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Please note that if there is any discrepancy, the Japanese version  
will take priority.

# Summary of FY2023 Earnings Results

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[J-POWER Group Medium-Term Management Plan FY2024-FY2026](#)

2024/5/9

# Forward Looking Statements

The following contains statements that constitute forward-looking statements, plans for the future, management targets, etc. relating to the Company and/or the J-POWER group. These are based on current assumptions of future events, and there exist possibilities that such assumptions are objectively incorrect and actual results may differ from those in the statements as a result of various factors.

Furthermore, information and data other than those concerning the Company and its subsidiaries/affiliates are quoted from public information, and the Company has not verified and will not warrant its accuracy or appropriateness.

## \*Display of Figures

- ✓ All figures are consolidated unless stated otherwise.
- ✓ Amounts less than 100 million yen and electric power sales volume less than 100 million kWh shown in the consolidated financial data have been rounded down. Consequently, the sum of the individual amounts may not necessarily agree with figures shown in total columns.

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## 1. Summary of FY2023 Earnings Results

# Summary of FY2023 Earnings Results

## Decreased revenue and profit

- Decreased revenue due to lower electricity sales volume resulting from lower load factor of thermal power plants and lower electricity sales prices, etc.
- Decreased profit due to decrease in profit of a subsidiary in Australia that owns coal mining interests, lower gross profit from JEPX sales and unplanned outages of thermal power plants

(Unit: billion yen)

Consolidated	FY2022 (Apr.-Mar.)	FY2023 (Apr.-Mar.)	Year-on-year change		FY2023 Forecast*1 (Apr.-Mar.)	Comparison with the forecast	
Operating Revenue	1,841.9	1,257.9	(583.9)	(31.7)%	1,307.0	(49.0)	(3.7)%
Operating Profit	183.8	105.7	(78.1)	(42.5)%	87.0	18.7	21.5 %
Ordinary Profit	170.7	118.5	(52.2)	(30.6)%	97.0	21.5	22.2 %
Profit attributable to owners of parent	113.6	77.7	(35.9)	(31.6)%	67.0	10.7	16.1 %

Non-consolidated	FY2022 (Apr.-Mar.)	FY2023 (Apr.-Mar.)	Year-on-year change		FY2023 Forecast*1 (Apr.-Mar.)	Comparison with the forecast	
Operating Revenue	1,370.7	843.2	(527.4)	(38.5)%	863.0	(19.7)	(2.3)%
Operating Profit	46.5	5.1	(41.4)	(89.0)%	(3.0)	8.1	-
Ordinary Profit	75.3	55.1	(20.1)	(26.8)%	59.0	(3.8)	(6.5)%
Profit	60.0	52.3	(7.7)	(12.9)%	59.0	(6.6)	(11.3)%



# Key Data (Electric Power Sales)

	FY2022 (Apr.-Mar.)	FY2023 (Apr.-Mar.)	Year-on-year change	
Electric Power Sales (TWh)				
Electric Power Business	68.4	60.3	(8.0)	(11.8)%
Hydroelectric Power	8.8	9.0	0.1	1.4 %
Thermal Power	45.6	38.5	(7.1)	(15.6)%
Wind Power	1.0	1.1	0.1	9.7 %
Other <sup>*1</sup>	12.8	11.6	(1.1)	(9.2)%
Overseas Business <sup>*2</sup>	14.2	19.8	5.5	39.1 %
Water supply rate	94%	96%	2 points	
Load factor <sup>*3</sup>	65%	55%	(10) points	

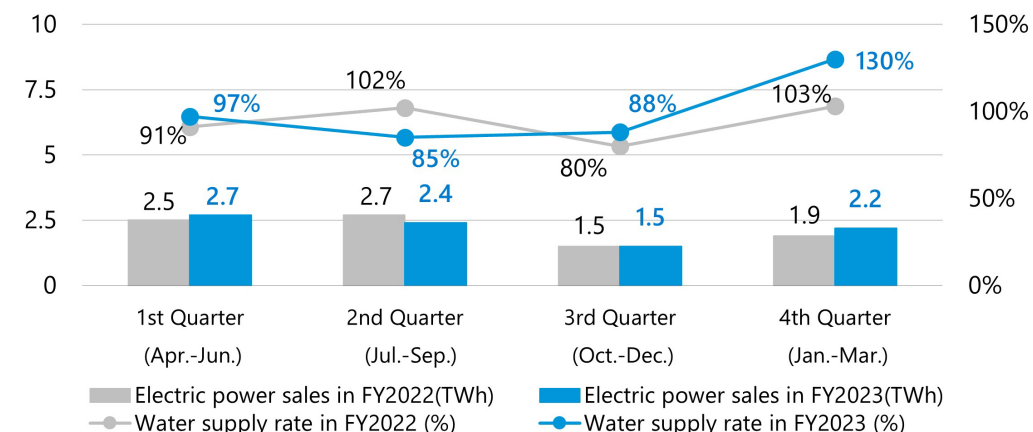
\*1 Electric power sales volume of electricity procured from wholesale electricity market, etc.

\*2 Electric power sales volume of overseas consolidated subsidiaries (Electric power sales volume of equity method affiliated companies is not included)

