FY2019 Financial Results (April 1, 2019 – March 31, 2020)

Tokyo Electric Power Company Holdings, Inc.

Overview of FY2019 Financial Results

(Released on May 15, 2020)

Regarding Forward-Looking Statements

Certain statements in the following presentation regarding TEPCO Group's business operations may constitute "forward-looking statements." As such, these statements are not historical facts but rather predictions about the future, which inherently involve risks and uncertainties, and these risks and uncertainties could cause TEPCO Group's actual results to differ materially from the forward-looking statements herein.

(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.

TEPCO

Key Points of FY2019 Financial Results

< FY2019 Financial Results >

- Operating revenue decreased due to decreases in electricity sales volume.
- Ordinary income/loss decreased due to decreases in operating revenue despite continual cost reductions made by all Group companies.
- Net income decreased due to operational expenses for fuel debris retrieval as extraordinary loss on disaster .

< Dividends >

- TEPCO has decided not to pay out fiscal 2019 year-end dividends.
- No interim and year-end dividends are planned for fiscal 2020.

TEPCO

1. Consolidated Financial Results

(Unit: Billion kWh)

	FY2019 (A)	FY2018 (B)	Comparison (A)-(B)	Comparison (A)/(B) (%)
Electricity Sales Volume	222.3	230.3	-8.0	96.5

(Unit: Billion Yen)

	FY2019 (A)	FY2018 (B)	Comparison (A)-(B)	Comparison (A)/(B) (%)
Operating Revenue	6,241.4	6,338.4	-97.0	98.5
Operating Income/Loss	211.8	312.2	-100.4	67.8
Ordinary Income/Loss	264.0	276.5	-12.5	95.5
Extraordinary Income	414.9	159.8	255.1	-
Extraordinary Loss	609.3	178.0	431.3	-
Net Income attributable to owners of parent	50.7	232.4	-181.7	21.8

TEPCO

2. Points of Each Company

<TEPCO Holdings>

- Ordinary income decreased due to factors including decreased wholesale power sales to TEPCO Energy Partner, etc.

<TEPCO Fuel & Power>

- Ordinary income increased due to factors including a gain incurred by fuel cost adjustment system time lag into income at JERA, which has succeeded the thermal power generation business, etc.

<TEPCO Power Grid>

- Although transmission revenue decreased, ordinary income increased due to factors including decreased maintenance expenses and depreciation.

<TEPCO Energy Partner>

- Ordinary income decreased due to intensified competition and moderate temperatures (counteraction from mild winter and heatwave in the last year), etc.

3. Overview of Each Company

(Unit: Billion Yen)

	FY2019 (A)	FY2018 (B)	Comparison (A)-(B)	Comparison (A)/(B) (%)
Operating Revenue	6,241.4	6,338.4	-97.0	98.5
TEPCO Holdings	846.9	950.1	-103.2	89.1
TEPCO Fuel & Power	9.7	2,033.6	-2,023.9	0.5
TEPCO Power Grid	1,759.8	1,788.9	-29.1	98.4
TEPCO Energy Partner	5,642.8	5,859.3	-216.4	96.3
Adjustments	-2,017.9	-4,293.5	2,275.6	-
Ordinary Income/Loss	264.0	276.5	-12.5	95.5
TEPCO Holdings	152.9	232.7	-79.7	65.7
TEPCO Fuel & Power	64.7	3.5	61.2	-
TEPCO Power Grid	116.6	113.9	2.7	102.4
TEPCO Energy Partner	60.0	72.7	-12.7	82.5
Adjustments	-130.3	-146.4	16.0	-

4. Consolidated Extraordinary Income/Loss

(Unit: Billion Yen)

	FY2019 (A)	FY2018 (B)	Comparison (A)-(B)
Extraordinary Income	414.9	159.8	255.1
Grants-in-Aid from NDF ※1	101.6	159.8	-58.1
Gain on change in equity	199.7	-	199.7
Gain on reversal of provision for loss on disaster	113.5	-	113.5
Extraordinary Loss	609.3	178.0	431.3
Contingent property loss	0.3	-	0.3
Extraordinary Loss on Disaster	394.9	26.9	367.9
Expenses for Nuclear Damage Compensation	107.9	151.0	-43.1
Loss on Decommissioning Fukushima Daini NPS	95.6	-	95.6
Impairment loss	10.5	-	10.5
Extraordinary Income/Loss	-194.3	-18.2	-176.1

※1 Nuclear Damage Compensation and Decommissioning Facilitation Corporation

○ Overview of Extraordinary Income

◆ Grants-in-aid from NDF

Apply for changes in grant amounts based on stipulations on March 30, 2020.

◆Gain on change in equity

Equity income was realized as a result of JERA taking over certain business.

◆Gain on reversal of provision for loss on disaster

Of the costs or losses recorded as a provision for loss on disaster, the amount for Fukushima Daini Nuclear Power Station was reverted due to the decision of decommissioning

○ Overview of Extraordinary Loss

◆Contingent property loss

Considered book value on loss of destroyed property from Typhoon #15, #19 and #21 was booked.

◆Extraordinary loss on disaster ※2

Increase in the estimated amount of repair expenses to recover assets damaged, or loss incurred, in the financial impact of the great east Japan Earthquake and considered repair expenses to recover assets damaged in the typhoons #15, #19 and #21 were booked.

◆Expenses for nuclear damage compensation

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

◆Losses on decommissioning Fukushima Daini

Losses were booked for equipment and nuclear fuel lost due to the decision of decommissioning.

◆Impairment loss ※2

Fixed assets posted as losses due to the inability to recover investment in the future

(※2)…To be explained on the next slide due to the large change in amounts from the FY2019 Consolidated Financial Results Forecast announced on March 30

TEPCO

5. Extraordinary Loss on Disaster and Impairment Loss

- Recorded operational expenses for fuel debris retrieval preparation based on the Mid-to-Long Term Decommissioning Implementation Plan 2020 announced on March 27, 2020 as extraordinary loss on disaster.
- Fixed assets for which the recovery of investment in the future has been deemed impossible were posted as Impairment loss.

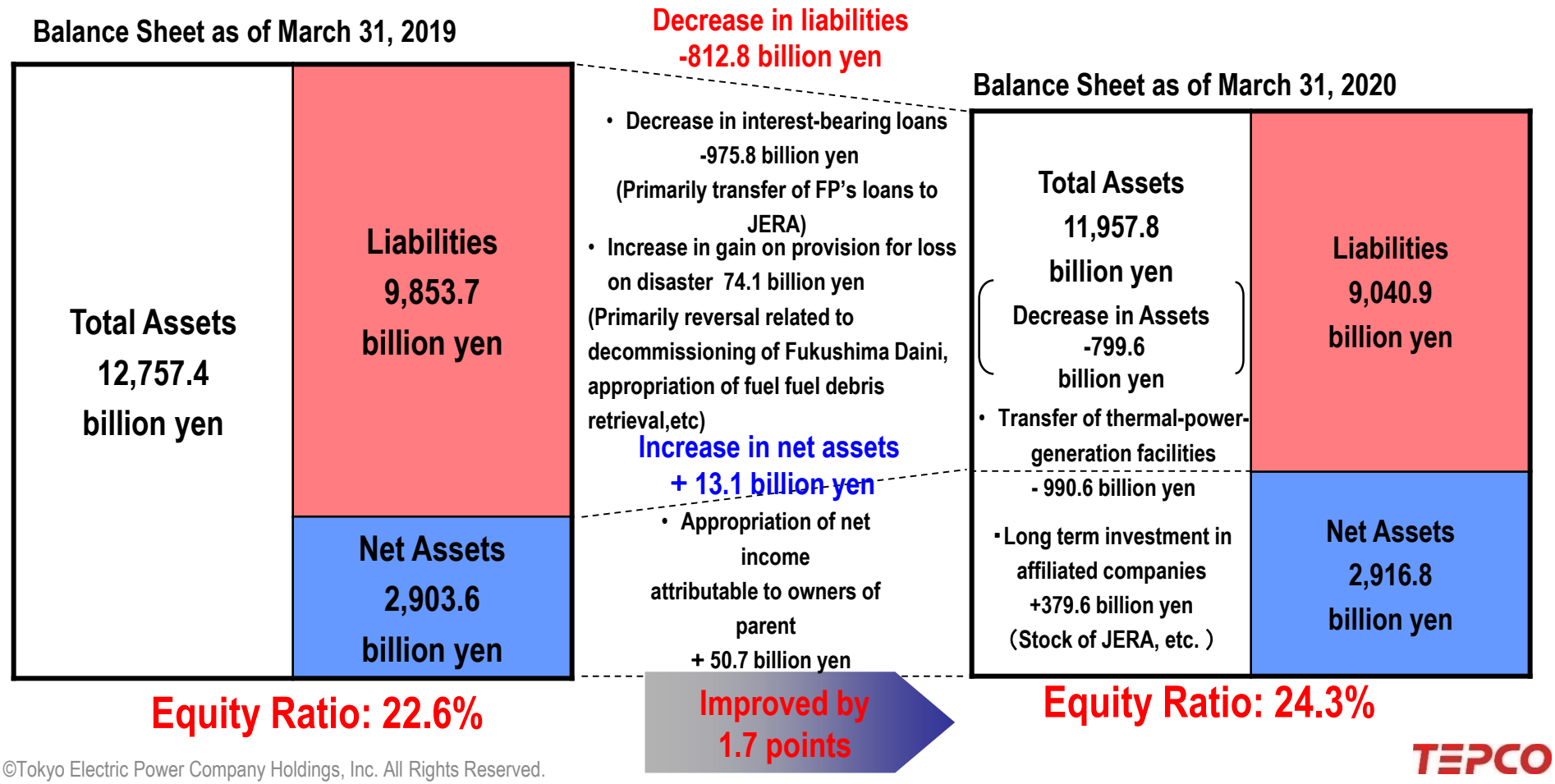
（Unit：Billion Yen）

	FY2019 Results	FY2019 Performance Forecast (Announced on March 30)
Extraordinary loss on disaster	394.9	388.3
Typhoon-related totals	20.8	17.3
Financial Impact of the Great East Japan Earthquake related	374.0	371.0
Fuel debris retreival	350.1	350.0
Contaminated water countermeasures	4.4	※ 21.0
Fuel removal	19.4	
Other	-0.0	
Impairment loss	10.5	—

※ Included in “Other” in the FY2019 Performance Forecast

6. Consolidated Financial Position

- Total assets balance decreased by 799.6 billion yen primarily due to the transfer of thermal-power-generation facilities to JERA.
- Total liabilities balance decreased by 812.8 billion yen primarily due to the transfer of TEPCO Fuel & Power's loans to JERA.
- Total net assets balance increased by 13.1 billion yen primarily due to the appropriation of net income attributable to owners of parent.
- Equity ratio improved by 1.7 points.



