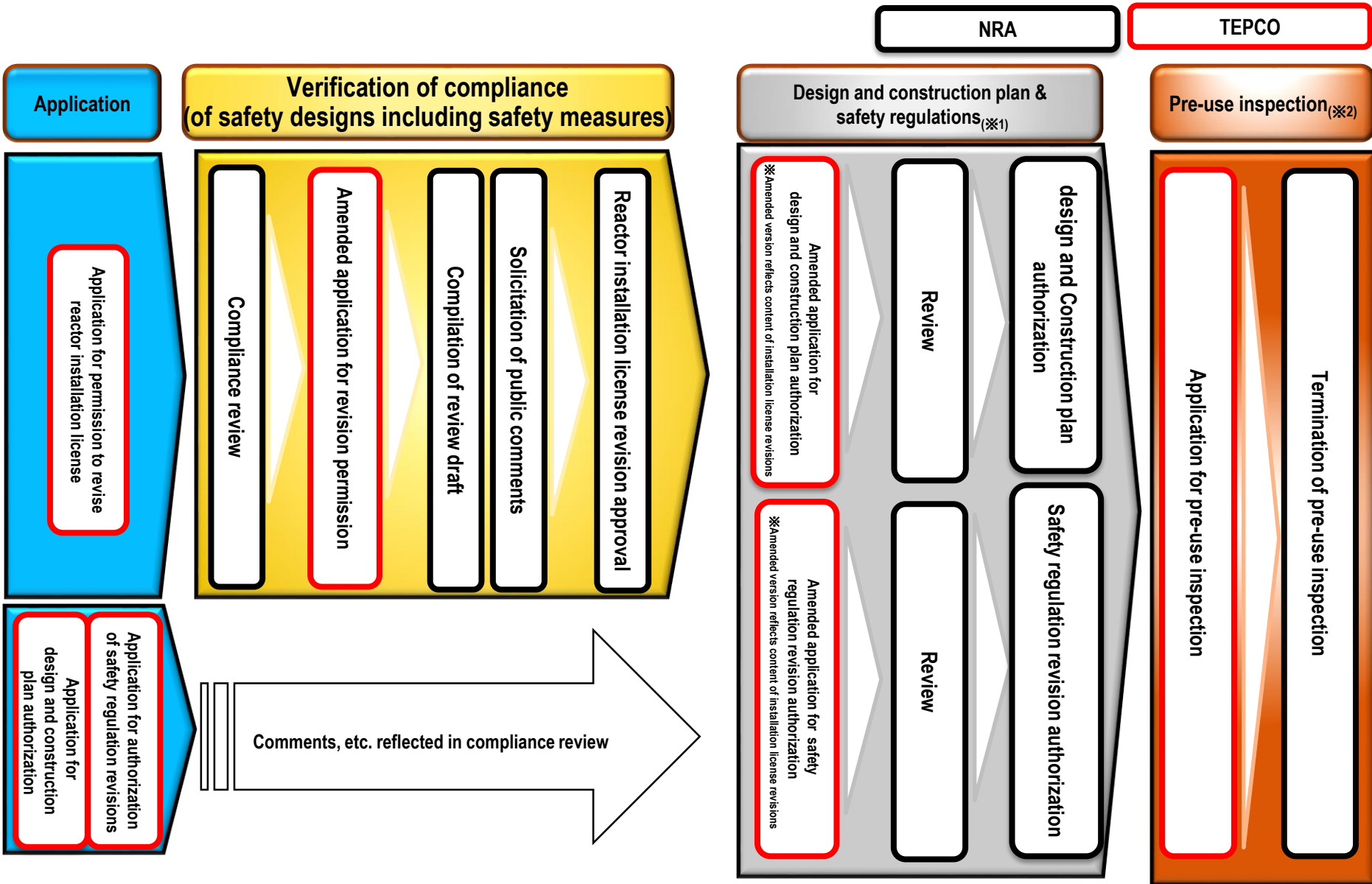
Latest Review Status

- On December 27, 2017, the Nuclear Regulation Authority (NRA) approved TEPCO's application for revision of the reactor installation licence for Units 6 and 7.
- October 14, 2020, the NRA approved TEPCO's application for the design and construction plan for Unit 7. (※1)
- On October 30, 2020, NRA approved TEPCO's application for authorization of safety regulation revision.
- On November 6, 2020, the application for pre-service confirmation for Unit 7 was submitted to the NRA.
- On January 20, 2021, the application for authorization of design and construction plan for Unit 7 was submitted to the NRA. (※2)