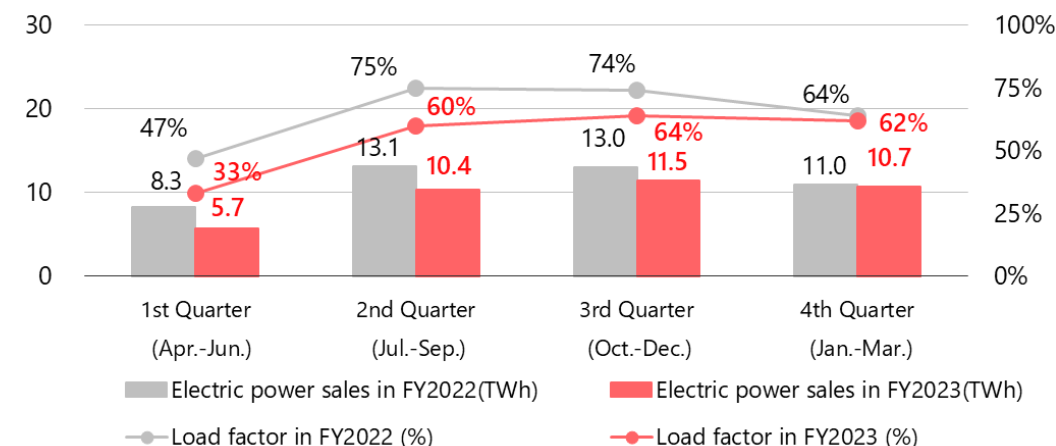
\*3 Load factor of thermal power shows the results for non-consolidated only

## Electric Power Sales for each Quarter

### [Domestic Hydroelectric Power]



### [Domestic Thermal Power]



## Key Data (Operating Revenue)

**Electric Power Business** : The revenue decreased due to lower electricity sales volume resulting from lower load factor of thermal power plants and lower electricity sales prices, etc.

**Overseas Business** : The revenue decreased due to lower electricity sales price in Jackson Generation Power Plant in North America

**Other Business** : The sales decreased due to falling coal prices at a subsidiary in Australia that owns coal mining interests

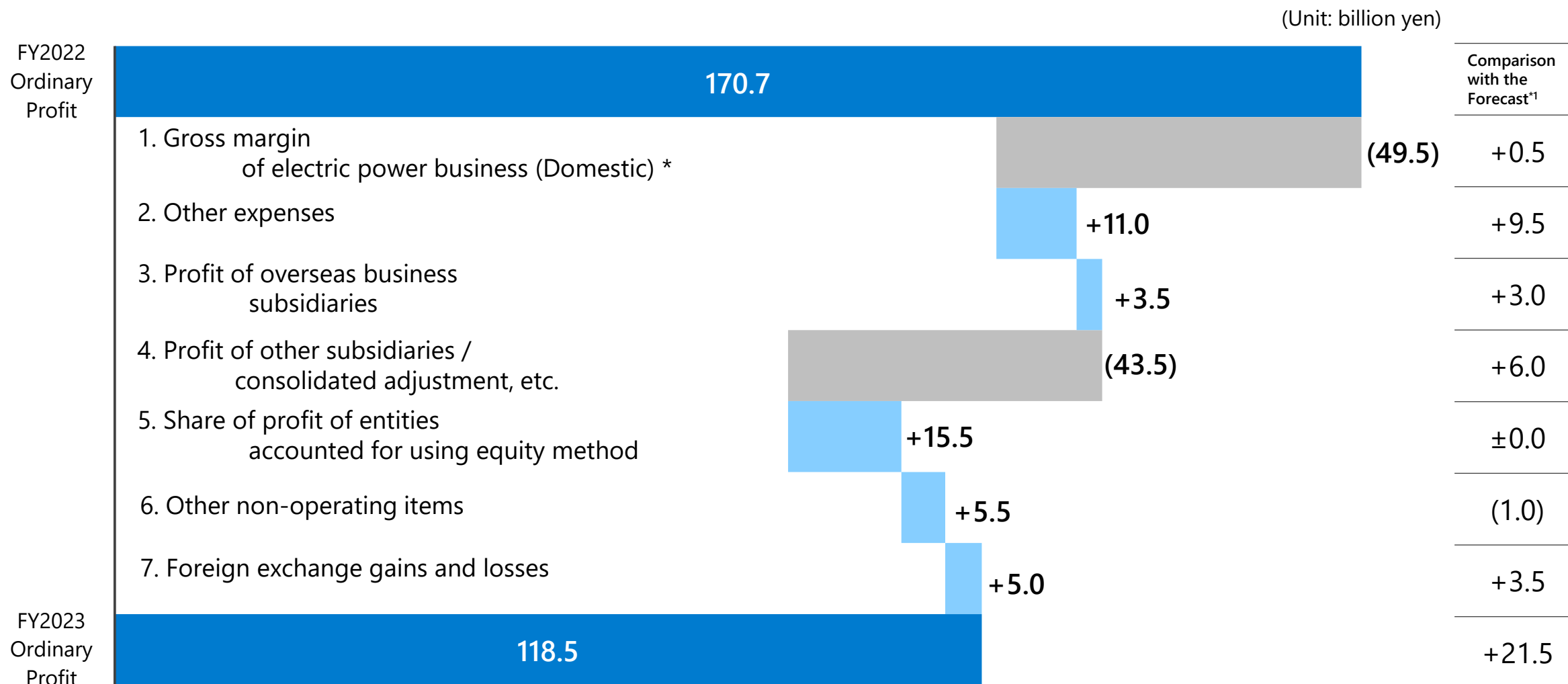
	FY2022 (Apr.-Mar.)	FY2023 (Apr.-Mar.)	Year-on-year change			FY2022 (Apr.-Mar.)	FY2023 (Apr.-Mar.)
Operating Revenue (Billion yen)	1,841.9	1,257.9	(583.9)	(31.7)%	Foreign exchange rate		
Electric Power Business	1,417.9	899.4	(518.4)	(36.6)%	(Yen/USD) at the end of December	132.70	141.83
Electric Power Sales	1,362.4	845.6	(516.8)	(37.9)%	(Yen/THB) at the end of December	3.80	4.13
Renewables <sup>*1</sup>	146.0	137.7	(8.3)	(5.7)%	(Yen/AUD) at the end of December	89.57	96.94
Transmission / Transformation	49.5	48.5	(1.0)	(2.0)%	(THB/USD) at the end of December	34.56	34.22
Overseas Business <sup>*2</sup>	277.5	259.2	(18.2)	(6.6)%			
Other Business <sup>*3</sup>	146.4	99.2	(47.2)	(32.2)%			

\*1 Hydroelectric, wind and geothermal power

\*2 Sales for the overseas business segment (Sales from overseas consolidated subsidiaries and overseas consulting business, etc.)