<Reference> Key Factors Affecting Performance (Results)

Area Demand

(Unit: Billion kWh)

	FY2019 (A)	FY2018 (B)	Comparison	
			(A)–(B)	(A)/(B) (%)
Area Demand	269.8	274.7	-4.9	98.2

Foreign Exchange Rates / CIF

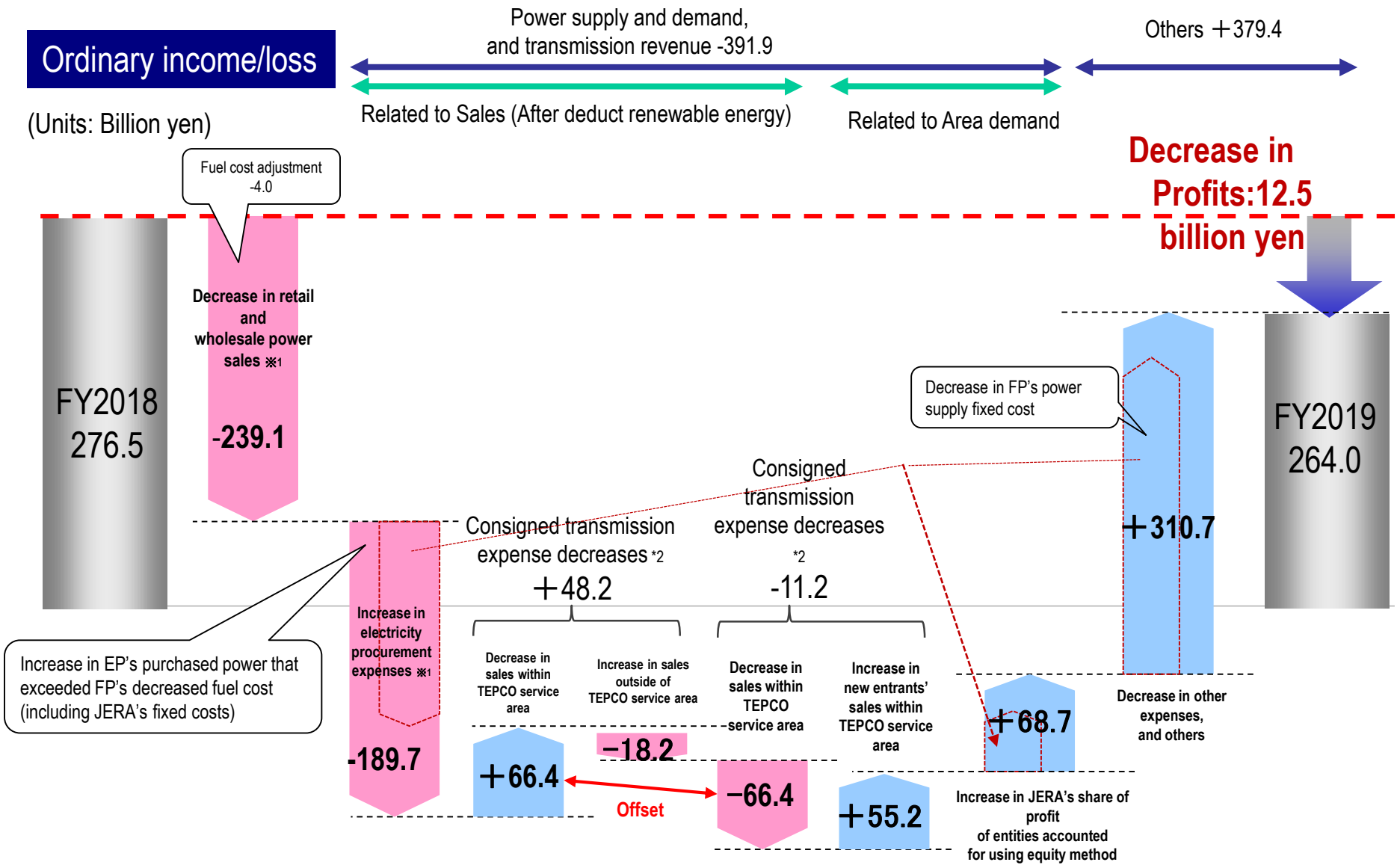
	FY2019(A)	FY2018 (B)	(A)–(B)
Foreign Exchange Rate (Interbank, yen/dollar)	108.7	110.9	-2.2
Crude Oil Prices (All Japan CIF, dollar/barrel)	67.8	72.2	-4.4

TEPCO

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

Ordinary income/loss

(Units: Billion yen)



※1 Expenses of retail and wholesale power sales include the effectiveness of indirect auction.

※2 Transmission expenses and transmission revenue exclude effectiveness of imbalance income/expense.

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

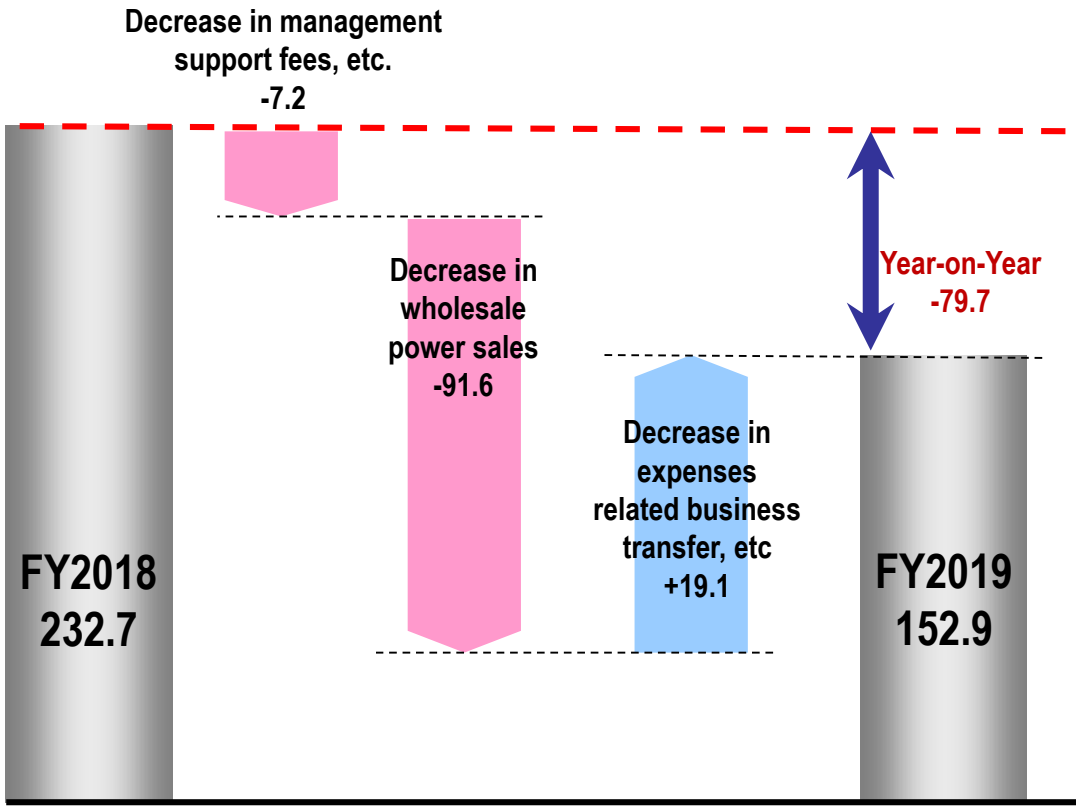
(Units: Billion yen)

		FY2018(B)	FY2019(A)	(A)–(B)
Ordinary Income		276.5	264.0	−12.5
Power supply and demand, and transmission revenue		2,302.3	1,910.3	-391.9
	Retail/wholesale power sales	4,679.4	4,440.3	-239.1
(△)	Electricity procurement expense	-2,617.6	-2,807.3	-189.7
(△)	Consigned transmission expense	-1,180.5	-1,132.3	+48.2
	Consigned transmission income	1,421.0	1,409.7	-11.2
Others		-2,025.7	-1,646.3	+379.4
	JERA's share of profit of entities accounted for using equity method	9.3	78.0	+68.7
(△)	Depreciation costs	-528.9	-411.0	+117.8
(△)	Facility costs	-361.8	-265.7	+96.0
	Other	1,144.3	-1,047.6	+96.7

<Reference> Year-on-Year Comparisons for TEPCO Holdings

Ordinary Income/Loss

（Unit：Billion Yen）



Profit Structure

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

Flow Rate

	FY2018	FY2019	Comparison
Apr-Mar	96.4%	105.5%	+9.1%

Ordinary Income

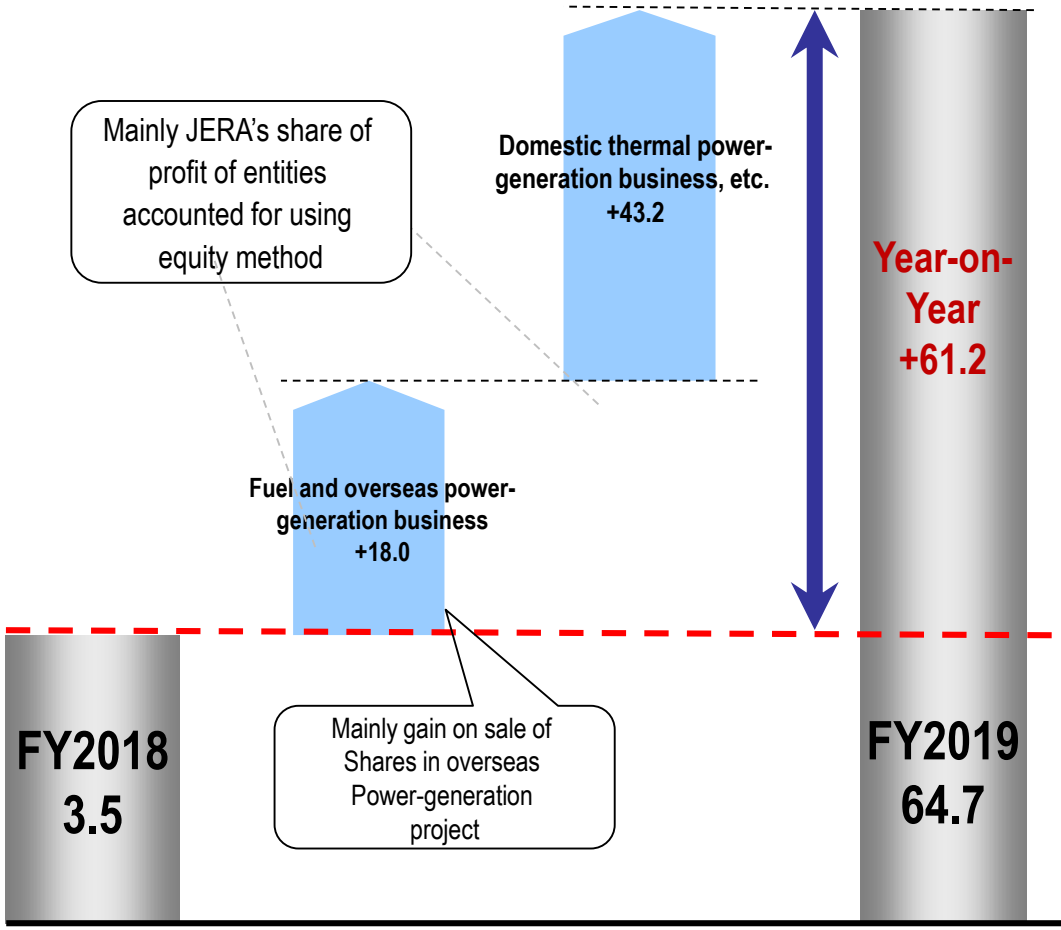
(Units: Billion Yen)

	FY2018	FY2019	Comparison
Apr-Jun	153.8	156.4	+2.5
Apr-Sep	173.4	162.3	-11.0
Apr-Dec	178.9	148.3	-30.6
Apr-Mar	232.7	152.9	-79.7

<Reference> Year-on-Year Comparisons for TEPCO Fuel & Power

Ordinary Income/Loss

（Unit：Billion Yen）



Profit Structure

Main profit is JERA's share of profit of entities accounted for using equity method.
Power-generation business was transferred to JERA on April1, 2019.