※1 On December 9, 2020, the application for authorization of design and construction plan for Unit 7 and a notice of minor changes were submitted to the NRA to reflect changes made to the design and construction plan and to correct some minor typographical errors. (Approved January 21, 2021)

※2 Applied for approval of high energy arcing fault countermeasures assuming that power will need to be supplied from the emergency diesel generator in response to revision in rules after the enforcement of the new regulatory requirements.

Key License/Permit Steps in Enforcement of New Regulatory Requirements



※1: Basic matters for safety of a nuclear power plant are stated, which an operator must observe.

※2: The operator checks for themselves that construction will be implemented according to the construction plan. The results are inspected by the NRA.

Other Initiatives

<TEPCO Holdings>

- October 1, 2020 The new quick charger for electric cars developed jointly with e-Mobility Power and Nichicon received the FY2020 Good Design Award (hosted by the Japan Institute of Design Promotion).
- October 16, 2020 Signed a Cooperative Agreement on Nuclear Disaster Prevention with Niigata Prefecture to increase the effectiveness of protective measures based on the Regional Niigata Prefecture Nuclear Disaster Evacuation Plan.
- October 22, 2020 Signed an Agreement of Cooperation in a Disaster with Metropolitan Expressway Company Limited, securing their cooperation during times of disaster such as large-scale earthquakes.
- November 16, 2020 Started a demonstration experiment on the joint use of quick chargers for electric cars for local companies and organizations in Minami-Alps city, Yamanashi prefecture.
- January 14, 2021 NTT Anode Energy started a demonstration on supplying DC electricity to Shirai Junior high School in Chiba as part of efforts to increase resilience using environmentally-friendly energy as part of the “joint demonstration to realize a smart energy city in Chiba-shi” conducted jointly with NTT Anode Energy, TN Cross Corporation, Nippon Telegraph and Telephone Corporation starting in April 2020.

<TEPCO Power Grid>

- October 20, 2020 Started regional supply and demand coordination in the Tokyo area as part of efforts of utilities to take advantage of each other’s load balancing capabilities that had been under discussion among the 9 general transmission and distribution operators (excluding Okinawa EPCO), in order to reduce load balancing capability related costs.
- November 4, 2020 Received a contract for managing the operations of the Fuji-shi wastewater treatment plant as a constituent of the consortium “Water agency/Pacific Consultants/TEPCO PG/Fujinokuni/Kobelco Eco-Solutions Group” (started work on November 1, 2020)
- November 5, 2020 Signed a mutual use agreement with the Tohoku Electric Power Network Co., Inc. on overhead transmission line diagnosis system (an AI analyzes the video of the overhead transmission line video taken from a helicopter to automatically extract problematic areas) being developed and operated by TEPCO PG.

<TEPCO Energy Partner>

- November 5, 2020 Started receiving applications for the “TokuToku Gas Plan”, a city gas rate plan for households, in the Kansai and Chubu areas (started receiving applications on November 16, 2020)
- December 21, 2020 Signed an “Comprehensive Agreement on Using Environmentally Friendly Electricity” with Mitsui Fudosan Co., Ltd., and will start to provide services that use renewable energy that have environment value, e.g. solar power generation from households for whom the electricity purchase period under the feed-in tariff scheme has ended, in privately and publicly owned parts of the office buildings owned and subleased by Mitsui Fudosan. (Will start providing the service in April 2021 in Tokyo Midtown Hibiya and will gradually expand services to other office buildings in the metropolitan area.)

<TEPCO Renewable Power>

- February 1, 2021 Integrated the monitoring and control functions of hydroelectric plants (163 plants across 7 prefectural areas) to one hub to increase productivity. Previously, monitoring and control were conducted by prefectural area.
- February 4, 2021 Joined the TetraSpar floating foundation demonstration project, alongside Shell, RWE, and Stiesdal Offshore Technologies.