\*3 "Other Business" is composed of "Electric Power-Related Business" segment and "Other Business" segment. See Appendix [P.22](#) for details

# FY2023 Earnings Results (Main Factors for Change)



\* Gross margin of electric power business (Domestic) : Domestic electric power business revenue (hydro, thermal, wind and other)-fuel costs, etc.

\*1 Earnings forecast released on October 31, 2023



# Breakdown of Increase / Decrease Factors of Consolidated Ordinary Profit (Year on Year)

(Unit: billion yen)

## 1. Gross margin of electric power business (Domestic) (49.5)

- Decrease in gross profit from JEPX sales due to lower JEPX prices and resource price impact, etc.
- Increase in unplanned outages
- Rebound decrease in fuel balance
- Decrease in revenue of renewable energy

(Reference) JEPX average price (Apr-Mar)  
FY2022: approx. 20 yen/kWh  
FY2023: approx. 10 yen/kWh

## 2. Other expenses +11.0

- Decrease in facilities maintenance costs...+4.0
- Increase in labor costs...(4.5)
- Decrease in other expenses...+11.5
- Decrease in waste disposal costs, etc.

## 3. Profit of overseas business subsidiaries +3.5

- Jackson Generation Power Plant in North America ±0.0  
Decrease in market selling price  
Increase in facilities maintenance costs due to start of operation, rebound in penalty in capacity market, etc.
- Power generation projects in Thailand +3.5  
Increase in energy margin, and foreign exchange rate impact, etc.

## 4. Profit of other subsidiaries

**/consolidated adjustment, etc. (43.5)**

- Decrease in profit from a subsidiary in Australia that owns coal mining interests due to the fall of coal prices

(Reference) Australian thermal coal spot price (Jan-Dec)  
FY2022: approx.US\$360/t  
FY2023: approx.US\$170/t

## 5. Share of profit of entities accounted for using equity method +15.5

- Overseas...+16.5  
Gain on sale of land in North America, etc.
- Domestic...(1.0)

## 6. Other non-operating items +5.5

- Increase in financing costs
- Gain on sales of fixed assets and securities, etc.
- Elimination of previous year's losses\*

\*Losses recorded due to disposal of construction materials of Ohma nuclear power project

## 7. Foreign exchange gains and losses +5.0

- Foreign exchange valuation gains on U.S. dollar denominated debt in the Thailand consolidation project +4.5

Foreign exchange rate(THB/USD)

	At the end of December of the previous year	At the end of Dec.*
FY2022	33.42	34.56
FY2023	34.56	34.22

\* The fiscal year of overseas subsidiaries is from January to December

- Increase in foreign exchange valuation gains on U.S. dollar denominated receivables, etc. +0.5

# Consolidated: Revenue / Expenditure Comparison

(Unit: billion yen)

	FY2022 (Apr.-Mar.)	FY2023 (Apr.-Mar.)	Year-on-year change	Main factors for change
<b>Operating Revenue</b>	<b>1,841.9</b>	<b>1,257.9</b>	<b>(583.9)</b>	
Electric power business	1,417.9	899.4	(518.4)	
Overseas business	277.5	259.2	(18.2)	
Other business	146.4	99.2	(47.2)	
<b>Operating Expenses</b>	<b>1,658.0</b>	<b>1,152.2</b>	<b>(505.7)</b>	Electric power business(479.5), Overseas business(21.8), Other business(4.3)
<b>Operating Profit</b>	<b>183.8</b>	<b>105.7</b>	<b>(78.1)</b>	
<b>Non-operating Revenue</b>	<b>24.7</b>	<b>49.5</b>	<b>24.7</b>	
Share of profit of entities accounted for using equity method	9.1	24.5	15.4	
Other	15.6	24.9	9.3	
<b>Non-operating Expenses</b>	<b>37.8</b>	<b>36.6</b>	<b>(1.1)</b>	
Interest expenses	27.3	30.9	3.5	
Other	10.4	5.7	(4.7)	
<b>Ordinary Profit</b>	<b>170.7</b>	<b>118.5</b>	<b>(52.2)</b>	Electric power business(32.6), Overseas business+21.6, Other business(41.1)
Total income taxes	51.7	33.8	(17.9)	
<b>Profit attributable to owners of parent</b>	<b>113.6</b>	<b>77.7</b>	<b>(35.9)</b>	

# Consolidated: Balance Sheet

(Unit: billion yen)

	FY2022 End of FY	FY2023 End of FY	Change from prior year end	Main factors for change
<b>Non-current Assets</b>	<b>2,701.3</b>	<b>2,785.4</b>	<b>84.1</b>	
Electric utility plant and equipment	1,065.5	1,092.6	27.1	
Overseas business facilities	447.2	463.4	16.2	
Other non-current assets	89.2	89.6	0.4	
Construction in progress	572.1	576.1	3.9	
Nuclear fuel	76.2	77.1	0.8	
Investments and other assets	451.0	486.5	35.4	Long-term investments +38.2 (Includes impact of foreign exchange revaluation+25.6)
<b>Current Assets</b>	<b>661.3</b>	<b>690.2</b>	<b>28.9</b>	
<b>Total Assets</b>	<b>3,362.6</b>	<b>3,475.7</b>	<b>113.0</b>	
Interest-bearing debt	1,885.8	1,867.0	(18.7)	Non-consolidated (14.3), Subsidiaries and others (4.4)
Other	284.1	275.6	(8.5)	
<b>Total Liabilities</b>	<b>2,169.9</b>	<b>2,142.6</b>	<b>(27.2)</b>	
Shareholders' equity	977.8	1,038.2	60.4	
Accumulated other comprehensive income	106.8	177.7	70.8	Foreign currency translation adjustment +40.4 Valuation difference on available-for-sale securities +12.4 Remeasurements of defined benefit plans+10.4 Deferred gains or losses on hedges+7.4
Non-controlling interests	108.0	117.1	9.0	
<b>Total Net Assets</b>	<b>1,192.7</b>	<b>1,333.0</b>	<b>140.3</b>	
D/E ratio (x)	1.7	1.5		
Shareholders' equity ratio	32.3%	35.0%		



## 2. Summary of FY2024 Earnings Forecast

# Summary of FY2024 Earnings Forecast

- Although improving income and expenditure by responding to changes in thermal power plant patterns, operating revenue and operating profit are expected to be decreased due to the impact of thermal power plant facilities troubles, such as Tachibanawan thermal power plant, etc. increase in other expenses, decrease in profit because of the fall of coal price at a subsidiary in Australia that owns coal mining interests, and rebound decrease in temporary profit, etc.