Timing Impact (JERA equity impact)

	FY2019
Apr-Mar	+39.0

Ordinary Income

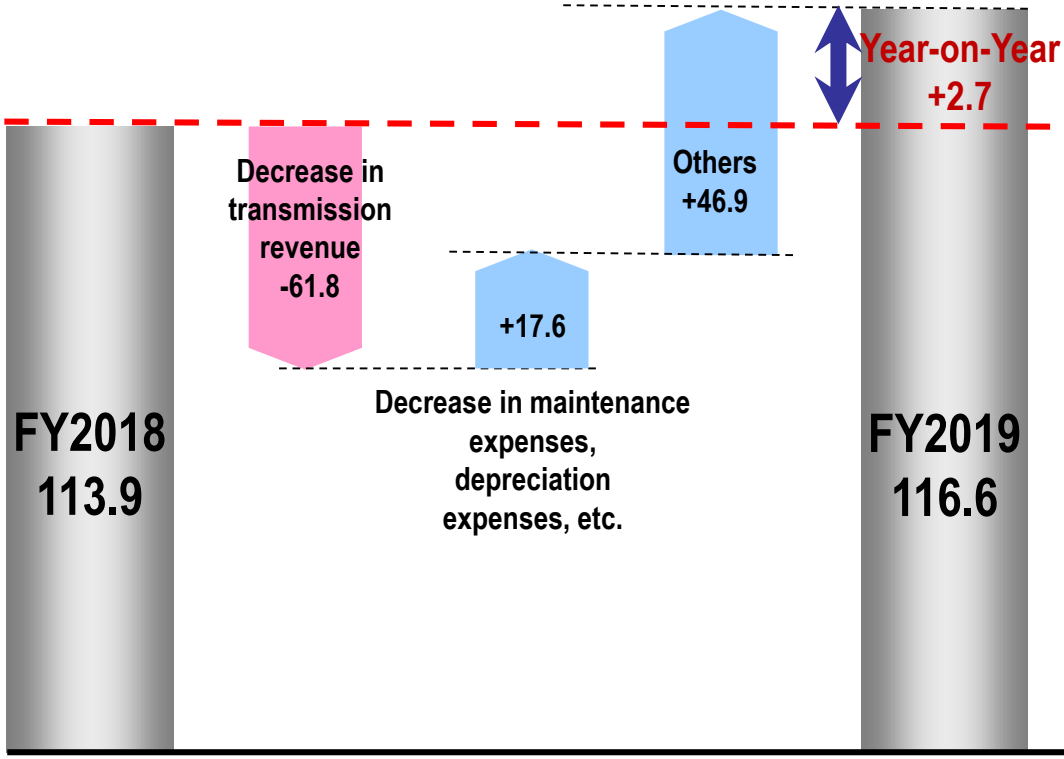
（Unit：Billion Yen）

	FY2018	FY2019	Comparison
Apr-Jun	22.4	45.8	+23.3
Apr-Sep	5.2	58.4	+53.2
Apr-Dec	3.4	62.3	+58.8
Apr-Mar	3.5	64.7	+61.2

<Reference> Year-on-Year Comparisons for TEPCO Power Grid

Ordinary Income/Loss

（Unit：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

(Unit: Billion kWh)

	FY2018	FY2019	Comparison
Apr-Mar	274.7	269.8	-4.9

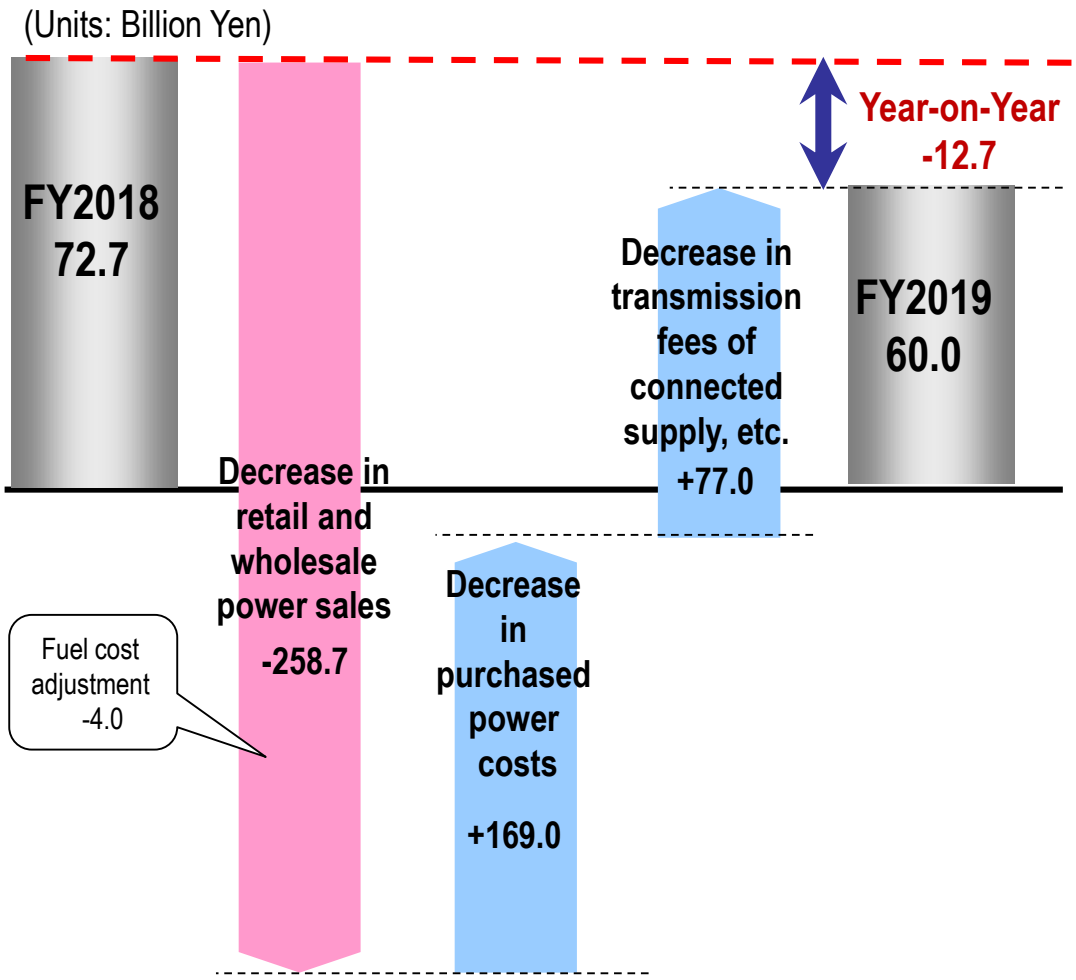
Ordinary Income

(Units: Billion Yen)

	FY2018	FY2019	Comparison
Apr-Jun	38.7	42.6	+3.8
Apr-Sep	117.0	119.9	+2.8
Apr-Dec	163.1	175.3	+12.2
Apr-Mar	113.9	116.6	+2.7

<Reference> Year-on-Year Comparisons for TEPCO Energy Partner

Ordinary Income/loss



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

(Unit: Billion kWh)

	FY2018	FY2019	Comparison
Apr-Mar	230.3	222.3	-8.0

Gas (including Nichi gas, TEA)

As of March 31, 2019	As of March 31, 2020
Approx. 1.25 million cases	Approx. 2.05 million cases

Ordinary Income

(Units: Billion Yen)

	FY2018	FY2019	Comparison
Apr-Jun	-8.3	-12.0	-3.6
Apr-Sep	54.1	43.4	-10.7
Apr-Dec	39.3	54.6	+15.2
Apr-Mar	72.7	60.0	-12.7

Supplemental Material

Table of Contents

FY2019 Financial Results

Detailed Information

Consolidated Statements of Income

(Unit: Billion Yen)

	FY2019(A)	FY2018 (B)	Comparison	
			(A)-(B)	(A)/(B) (%)
Operating Revenue	6,241.4	6,338.4	-97.0	98.5
Operating Expenses	6,029.5	6,026.2	3.3	100.1
Operating Income / Loss	**211.8**	**312.2**	**-100.4**	**67.8**
Non-operating Revenue	107.4	38.1	69.3	281.8
Investment Gain under the Equity Method	99.7	25.0	74.7	398.4
Non-operating Expenses	55.2	73.8	-18.5	74.8
Ordinary Income / Loss	**264.0**	**276.5**	**-12.5**	**95.5**
Provision or Reversal of Reserve for Fluctuation in Water Levels	—	-0.5	0.5	—
Provision or Reversal of Reserve for Preparation of Depreciation of Nuclear Power Construction	0.3	0.2	0.0	131.0
Extraordinary Income	414.9	159.8	255.1	—
Extraordinary Loss	609.3	178.0	431.3	—
Income Tax, etc.	17.6	26.0	-8.4	67.8
Net Income Attributable to Non-controlling Interests	0.8	0.1	0.7	641.8
Net Income Attributable to Owners of Parent	**50.7**	**232.4**	**-181.7**	21.8

TEPCO

Financial Impact of the Great East Japan Earthquake

(Unit: Billion Yen)

Item	FY2010 to FY2018	FY2019	Cumulative Amount
◇Grants–in-aid from Nuclear Damage Compensation and Decommissioning Facilitation Corporation			
○Grants-in-aid based on Nuclear Damage Compensation and Decommissioning Facilitation Corporation Act	*1 7,193.1	101.6	*2 7,294.8
Note: Journal Entry: Grants-in-aid receivable from Nuclear Damage Compensation and Decommissioning Facilitation Corporation is debited on the balance sheet.			
*1 Numbers above are those after deduction of a governmental indemnity of 188.9 billion yen, and Grants-in-aid corresponding to decontamination expenses of 3,585.1 billion yen respectively.			
*2 Numbers above are those after deduction of a governmental indemnity of 188.9 billion yen, and Grants-in-aid corresponding to decontamination expenses of 4,398.4 billion yen respectively.			
◆Breakdown of the restoration cost and others caused by the Great East Japan Earthquake (Extraordinary Income and Loss)			
●Expenses and/ or losses for Fukushima Daiichi Nuclear Power Station Units 1 through 4	1,079.1	374.0	1,453.2
●Other expenses and/ or losses	381.9	-0.0	381.8
Loss on Disaster Sub Total: (A)	1,461.0	374.0	1,835.1
○Difference of the restoration cost caused by re-estimation due to decommissioning of Fukushima Daiichi Nuclear Power Station Units 5 and 6	32.0	—	32.0
○Difference of the work cost caused by re-estimation due to decommissioning of Fukushima Daini Nuclear Power Station	—	113.5	113.5
Gain on reversal of provision for loss on disaster (Extraordinary Income) Sub Total: (B)	32.0	113.5	145.5
Total: (A)-(B)	1,429.0	**260.5**	1,689.5
◆Loss on Decommissioning			
●Expenses and/ or losses for decommissioning of Fukushima Daiichi Nuclear Power Station Units 5 and 6	39.8	—	39.8
●Expenses and/ or losses for decommissioning of Fukushima Daini Nuclear Power Station	—	95.6	95.6
◆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.	2,070.6	0.6	2,071.3
●Compensation for business damages ・Opportunity losses on businesses, Damages due to the restriction on shipment, Damages due to groundless rumor and Package compensation etc.	3,045.3	68.3	3,113.6
●Other expenses ・Damages due to decline in value of properties, Housing assurance damages and Decontamination costs etc.	5,845.1	852.2	6,697.3
● Amount of indemnity for nuclear accidents from the Government	-188.9	—	-188.9
●Grants-in-aid corresponding to decontamination expenses	-3,585.1	-813.2	-4,398.4
Total	7,187.0	**107.9**	7,294.9