(Unit: billion yen)

Consolidated	FY2023 Result	FY2024 Forecast	Comparison with FY2023 Result	
Operating Revenue	1,257.9	1,155.0	(102.9)	(8.2)%
Operating Profit	105.7	64.0	(41.7)	(39.5)%
Ordinary Profit	118.5	62.0	(56.5)	(47.7)%
Profit attributable to owners of parent	77.7	42.0	(35.7)	(46.0)%
Non-consolidated	FY2023 Result	FY2024 Forecast	Comparison with FY2023 Result	
Operating Revenue	843.2	805.0	(38.2)	(4.5)%
Operating Profit	5.1	4.0	(1.1)	(22.2)%
Ordinary Profit	55.1	46.0	(9.1)	(16.6)%
Profit	52.3	45.0	(7.3)	(14.0)%

## Key Data & Earnings Forecasts by segment

- Power generation business : Although profitability of thermal power generation improved, decrease in profit due to the impact of the facility trouble and the increase in other expenses, etc.
- Transmission and Transformation business: Decrease in profit due to the increase of subcontracting costs, etc.
- Overseas business : Rebound decrease in temporary profit from share of profit of entities accounted for using equity method
- Electric Power-Related business & Other business : Decrease in profit due to the fall of coal prices at a subsidiary in Australia that owns coal mining interests

(Unit: billion yen)

Sales by segment	FY2023 Result	FY2024 Forecast	Comparison with FY2023 Result	
Power generation business	855.6	824.0	(31.6)	(3.7)%
Transmission and Transformation business	48.9	50.0	1.1	2.1 %
Overseas business	259.2	225.0	(34.2)	(13.2)%
Electric Power-Related business & Other business	94.1	56.0	(38.1)	(40.5)%

\*Sales figures for external customers.

Ordinary profit by segment	FY2023 Result	FY2024 Forecast	Comparison with FY2023 Result	
Power generation business	20.3	16.5	(3.8)	(19.0)%
Transmission and Transformation business	7.3	3.0	(4.3)	(58.9)%
Overseas business	44.3	32.0	(12.3)	(27.8)%
Electric Power-Related business & Other business	47.3	10.5	(36.8)	(77.8)%

\*Figures before elimination of inter-segment transactions.

	FY2023 Result	FY2024 Forecast	Comparison with FY2023 Result	
Electric Power Sales (TWh)				
Power generation business	60.3	65.6	5.2	8.7 %
Hydroelectric Power	9.0	9.2	0.1	2.1 %
Thermal Power	38.5	40.5	1.9	5.1 %
Wind Power	1.1	1.4	0.2	21.8 %
Other <sup>*1</sup>	11.6	14.5	2.8	24.2 %
Overseas business <sup>*2</sup>	19.8	16.9	(2.9)	(14.9)%

	FY2023 Result	FY2024 Forecast
Water supply rate	96%	100%
Load factor	55%	59%
<b>Foreign exchange rate</b>		
(Yen/USD) at the end of December	141.83	145.00
(Yen/THB) at the end of December	4.13	4.00
(Yen/AUD) at the end of December	96.94	95.00

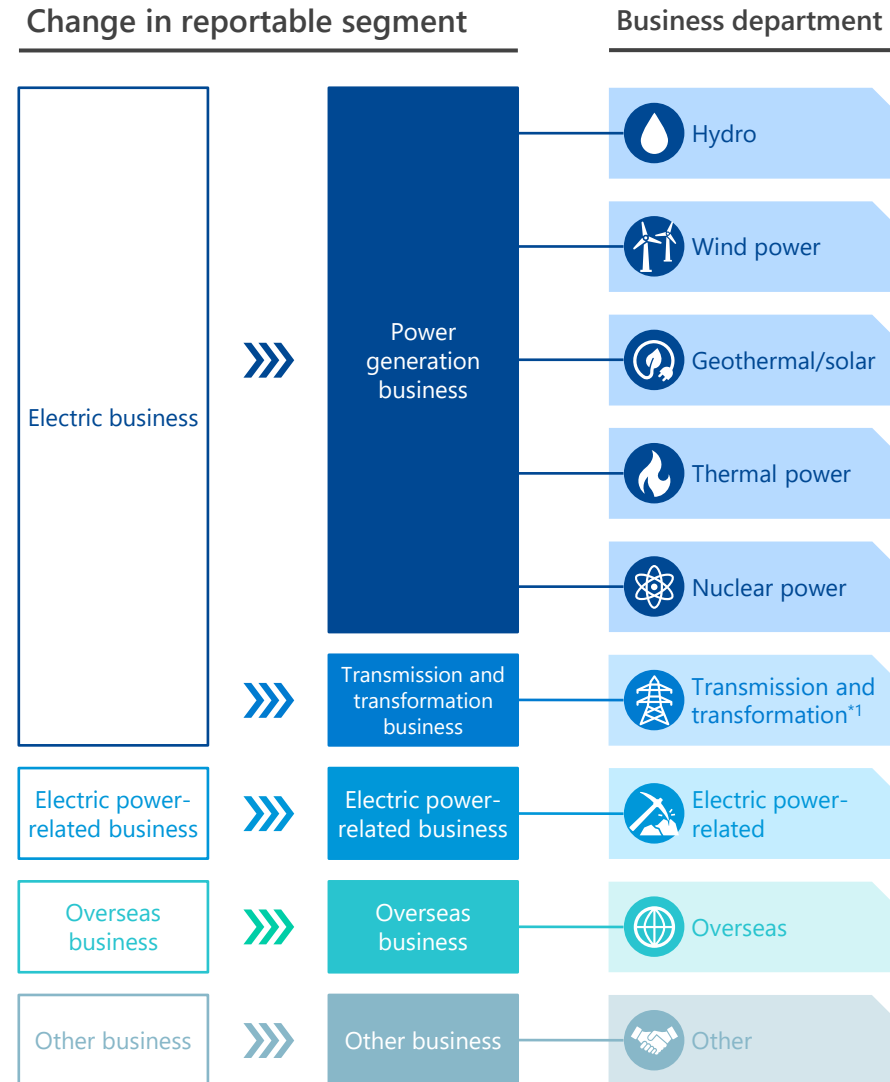
\*1 Electric power sales volume of electricity procured from wholesale electricity market, etc.

\*2 Electric power sales volume of overseas consolidated subsidiaries (Electric power sales volume of equity method affiliated companies is not included)



## (Reference) Change of business segment (from the year ending 31 March 2025)

- Separation of 'Electric power business' into 'Power generation business' and 'Transmission and transformation business'.
- In 'Electric power-related business', subsidiaries involved in power generation and maintenance and operation are integrated into 'Power generation business' segment.



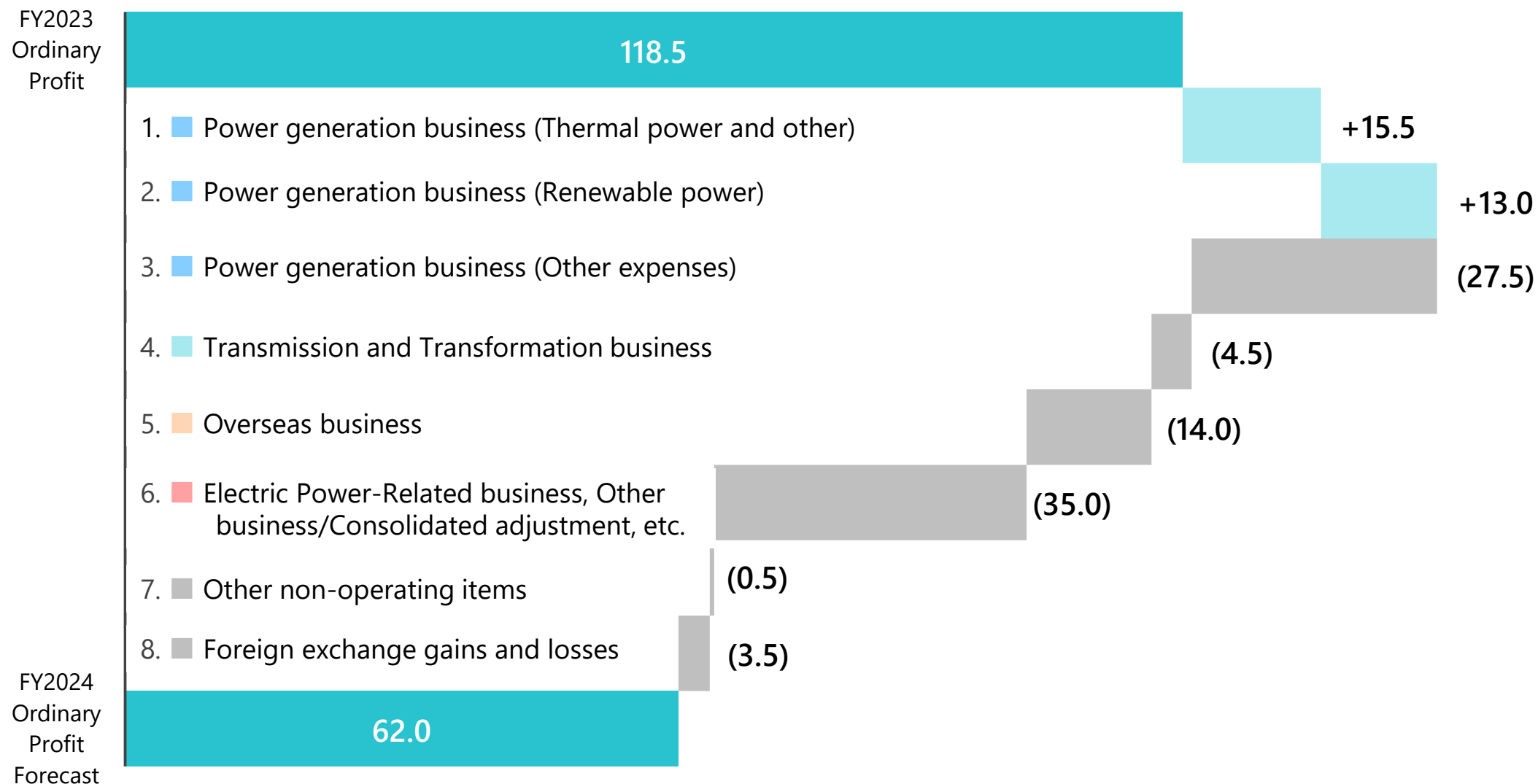
### Old segment

Electric power business	Engaged in the power generation business utilizing power plants owned by J-POWER Group companies including hydroelectric, thermal and wind, and the sale of electricity procured from the wholesale power trading market. Also engaged in transmission business with power transmission and transformation facilities owned by a subsidiary, providing transmission services to nine transmission and distribution companies excluding The Okinawa Electric Power Company.
Electric power-related business	Complements and contributes to the smooth and efficient implementation of electric power business
Overseas business	Engaged in overseas power generation business and businesses related to this
Other business	Consists of various business activities including the sale of coal that fully utilize J-POWER Group's management resources and know-how