Consolidated Balance Sheets

(Unit: Billion Yen)

	Mar. 31 2020 (A)	Mar. 31 2019 (B)	Comparison (A)-(B)	Comparison (A)/(B) (%)
Total Assets	**11,957.8**	**12,757.4**	**-799.6**	**93.7**
Fixed Assets	10,171.8	10,657.7	-485.8	95.4
Current Assets	1,786.0	2,099.7	-313.7	85.1
Liabilities	**9,040.9**	**9,853.7**	**-812.8**	**91.8**
Long-term Liability	4,858.6	4,766.2	92.3	101.9
Current Liability	4,174.7	5,080.3	-905.5	82.2
Reserve for Preparation of the Depreciation of Nuclear Plants Construction	7.5	7.1	0.3	105.3
Net Assets	**2,916.8**	**2,903.6**	**13.1**	**100.5**
Shareholders' Equity	2,940.4	2,889.6	50.8	101.8
Accumulated Other Comprehensive Income	-40.2	-0.2	-40.0	—
Share Acquisition Rights	0.0	—	0.0	—
Non-controlling Interests	16.6	14.2	2.4	117.0

*On April 1st, 2019, TEPCO Fuel & Power Inc., succeeded its existing thermal power generation business to JERA Co., Inc. (50% investment by TEPCO Fuel & Power Inc., 50% investment by Chubu Electric Power Co., Inc.)

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

	Mar. 31 2020 (A)	Mar. 31 2019 (B)	(A)-(B)
Bonds	2,214.6	1,956.7	257.8
Long-term Debt	727.5	1,161.6	-434.0
Short-term Debt	1,972.6	2,772.3	-799.6
Total	4,914.9	5,890.7	-975.8

<Reference>

	FY2019	FY2018	(A)-(B)
ROA(%)	1.7	2.5	-0.8
ROE(%)	1.8	8.4	-6.6
EPS(Yen)	31.65	145.06	-113.41

ROA: Operating Income / Average Total Assets

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

Consolidated Statements of Cash Flows

(Unit: Billion Yen)

	FY2019 (A)	FY2018 (B)	Comparison (A)-(B)
Cash flow from operating activities	**323.4**	**503.7**	**-180.2**
Income / loss before income taxes	69.2	258.6	-189.3
Depreciation and amortization	422.4	541.8	-119.3
Increase (decrease) in decommissioning reserve fund*	-190.1	-200.0	9.8
Interest expenses	43.9	55.5	-11.5
Grants-in-aid from Nuclear Damage Compensation and Decommissioning Facilitation Corporation	-101.6	-159.8	58.1
Expenses for nuclear damage compensation	107.9	151.0	-43.1
Decrease (increase) in notes and accounts receivable trade*	57.2	-30.3	87.6
Increase (decrease) in notes and accounts payable trade**	63.5	60.0	3.4
Interest expenses paid	-42.9	-62.3	19.4
Payments for extraordinary loss on disaster due to the Great East Japan Earthquake	-23.3	-19.6	-3.7
Grants-in-aid from Nuclear Damage Compensation and Decommissioning Facilitation Corporation received	520.0	797.0	-277.0
Payments for nuclear damage compensation	-521.4	-799.1	277.7
Others	-81.4	-89.0	7.6
Cash flows from investing activities	**-508.2**	**-570.8**	**62.5**
Purchases of property, plant and equipment	-554.8	-619.5	64.7
Others	46.6	48.7	-2.1
Cash flows from financing activities	**13.5**	**-117.6**	**131.2**
Proceeds from issuance of bonds	879.6	959.1	-79.4
Redemption of bonds	-623.5	-1,234.6	611.1
Proceeds from long-term loans	-	-	-
Repayment of long-term loans	-433.9	-1,049.2	615.2
Proceeds from short-term loans	4,088.1	6,128.8	-2,040.7
Repayment of short-term loans	-3,892.3	-4,937.5	1,045.2
Others	-4.3	15.7	-20.1
Effect of exchange rate changes on cash and cash equivalents	0.0	-0.1	0.2
Net increase (decrease) in cash and cash equivalents**	-171.1	-185.0	13.8
Cash and cash equivalents at the beginning of the fiscal year	999.3	1,184.3	-185.0
Decrease in cash and cash equivalents due to change in scope of consolidation	-16.0	-	-16.0
Cash and cash equivalents at the end of the fiscal year	812.1	999.3	-187.2

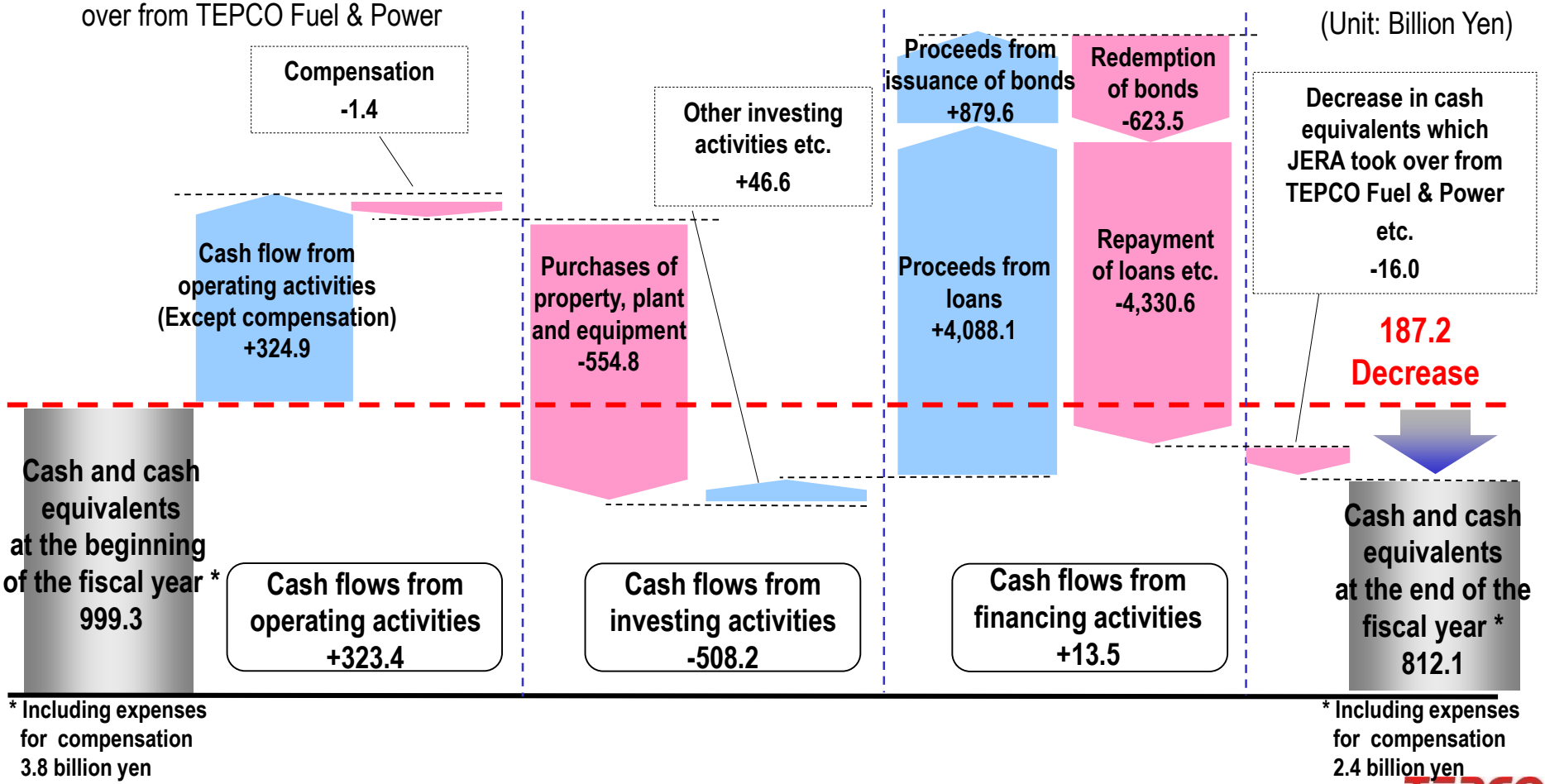
* Minus denotes an increase. ** Minus denotes a decrease.

TEPCO

Overview of Consolidated Cash Flows - Year on Year Comparison

- Cash and cash equivalents as of March 31, 2020 decreased 187.2 billion yen to 812.1 billion yen.
  - Cash flow from operating activities increased 323.4 billion yen mainly due to income before income taxes and minority interests
  - Cash flow from investing activities decreased 508.2 billion yen mainly due to purchases of property, plant and equipment
  - Cash flow from financing activities increased 13.5 billion yen mainly because proceeds from bonds/ loans exceeded redemption of bonds / repayment of loans
  - Moreover, cash and cash equivalents decreased 16.0 billion yen mainly due to decrease in cash equivalents which JERA took over from TEPCO Fuel & Power

(Unit: Billion Yen)



* Including expenses for compensation 3.8 billion yen

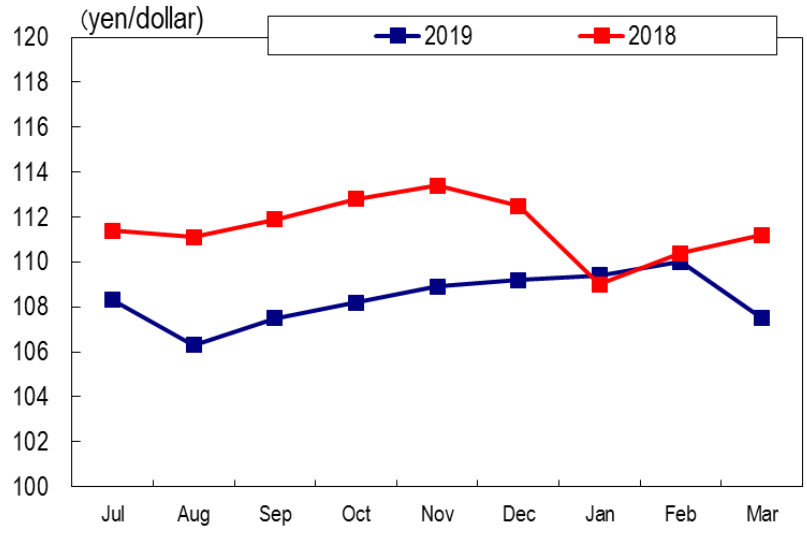
* Including expenses for compensation 2.4 billion yen

Key Factors Affecting Performance

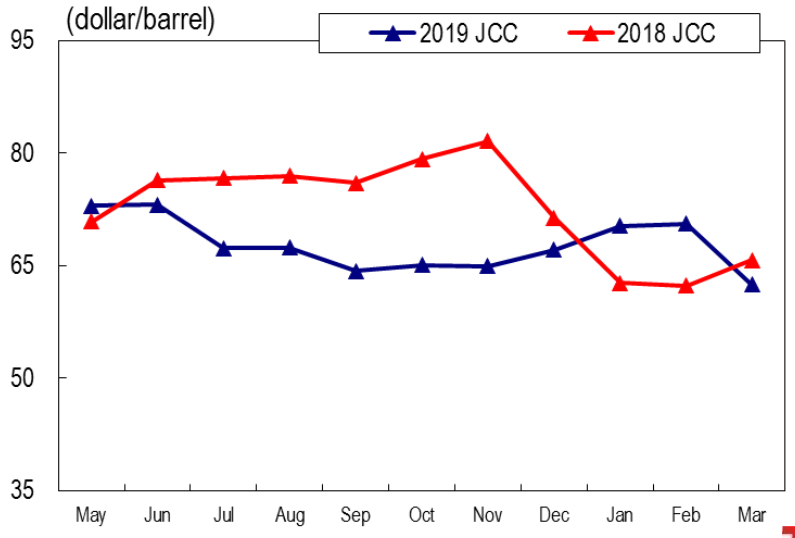
Key Factors Affecting Performance（Results）

	FY2019	[Reference] FY2018
Electricity Sales Volume (Billion kWh)	222.3	230.3
Gas Sales Volume (Million ton)	2.17	1.77
Foreign Exchange Rate (Interbank; yen per dollar)	108.7	110.9
Crude Oil Prices (All Japan CIF; dollars per barrel)	67.8	72.2
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

	FY2019						
	Apr-Sep	Oct-Dec	Jan	Feb	Mar	Jan-Mar	Full year
Lighting	32.25	15.66	7.55	7.01	6.09	20.65	68.57
Power	79.53	37.29	12.40	12.47	12.03	36.90	153.71
Total	111.78	52.95	19.95	19.49	18.11	57.55	222.28

	FY2018							[Ref.] Year-on-year Comparison	
	Apr-Sep	Oct-Dec	Jan	Feb	Mar	Jan-Mar	Full year	Jan-Mar	Full year
Lighting	35.34	16.40	8.49	8.02	6.39	22.91	74.64	90.1%	91.9%
Power	80.74	37.24	12.73	12.68	12.28	37.69	155.67	97.9%	98.7%
Total	116.07	53.63	21.23	20.70	18.67	60.60	230.31	95.0%	96.5%

Total Power Generated

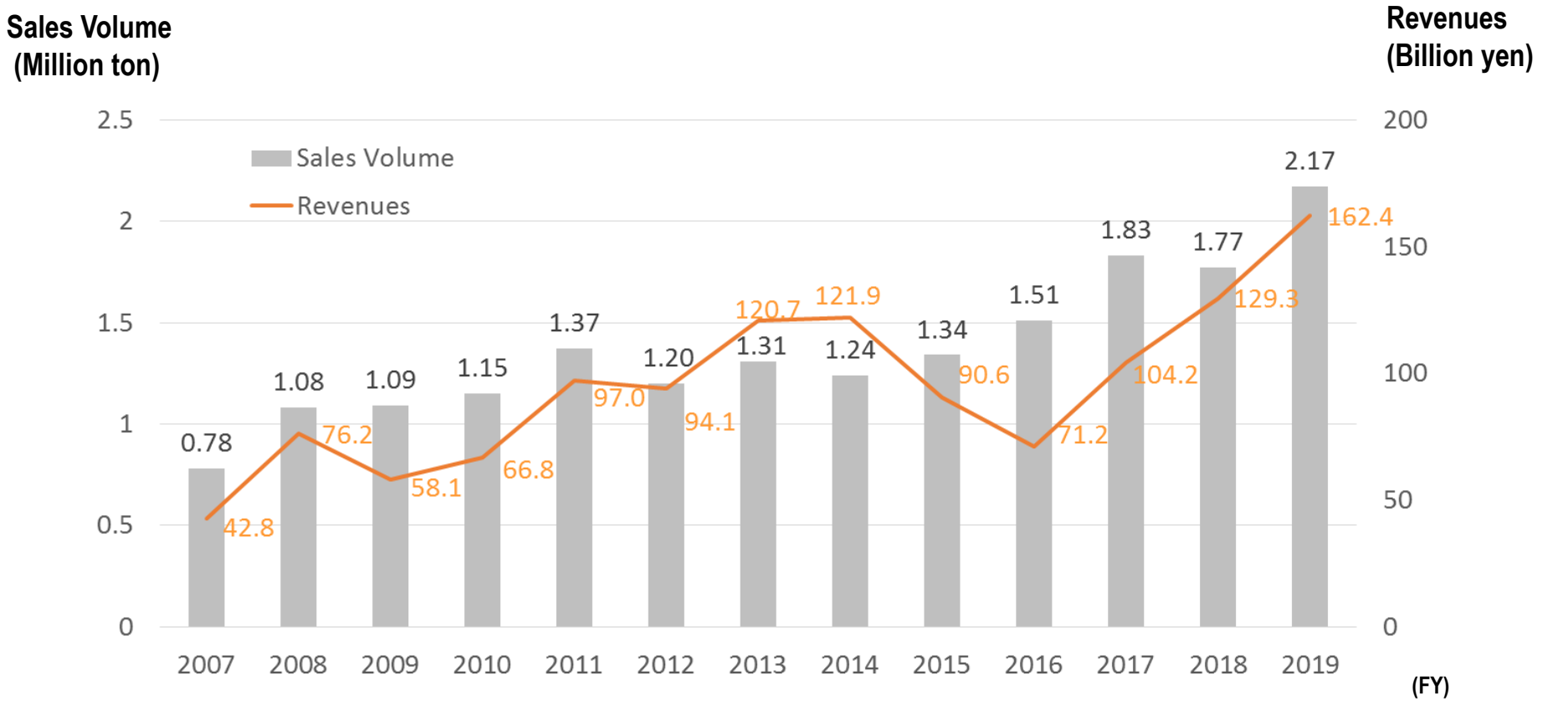
Unit: Billion kWh

	FY2019						
	Apr-Sep	Oct-Dec	Jan	Feb	Mar	Jan-Mar	Full year
Hydroelectric	6.04	2.46	0.79	0.65	0.80	2.24	10.74
Thermal	0.08	0.04	0.01	0.01	0.01	0.04	0.16
Nuclear	-	-	-	-	-	-	-
Renewable etc.	0.04	0.01	0.00	0.00	0.01	0.01	0.06
Total	6.16	2.51	0.81	0.67	0.82	2.29	10.97

*On April 1st, 2019, TEPCO Fuel & Power Inc., succeeded its existing thermal power generation business to JERA Co., Inc. (50% investment by TEPCO Fuel & Power Inc., 50% investment by Chubu Electric Power Co., Inc.)

	FY2018							[Ref.] Year-on-year Comparison	
	Apr-Sep	Oct-Dec	Jan	Feb	Mar	Jan-Mar	Full year	Jan-Mar	Full year
Hydroelectric	6.73	2.29	0.71	0.57	0.76	2.04	11.07	109.5%	97.0%
Thermal	88.82	43.71	17.50	14.95	14.63	47.08	179.61	0.1%	0.1%
Nuclear	-	-	-	-	-	-	-	-	-
Renewable etc.	0.04	0.01	0.00	0.00	0.01	0.02	0.07	88.4%	87.2%
Total	95.60	46.01	18.21	15.53	15.40	49.14	190.75	4.7%	5.7%

Gas Supply Business



* April 2017~ Full liberalization of gas market

<FY2019 Actual Performance>

Revenues: Increased 33.1 billion yen YoY to 162.4 billion yen due to increases in sales volume mainly in household gas.

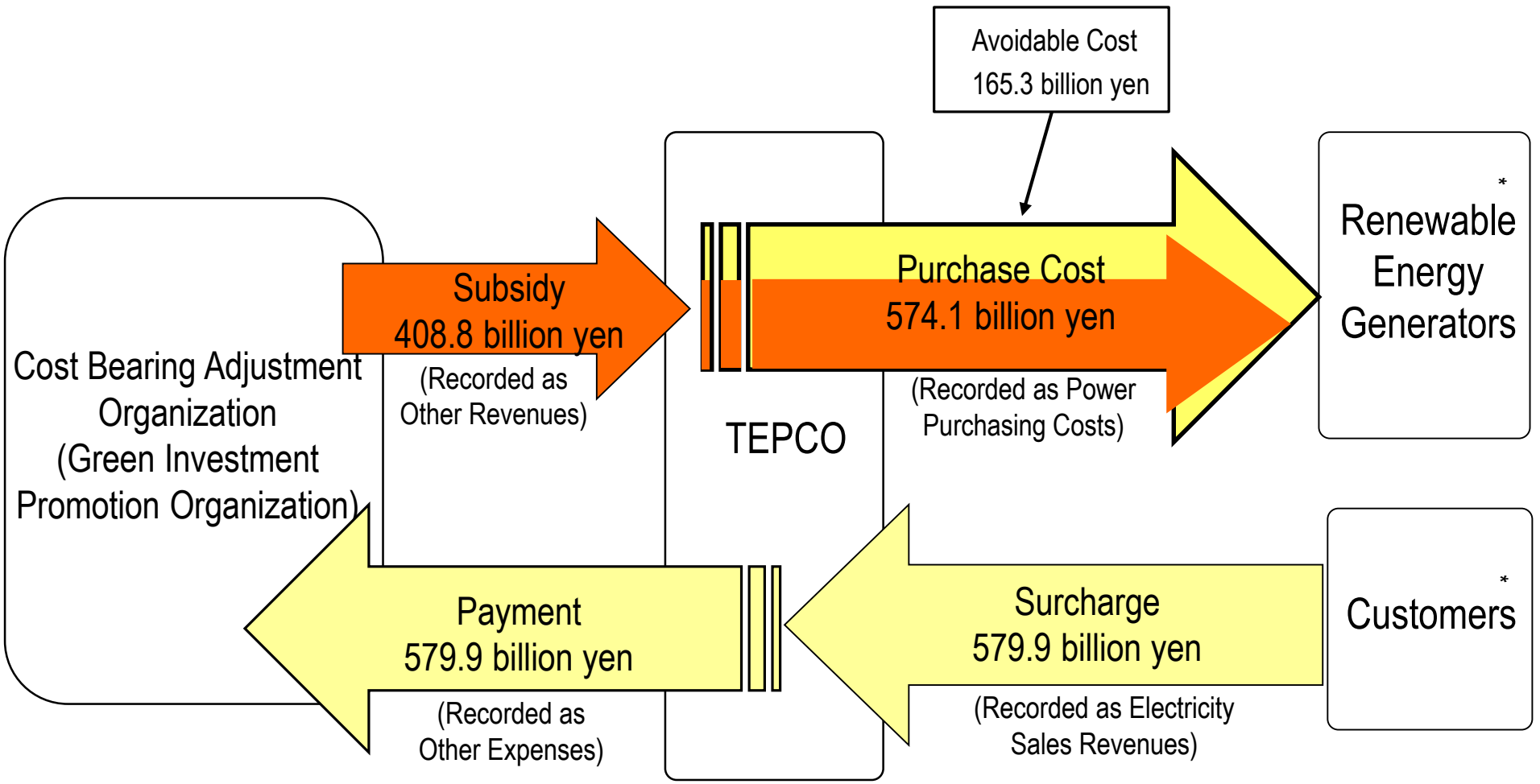
Operating expenses: Increased 31.2 billion yen YoY to 160.1 billion yen due to rise of price of resources

Operating Income: Recorded 2.3 billion yen.