### New segment

Power generation business	Engaged in the power generation business utilizing power plants owned by J-POWER Group companies including hydroelectric, thermal and wind, <b>facilities maintenance and operation business</b> , and the sale of electricity procured from the wholesale power trading market.
<b>Transmission and transformation business</b>	Engaged in transmission business with power Transmission and transformation facilities owned by a subsidiary, providing transmission services to nine transmission and distribution companies excluding The Okinawa Electric Power Company.
Electric power-related business	Complements and contributes to the smooth and efficient implementation of Power generation business and Transmission and Transformation business
Overseas business	Engaged in Overseas power generation business and businesses related to this
Other business	Consists of various business activities including the sale of coal that fully utilize J-POWER Group's management resources and know-how

# FY2024 Earnings Forecast (Main Factors for Change)



Corresponding segments

■ Power generation business 
 ■ Transmission and Transformation business 
 ■ Overseas business 
 ■ Electric Power-Related business & Other business 
 ■ Contains multiple segments

# Breakdown of Increase / Decrease Factors of Consolidated Ordinary Profit Forecast

(Unit: billion yen)

## 1. Power generation business (Thermal power and other) +15.5

- Improve profits by responding to changes in in the operational pattern of thermal power plants
- Increase in unplanned outages (Tachibanawan thermal power plant, etc.)
- Effect of capacity market and power generation charge

(Reference) JEPX average price (Apr-Mar)  
FY2023: approx. 10 yen/kWh  
FY2024(forecast): approx. 10 yen/kWh

## 2. Power generation business (Renewable power) +13.0

- Increase in revenue of renewable energy

## 3. Power generation business (Other expenses) (27.5)

- Increase in facilities maintenance cost (20.0)  
Tachibanawan thermal power plant, etc.
- Promotion of GX/DX (5.0)
- Decrease in labour costs +7.0  
Decrease due to amortisation of actuarial differences in retirement benefits, etc.
- Other (9.5)  
Increase in depreciation cost, etc.

## 4. Transmission and Transformation business (4.5)

- Increase in subcontracting costs and loss on disposal of fixed assets

1. Power generation business (Thermal power and other) :  
(Thermal power and other revenue)-(Fuel cost+Cost of purchasing electricity from other companies+Waste disposal costs, etc.)+Share of profit and loss of entities accounted for using equity method of Thermal power  
2. Power generation business (Renewable power) :  
(Hydropower/Geothermal power/Wind power electricity sales revenue+Non-fossil value sales revenue)-Cost of purchasing electricity from other companies+Share of profit and loss of entities accounted for using equity method of Renewable power  
3. Power generation business (Other expenses) :  
Facilities maintenance costs, Labour costs, other expenses,+Consolidated subsidiaries on operation and maintenance of facilities

## 5. Overseas business (14.0)

- Jackson Generation Power Plant in US +3.0  
Increase in market selling price
- Consolidated subsidiary projects in Thailand (3.0)  
Increase in facilities maintenance cost  
Foreign exchange effect (JPY appreciation),etc.
- Share of profit of entities accounted for using equity method (14.0)  
Rebound loss of gain on sale of land in North America, etc.

## 6. Electric Power-Related business, Other business/Consolidated adjustment, etc. (35.0)

- Decrease in profit from a subsidiary in Australia that owns coal mining interests due to the fall of coal prices

(Reference) Australian thermal coal spot price (Jan-Dec)  
FY2023: approx.US\$170/t  
FY2024(forecast): approx.US\$120/t

## 7. Other non-operating items (0.5)

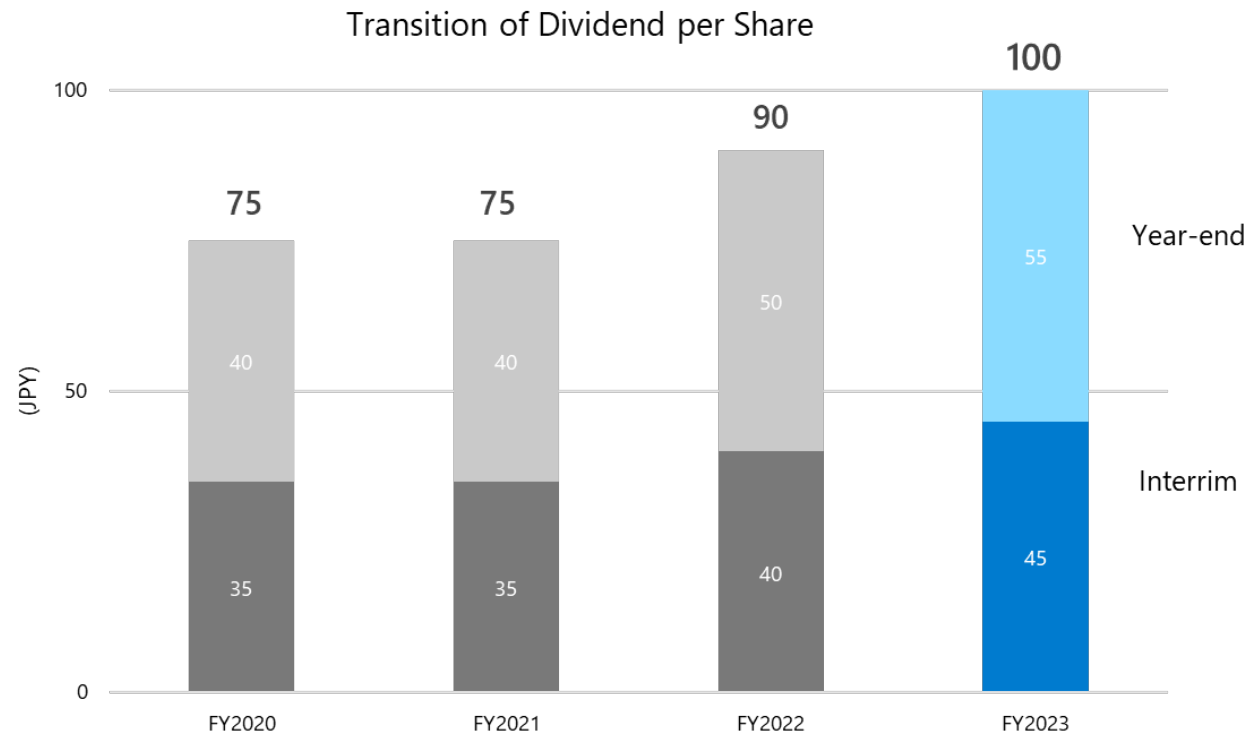
- Gain on sales of fixed assets
- Rebound loss in gain on sales of securities