*~FY2015: former TEPCO (Non-consolidated), FY2016~: TEPCO Energy Partner

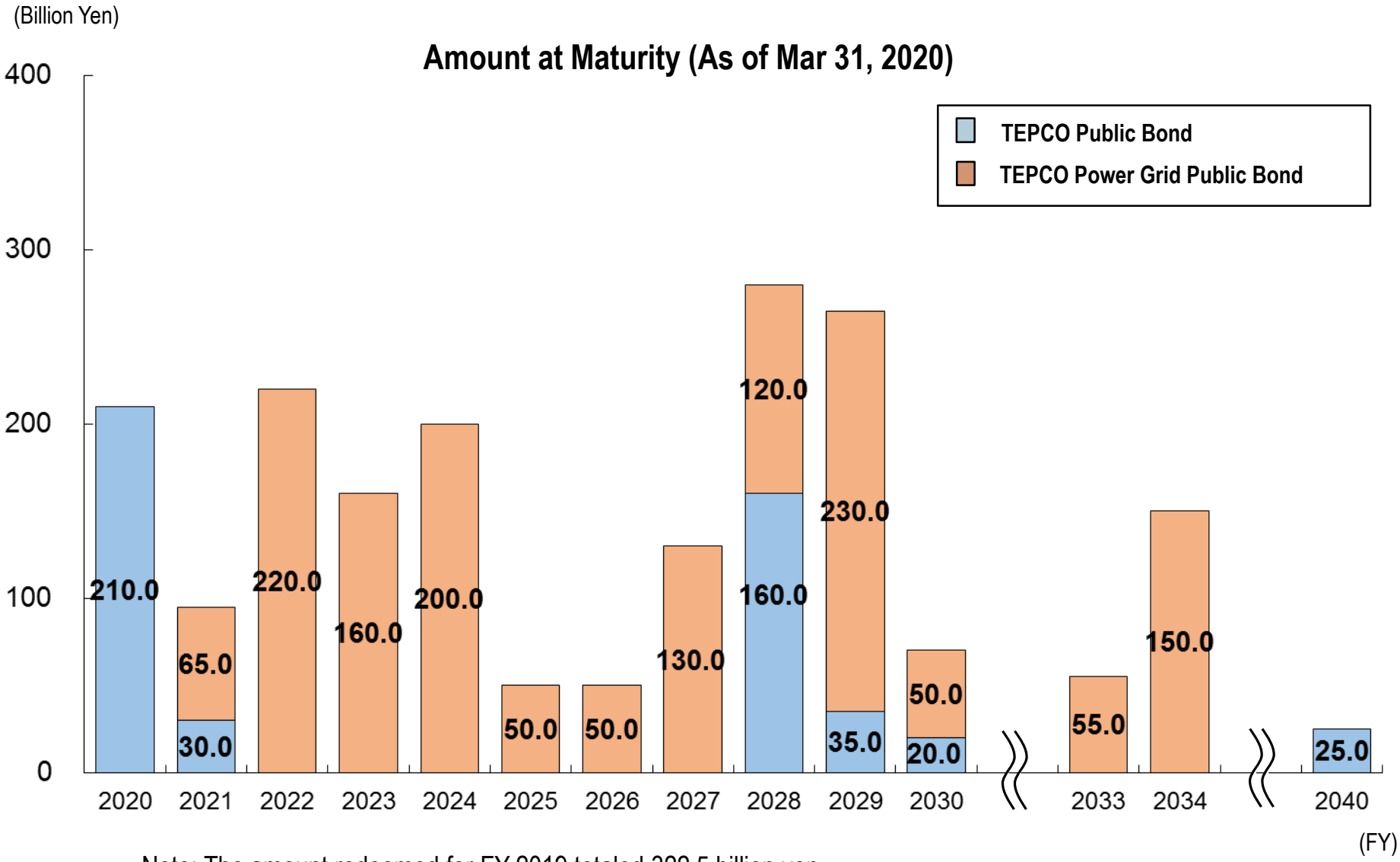
Feed-in Tariff Scheme for Renewable Energy (Purchase Cost Collection Flow)

(FY2019)



* Including TEPCO Group Companies

Schedules for Public Bond Redemption



Note: The amount redeemed for FY 2019 totaled 322.5 billion yen.

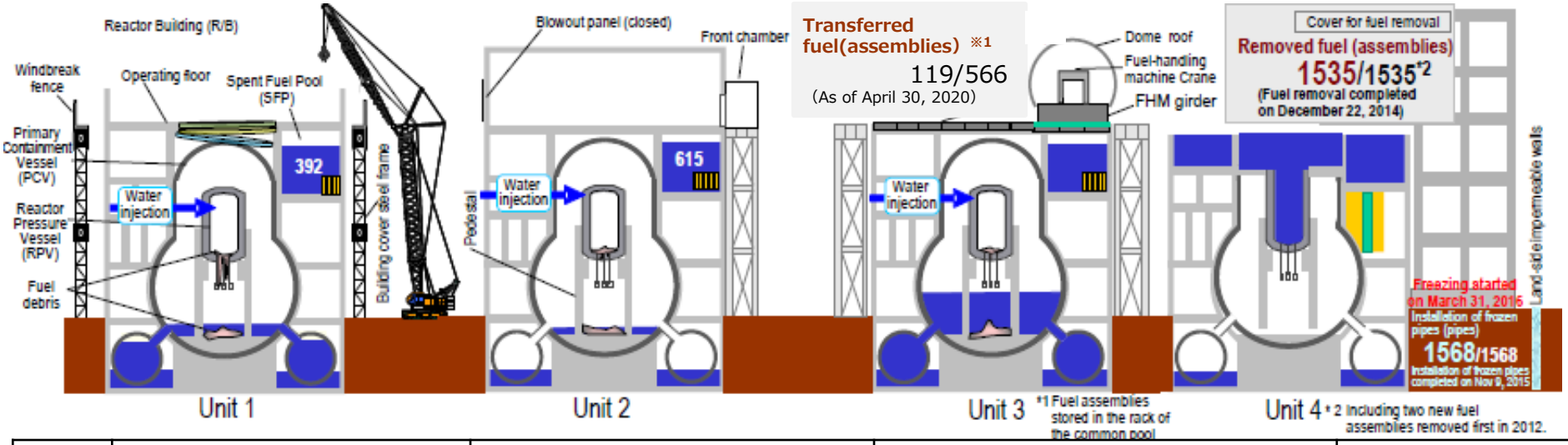
The Current Status of Fukushima Daiichi Nuclear Power Station and Future Initiatives

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. To facilitate the removal of spent fuel, preparation works are underway.
- Created the Mid-and-Long Term Decommissioning Implementation Plan 2020 based on revisions to the Mid-and-Long Term Roadmap.

Current Situation

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



Works towards removal of spent fuel and fuel debris	[Spent fuel removal] ・Installed a SFP gate cover in March 2020 as part of measures to prevent rubble from falling into the SFP when removing the fallen roof on the south side of the operating floor (Unit 3 side). This reduced the risk of water levels falling due to gate damage or the dislodging of the gate as a result of the steel beams of the roof falling onto the SFP gate. [Fuel debris removal] ・Currently building an access route to conduct an investigation inside the PCV. Drilled the second hole into the inner door in March 2020. Cameras will be inserted from the created holes to carry out a preparatory investigation for severing interfering objects inside the PCV while also conducting preparatory work for drilling the third and final hole.	[Spent fuel removal] ・Currently working on developing the south side (Unit 3 side) of the R/B, which includes completely dismantling everything in the area except for the common boiler building, in order to install the gantry to remove the fuel from the SFP. Also started south side yard development work which includes removing buried objects in preparation for ground improvement work in April 2020. [Fuel debris removal] ・Assessments have found that Unit 2 is best suited to be the first unit from which fuel debris is retrieved. ・As the method, to determine, a trial retrieval using a robot arm will begin. After verifying and checking this retrieval method, the scale will be gradually expanded using equipment with the same mechanism.	[Spent fuel removal] ・Fuel and rubble removal is going as planned. As of April 30, 2020, 119 fuel assemblies have been removed. On March 30, fuel and rubble removal was temporarily suspended for crane inspections mandated by law. The work will be restarted in June. We will continue to put safety as the first priority, aiming for fuel removal completion by the end of FY2020. [Fuel debris removal] - Analyzing the image data obtained from the pedestal internal survey of July 2017, damage of multiple structures and the structures assumed as core internals, is confirmed. The review of fuel extraction will be continued based on the obtained information.	[Spent fuel removal] - Fuel removal from the SFP was completed in December, 2014.

Key points of the revised “the Mid-and-Long-Term Roadmap”

●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”**

①Fuel 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.

②Fuel 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

③Contaminated water countermeasures

- The volume of contaminated water generated has been significantly suppressed.
  (540m^3/day (May 2014) → 170m^3/day (average of FY2018))

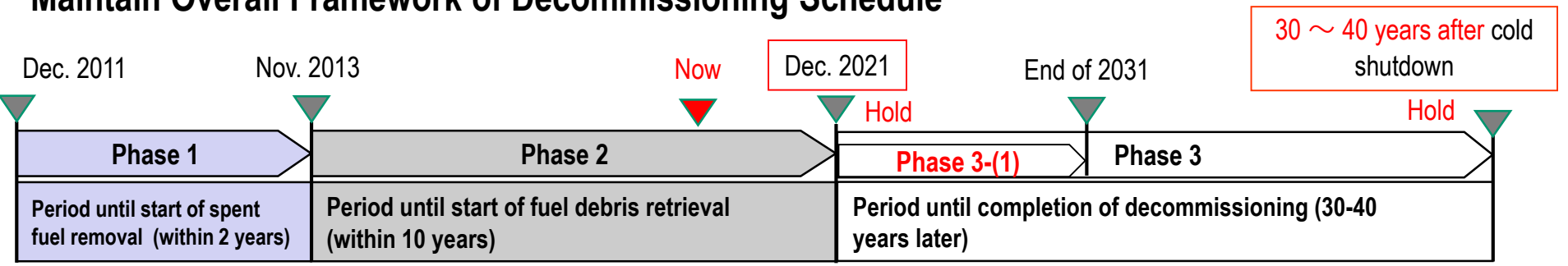
Keep current target of reducing the contaminated water generation **to 150m^3/d within 2020.**
Set new target of reducing the contaminated water generation **to 100m^3/d within 2025.**

* 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)

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

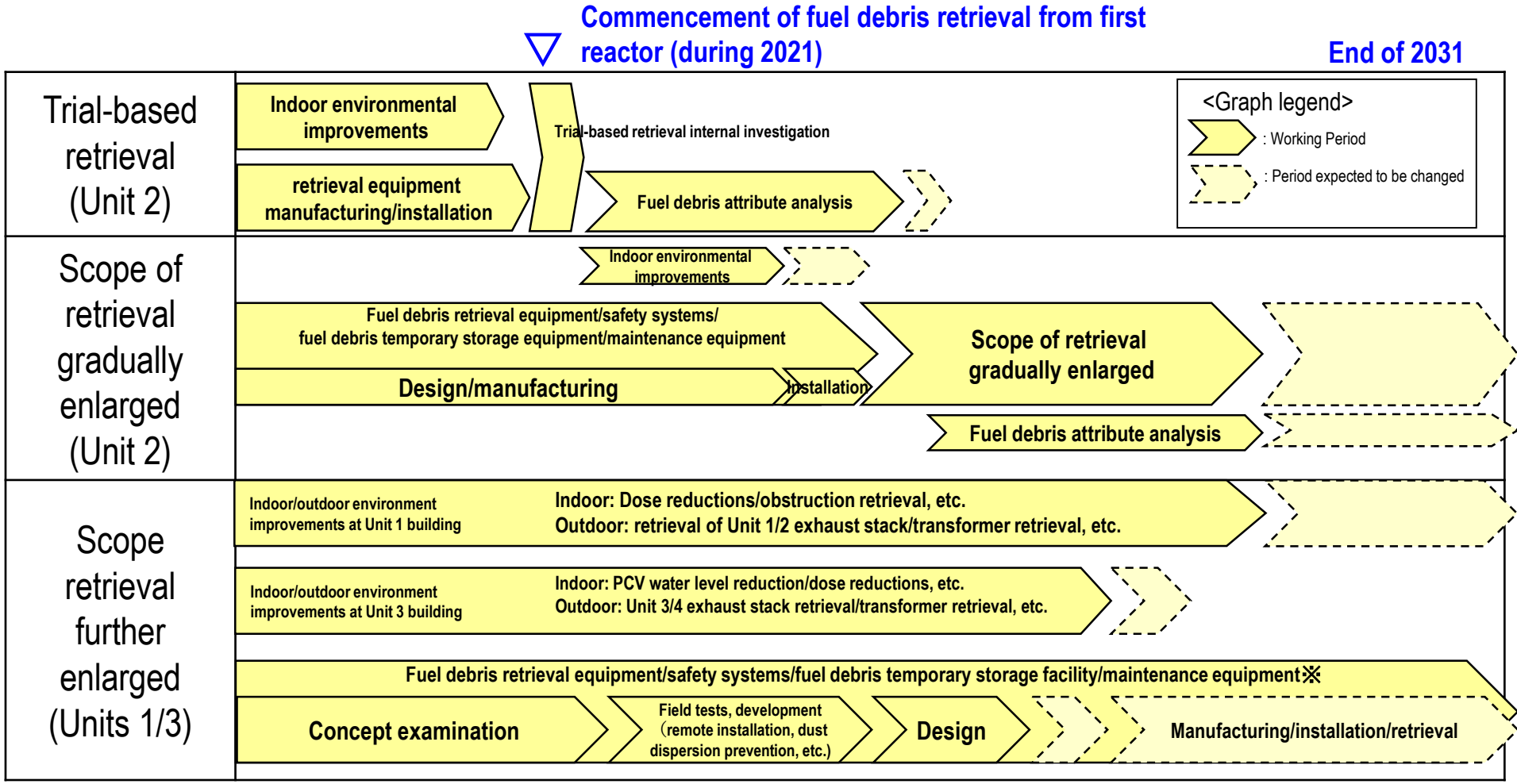
※ Excluding the reactor buildings of Units 1-3, process main buildings, and High temperature incineration building.

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

TEPCO

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.



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

Contaminated Water Management

- 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

- The work to circulate and purify stagnant water inside the buildings started on the Units 3/4 side in February 2018 and on the Units 1/2 side in April 2018.

< 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 894,771 tons of groundwater has been discharged as of 15:00 on May 10, 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.

Land-side frozen impermeable walls

➢In March 2018, the land-side impermeable walls were considered completed as the underground temperature had declined below 0℃ in almost all areas.

➢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.

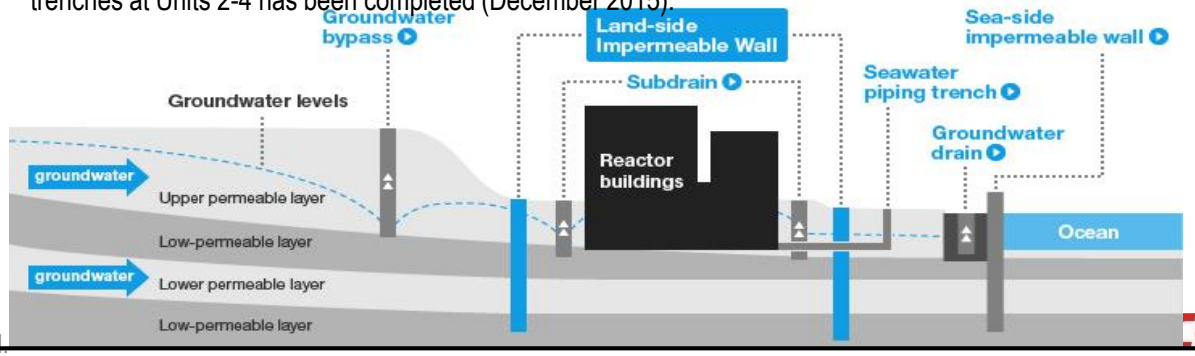
➢Investigations and countermeasures will be conducted to further reduce the generated contaminated water.

Sea-side impermeable walls

➢On October 26, 2015, the seaside impermeable walls were completed to be closed.

Removal of contaminated water in trenches

➢The work to remove approx. 10,000 tons of contaminated water from seawater pipe trenches and fill the trenches at Units 2-4 has been completed (December 2015).



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

Main Measures to Secure Safety – 1 [Outline]

◆ We promote the following measures to secure further safety after the Great East Japan Earthquake.

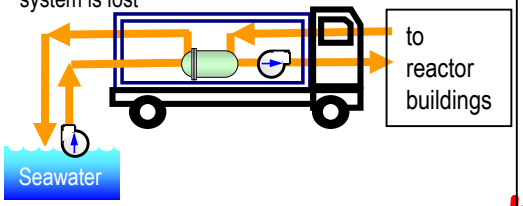
I. Installation of flooding embankment [banks]

- 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

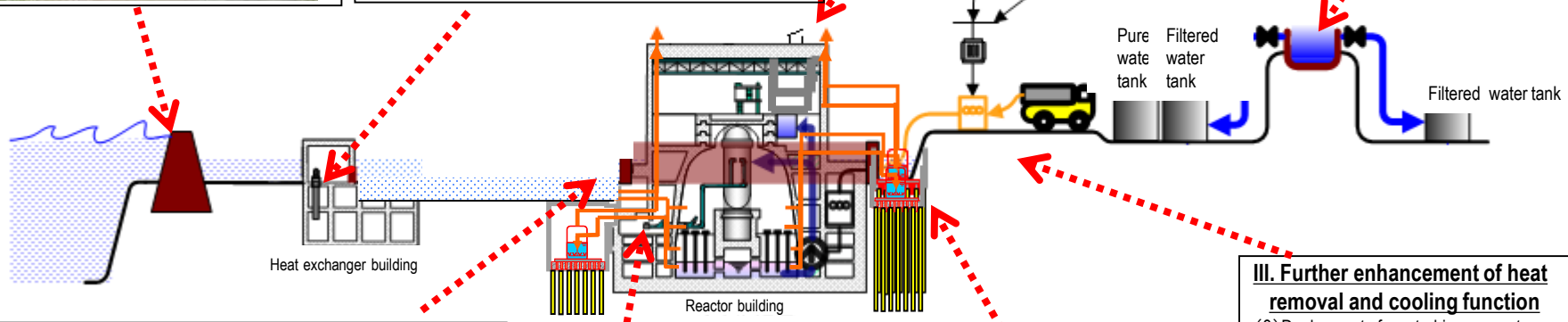
(8) Installation of top venting on reactor buildings

- 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

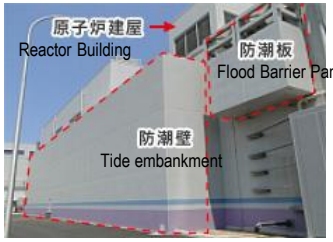
- Install a freshwater reservoir in the power station to secure stable supply of coolant water for reactors and spent fuel pools



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 April 8, 2020

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	Under construction
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					Under construction	Under construction
(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	Under construction
(7) Installation of aboveground filter vent	Under construction	Under consideration	Under consideration	Under consideration	Under construction	Under construction	Under construction
(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		
(16) Environmental improvement of the seismic isolated building	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 Coriumu 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

Compliance Review under the New Regulatory Requirements

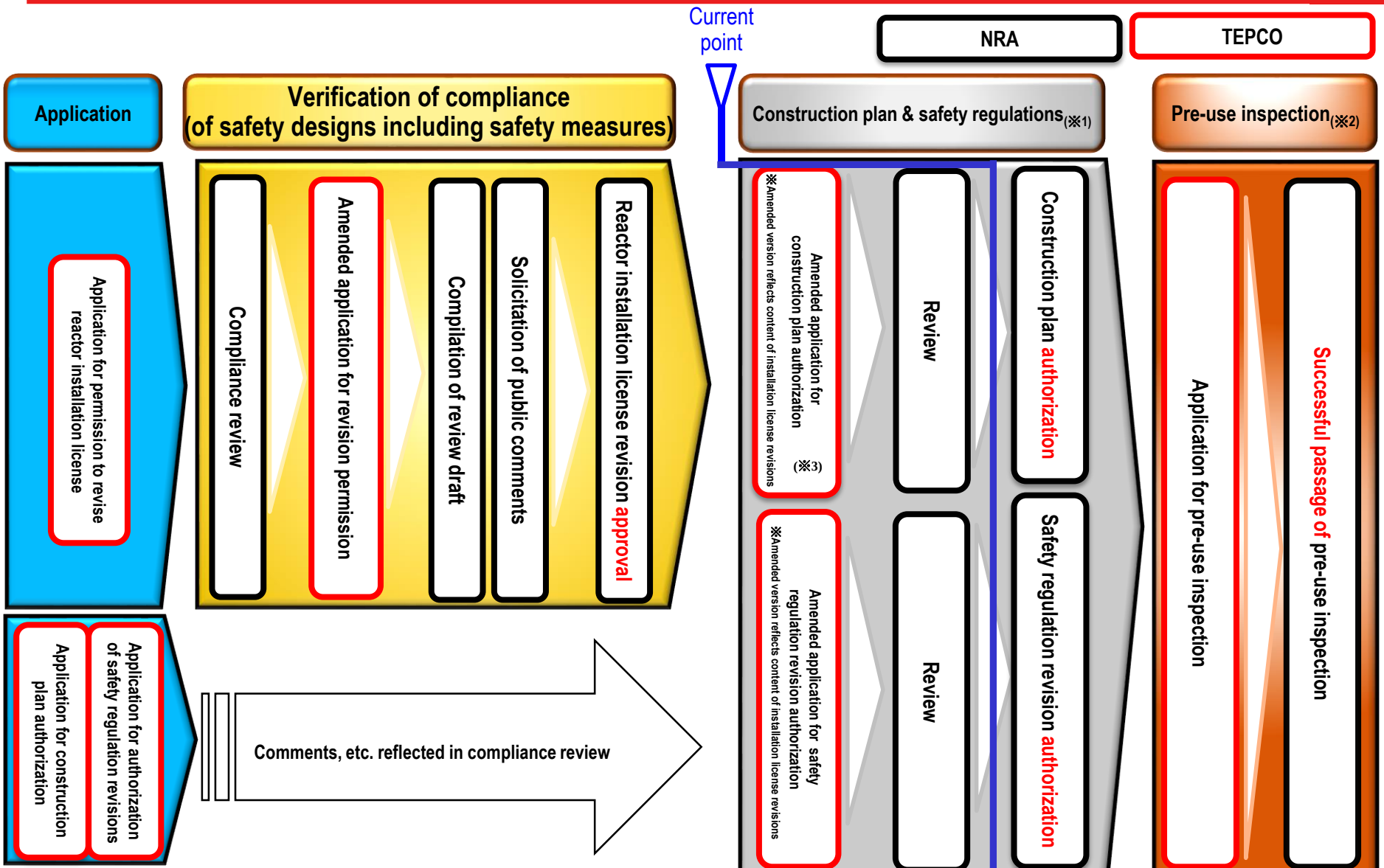
Latest Review Status

- On September 27, 2013, the applications for permission changes in reactor installation were presented to receive the regulatory standard compliance examination for Units 6 and 7.
- After the application for permission changes in reactor installation was presented, amended applications for revision of the reactor installation license, which reflect changes sought as discussed review meetings held, were submitted to the Nuclear Regulation Authority (NRA) on June 16, August 15, September 1 and December 18, in 2017.
- On December 27, 2017, the NRA approved TEPCO's application for revision of its reactor installation license.
- Amended application for authorization of a construction plan (first) for Unit 7 was submitted on December 13, 2018.
- Amended application for authorization of a construction plan (second) for Unit 7 was submitted on July 5, 2019.
- Amended application for authorization of safety regulation revision was submitted on March 30,2020.