## 8. Foreign exchange gains and losses (3.5)

- Foreign exchange gains in the previous fiscal year

# Shareholder Returns

- Achievement of the medium-term management plan FY2021-2023 target of 90 billion yen in ordinary profit.
- Plans to pay a year-end dividend of 55 yen per share, for an annual dividend of 100 yen per share (an increase of 10 yen per share).
- Continued in FY2024 with a minimum limit of 100 yen/share.



	Cash dividends per share		
	Interim	Year end	Annual
FY2013	35yen	35yen	70yen
FY2014	35yen	35yen	70yen
FY2015	35yen	35yen	70yen
FY2016	35yen	35yen	70yen
FY2017	35yen	40yen	75yen
FY2018	35yen	40yen	75yen
FY2019	35yen	40yen	75yen
FY2020	35yen	40yen	75yen
FY2021	35yen	40yen	75yen
FY2022	40yen	50yen	90yen
FY2023	45yen	55yen	100yen
FY2024	50yen (forecast)	50yen (forecast)	100yen (forecast)

The company strives to enhance stable and continuous returns to shareholders in line with a consolidated pay-out ratio of around 30%, disregarding factors that cause short-term fluctuations of profit.

## Appendix



# (1) Financial Data Contents

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# (1) -1. Consolidated: Revenues and Expenses

(Unit: 100 million yen)

	FY2019	FY2020	FY2021	FY2022	FY2023
<b>Operating revenue</b>	<b>9,137</b>	<b>9,091</b>	<b>10,846</b>	<b>18,419</b>	<b>12,579</b>
Electric utility operating revenue	6,841	7,313	8,764	14,179	8,994
Overseas business operating revenue	1,790	1,380	1,451	2,775	2,592
Other business operating revenue	505	397	630	1,464	992
<b>Operating expenses</b>	<b>8,301</b>	<b>8,313</b>	<b>9,976</b>	<b>16,580</b>	<b>11,522</b>
<b>Operating profit</b>	<b>836</b>	<b>777</b>	<b>869</b>	<b>1,838</b>	<b>1,057</b>
<b>Non-operating income</b>	<b>265</b>	<b>112</b>	<b>225</b>	<b>247</b>	<b>495</b>
Share of profit of entities accounted for using equity method	113	27	142	91	245
Foreign exchange gains	74	6	-	-	36
Other	77	77	82	156	213
<b>Non-operating expenses</b>	<b>320</b>	<b>280</b>	<b>366</b>	<b>378</b>	<b>366</b>
Interest expenses	262	237	224	273	309
Foreign exchange losses	-	-	75	11	-
Other	57	43	66	93	57
<b>Ordinary profit</b>	<b>780</b>	<b>609</b>	<b>728</b>	<b>1,707</b>	<b>1,185</b>
Extraordinary income	-	94	-	-	-
Extraordinary losses	124	57	-	-	-
<b>Profit attributable to owners of parent</b>	<b>422</b>	<b>223</b>	<b>696</b>	<b>1,136</b>	<b>777</b>

## (1) -2. Consolidated: Cash Flow

(Unit: 100 million yen)

	FY2019	FY2020	FY2021	FY2022	FY2023
<b>Operating activities</b>	<b>1,592</b>	<b>1,679</b>	<b>1,283</b>	<b>1,558</b>	<b>2,540</b>
Profit before income taxes	655	646	728	1,707	1,185
Depreciation	830	964	969	1,076	1,103
Share of (profit) loss of entities accounted for using equity method	(113)	(27)	(142)	(91)	(245)
<b>Investing activities</b>	<b>(1,617)</b>	<b>(1,432)</b>	<b>(1,788)</b>	<b>(1,508)</b>	<b>(1,619)</b>
Purchase of non-current assets	(1,495)	(1,592)	(1,352)	(1,448)	(1,158)
Investments and loan advances	(109)	(25)	(497)	(78)	(93)
<b>Financing activities</b>	<b>(277)</b>	<b>70</b>	<b>840</b>	<b>960</b>	<b>(658)</b>
<b>Free cash flow</b>	<b>(24)</b>	<b>246</b>	<b>(504)</b>	<b>49</b>	<b>920</b>

# (1) -3. Consolidated: Segment Information

(Unit: 100 million yen)

		FY2019	FY2020	FY2021	FY2022	FY2023	YoY
Electric power	Sales	6,860	7,334	8,788	14,202	9,018	(5,184)
	Ordinary profit	274	190	266	545	219	(326)
Electric power-related	Sales	4,005	3,741	2,439	3,217	2,754	(462)
	Ordinary profit	185	122	258	928	533	(394)
Overseas	Sales	1,790	1,380	1,451	2,775	2,592	(182)
	Ordinary profit	339	308	220	226	443	216
Other	Sales	221	184	210	293	172	(120)
	Ordinary profit	5	10	12	18	1	(16)
Subtotal	Sales	12,878	12,641	12,889	20,489	14,538	(5,950)
	Ordinary profit	805	633	757	1,719	1,198	(521)
Elimination*	Sales	(3,740)	(3,550)	(2,043)	(2,069)	(1,958)	111
	Ordinary profit	(24)	(24)	(29)	(11)	(12)	(1)
Consolidated	Sales	9,137	9,091	10,846	18,419	12,579	(5,839)
	Ordinary profit	780	609	728	1,707	1,185	(522)

## "Electric Power Business"

Mainly J-POWER group's electric power generation business and transmission/ transformation business. The majority of consolidated revenue is derived from this segment.