Upcoming Reviews

- The pending amended applications for authorization of a construction plan will be submitted as soon as preparations are complete (submission time is unknown at present).
- Amended application for authorization of safety regulation revision will be resubmitted based on the review status given the revision in relevant laws and regulations (enacted April 1, 2020). (Aiming to submit the amendment around August 2020)

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: Inspection conducted by the central government to verify that construction has been carried out in the manner determined by the construction plan.

※3: Amended application for authorization of a construction plan (partial) was submitted.

※4:Given the revisions of laws and regulations, amended application for authorization of safety regulation revision will be resubmitted based on the status of review.

Other Initiatives

Efforts towards Nuclear Reform - 1
- Framework for Nuclear Reform

- Since April 2013, TEPCO has advanced the Nuclear Safety Reform Plan so that it may realize its determination that "the Fukushima nuclear accident will never be forgotten and we will be a nuclear operator which continues to create unparalleled safety and increase the level of that safety to be greater today than yesterday and still greater tomorrow than today."
- The Mid-and-Long-Term Roadmap for decommissioning Fukushima Daiichi NPS was revised in September 2017 and permission received to revise the reactor installation license for Kashiwazaki-Kariwa NPS Units 6 & 7. TEPCO will now reassess its plans to take into account items pointed out and suggested by the Nuclear Reform Monitoring Committee and faithfully implement these items.

<Framework for Nuclear Reform>

Board of Directors

Advice ↓ ↑ Suggestion

Nuclear Reform Monitoring Committee (Established in September, 2012)
Monitoring and supervising efforts of nuclear reform, then reporting and suggesting to the Board of Directors

Dale Klein, Chairman (former Chairman of the U.S. Nuclear Regulatory Commission)
Barbara Judge, Vice Chairman (former Chairman of the U.K. Atomic Energy Authority)
Masafumi Sakurai, committee member (former member of the National Diet of the Japan Fukushima Nuclear Accident Independent Investigation Commission)

Supervise/Monitor ↓ ↑ Report

Nuclear Safety Oversight Office(Established in May, 2013)

On April 1,2015, the Nuclear Safety Oversight Office, which reports to the Board of Directors, was reorganized so that it now reports directly to the President.

Dealing with nuclear safety through supervising and consulting activities, but from a much closer position to the front line of nuclear plants, and also involving more directly with the decision-making process on nuclear safety.

Nuclear Reform Special Task Force
(Established in September, 2012)

Implementing nuclear reform under the supervision of the Committee.

Public Communications Office (risk communicators)
Risk communicators coordinate with power plants' PR officers to provide advice and recommendations to senior management and the Nuclear Power Division from social perspectives. (The Social Communication Office, which served the abovementioned function, became amalgamated with the Public Communications Office in July 2018.)

Nuclear Power & Plant Siting Division

Fukushima Daiichi Decontamination & Decommissioning Engineering Company (Established in April, 2014)
An internal entity established for the purpose of clarifying the responsibilities allocation and focusing solely on handling of decommissioning and contaminated water.
Positioning "Chief Decommissioning Officer (CDO)" as Company President.
Assigning three experienced executives invited from nuclear power manufacturers to the Vice President. In addition, as of June 30, 2015, Yoshikazu Murabe, a managing director at the Japan Atomic Power Company, was brought in to serve as Senior Vice President (as of October 1, 2017, Naoto Moroo, a managing director at the same company, succeeded the post) and his responsibilities will focus on waste measures, maintaining safety at Units 5 & 6, radiation & chemical management among other duties.

Efforts towards Nuclear Reform – 2
- Report on Status of the Nuclear Safety Reform Plan

✓With respect to the Nuclear Safety Reform Plan, in addition to measures to make up for the inadequacies in "safety awareness", "interaction capabilities", "technical capabilities" that were the underlying factors of the accident, and to enhance these factors, initiatives for strengthening the governance across the organization are being undertaken as well.

✓At the Nuclear Reform Monitoring Committee on February 4, 2020, TEPCO delivered reports on the progress of nuclear safety reforms and the status of internal assessments. The Committee complimented TEPCO for its great progress in conducting stricter internal assessments and strengthening its organization and governance. TEPCO will continue to innovate “nuclear safety reforms for next-generation employees”, including by identifying internal weaknesses and other issues proactively before external experts point them out.

	Recent main initiatives, etc. ※
Initiatives for strengthening governance	- In addition to ensuring that the reflections and lessons learned in Fukushima Nuclear Accident are handed down to the next generation, the Nuclear Safety Reform Plan and management model will be organized, integrated and systematized as the “nuclear safety reforms for next-generation employees" to promote the reform more powerfully. - The Fukushima Daiichi Decontamination & Decommissioning Engineering Company (FDEC) decided to construct a Decommissioning Management Model to strengthen corporate governance. The model incorporates the vision and values of the Nuclear Safety Reform Plan while also maintaining commonality with the Nuclear Power & Plant Siting Division’s Management Model. Innovations have been made to clarify the relationship between individuals’ duties and overall goals, particularly in light of the fact that the model covers tasks that are unique to the FDEC, such as counter measures for contaminated-water and fuel-debris removal.
Initiatives for enhancing safety awareness	- More than 5,000 contractors are being thoroughly educated on Foreign Material Exclusion measures, including using special covers for pipes . In light of such initiatives, TEPCO was presented a Power Station Special Award by the Japan Nuclear Safety Institute (JANSI) on November 14, 2019 in recognition of its remarkable efforts to improve safety throughout the nuclear power industry.
Initiatives for enhancing interaction capabilities	-The Aomori Division implemented an external- communication initiative during which office personnel visited all homes in Higashidori Village and some 2,300 companies in the region between November 5 and 28, 2019. Residents were provided with an overview of the Aomori Division and information about geological surveys, and many said that they look forward to further communication efforts by the Office. - Representatives from Niigata Headquarters visited 33,000 homes in Kashiwazaki City and Kariwa Village between August 28 and December 8, 2019, receiving more than 16,000 valuable opinions. Intermixed with these opinions were questions about troubles and safety measures at the site. Goingforward, the company shall continue to listen carefully to local residents and respond to their requests for improved communication, both internal and external, as well as enhanced operation of power stations.
Initiatives for enhancing technical capabilities	- A skill- training facility at Fukushima Daiichi was rendered unusable by the Fukushima nuclear accident, so TEPCO opened the new Fukushima Skill Training Center inside the Fukushima Daini contractor administration building on October 10, 2029. TEPCO has begun use the Center to greatly upgrade education and training aimed at improving employee skills and technical capabilities. - Maintenance division personnel will be required to acquire technical skills to respond quickly and effectively for a period of time in a emergency before outside assistance arrives. The Maintenance Division implements in-house training to them in order to improve such skills. During the third quarter of FY2019, training on how to deal with gas turbine generator malfunctions was conducted at Kashiwazaki-Kariwa, aiming to realize faster and more efficient repairs.

※From the Nuclear Safety Reform Plan FY2019 Third quarter progress report” released in February 18, 2020

Main Efforts to Increase Corporate Value-1

<TEPCO Holdings>

February 3, 2020	Signed a comprehensive cooperation agreement on establishing a joint research project on disaster prevention and mitigation with the Nagaoka University of Technology
March 18, 2020	Agreed with Ørsted A/S to establish a joint venture “Choshi Offshore Wind Farm K.K.” to promote the Choshi Offshore Wind Power Project
April 7,2020	Signed an “Agreement on Supporting the Supply of Materials in Disaster” with the NPO Komeri Disaster Management Center
April 23,2020	Announced the implementation of a joint demonstration to realize a smart energy city in Chiba city, Chiba Prefecture with TN Cross Corporation, NTT Anode Energy Corporation, and Nippon Telegraph and Telephone Corporation (NTT)

<TEPCO Power Grid>

March 19, 2020	Established “Grid Skyway Limited” with NTT DATA Corporation and Hitachi, Ltd. to build a nation-wide “airway platform” that utilizes the air above electrical equipment and enhances equipment inspections using drones
March 26, 2020	Entered into a capital and business alliance with Welmo Inc. to collaborate on a nursing care platform service that utilizes electricity data such as electricity use data, AI, and ICT
April 20, 2020	Entered into a capital and business alliance with Japan Infra Waymark to enhance electrical equipment maintenance work using drones

Main Efforts to Increase Corporate Value-2

<TEPCO Energy Partner>

February 26, 2020 Expanded the mobile battery rental service “Juren” service area across Japan, aiming for the installation of approx. 10,000 units within FY2020

March 12, 2020 Established a new organization, the DX Promotion Office, on April 1, 2020 to actively promote the launch of new services and businesses using AI (artificial intelligence), IoT (internet of things), and digital transformation (DX) that realizes radical transformation of existing businesses

March 17, 2020 Achieved the target of 2 million city gas contracts (as of March 10, 2020) with the mutual cooperation of NIPPON GAS CO., Ltd

March 26, 2020 Signed a comprehensive cooperation agreement with Chichibu city, Saitama Prefecture and Chichibu PPS with the aim of building a sustainable, environmentally-friendly town that is disaster resistant

March 31, 2020 Signed a basic agreement of comprehensive cooperation with CHUO UNIVERSITY on the sustainable development of society and regions as part of an industry-university collaboration initiative that integrates human and intellectual resources

<TEPCO Renewable Power>

April 1, 2020 Started operation as a company dedicated to renewable energy succeeding the renewable energy generation business of TEPCO Holdings

April 28, 2020 Announced TEPCO Renewable Power’s participation in the operation of Dariali Hydropower Plant (total output: 108 MW) owned by Dariali Energy, a hydroelectric utility in Georgia (This is the second overseas hydroelectric business that TEPCO will be participating in)

TEPCO