## "Electric Power-Related business"

These focus on peripheral business essential for the operation of power plants and transmission facilities, such as designing, executing, inspecting and maintaining power facilities and importing and transporting coal. Intra-group transactions account for a large portion of this segment, such as Company's power plant maintenance, coal transportation activities.

## "Overseas business"

Overseas power generation business, overseas engineering and consulting business

## "Other business"

Diversified business such as telecommunication, environmental and the sale of coal

\* Elimination includes elimination of intersegment sales

# (1) -4. Consolidated: Key Ratios and Key Data

(Unit: 100 million yen)

	FY2019	FY2020	FY2021	FY2022	FY2023
<b>(PL)</b> Operating revenue	9,137	9,091	10,846	18,419	12,579
Operating profit	836	777	869	1,838	1,057
Ordinary profit	780	609	728	1,707	1,185
Profit attributable to owners of parent	422	223	696	1,136	777
<b>(BS)</b> Total assets	28,053	28,419	30,661	33,626	34,757
Construction in progress	6,471	5,882	6,765	5,721	5,761
Shareholders' equity	8,077	8,091	9,160	10,846	12,159
Net assets	8,573	8,536	9,641	11,927	13,330
Interest-bearing debt	16,484	16,646	17,864	18,858	18,670
<b>(CF)</b> Investing activities	(1,617)	(1,432)	(1,788)	(1,508)	(1,619)
Free cash flow	(24)	246	(504)	49	920
(Ref) CAPEX* <sup>1</sup>	(1,626)	(1,715)	(1,321)	(1,218)	(1,198)
(Ref) Depreciation	830	964	969	1,076	1,103
ROA (%)	2.8	2.2	2.5	5.3	3.5
ROA (ROA excl. Construction in progress) (%)	3.6	2.8	3.1	6.6	4.2
ROE (%)	5.3	2.8	8.1	11.4	6.8
EPS (¥)	230.96	121.85	380.70	621.50	425.31
BPS (¥)	4,412.84	4,420.39	5,004.31	5,931.68	6,649.11
Working assets ROIC (%)	-	-	-	-	4.5
Shareholders' equity ratio (%)	28.8	28.5	29.9	32.3	35.0
D/E ratio (x)	2.0	2.1	2.0	1.7	1.5
Number of shares issued* <sup>2</sup> (thousand)	183,048	183,048	183,048	182,861	182,869

\*Capital expenditure: Increase in tangible and intangible non-current assets

\*<sup>2</sup> Number of shares issued at the end of the fiscal year (excluding treasury stock)

# (1) -5. Non-consolidated: Revenues and Expenses

(Unit: 100 million yen)

	FY2019	FY2020	FY2021	FY2022	FY2023
<b>Operating revenue</b>	<b>5,712</b>	<b>5,899</b>	<b>7,900</b>	<b>13,707</b>	<b>8,432</b>
<b>Electric power business</b>	<b>5,638</b>	<b>5,838</b>	<b>7,810</b>	<b>13,533</b>	<b>8,359</b>
Sold power to retailers	-	-	6	11	2
Sold power to other suppliers	5,104	5,660	7,672	13,373	8,214
Other <sup>*</sup>	533	177	132	149	142
<b>Incidental business</b>	<b>74</b>	<b>61</b>	<b>89</b>	<b>173</b>	<b>73</b>
<b>Operating expenses</b>	<b>5,464</b>	<b>5,120</b>	<b>7,721</b>	<b>13,241</b>	<b>8,380</b>
<b>Electric power business</b>	<b>5,397</b>	<b>5,065</b>	<b>7,637</b>	<b>13,075</b>	<b>8,315</b>
Personnel expense	358	318	201	206	250
Amortization of the actuarial difference in retirement benefits	24	28	(70)	(75)	(39)
Fuel cost	2,332	1,937	2,985	7,621	4,228
Repair and maintenance cost	666	441	515	419	409
Depreciation	527	552	559	589	595
Other	1,512	1,814	3,375	4,238	2,831
<b>Incidental business</b>	<b>66</b>	<b>55</b>	<b>84</b>	<b>166</b>	<b>65</b>
<b>Operating profit</b>	<b>248</b>	<b>778</b>	<b>178</b>	<b>465</b>	<b>51</b>

<sup>\*1</sup> "Other" shows transmission revenue and other electricity revenue.

Due to the split of transmission business in April, 2020, "Other" from FY2020 shows only other electricity revenue

# (1) -5. Non-consolidated: Revenues and Expenses

(Unit: 100 million yen)

【Amortization of the actuarial gain or loss】	FY2019	FY2020	FY2021	FY2022	FY2023
Opening balance (a)	35	42	(103)	(109)	(58)
Amortization* (b)	24	28	(70)	(75)	(39)
Amount accrued for the current year (c)	31	(116)	(77)	(23)	(164)
Closing balance (d)=(a)-(b)+(c)	42	(103)	(109)	(58)	(183)

【Repair and maintenance cost】	FY2019	FY2020	FY2021	FY2022	FY2023
Hydroelectric	129	134	122	122	113
Thermal	472	290	374	278	276
Renewable and others	-	-	-	-	1
Transmission	48	-	-	-	-
Others	16	16	18	18	18
Total	666	441	515	419	409

【Depreciation and amortization cost】	FY2019	FY2020	FY2021	FY2022	FY2023
Hydroelectric	147	155	159	170	170
Thermal	239	356	357	376	370
Renewable and others	-	-	-	0	16
Transmission	102	-	-	-	-
Others	37	40	42	41	38
Total	527	552	559	589	595

\* Actuarial differences is amortized by the declining-balance method over two years from the year following the year in which they occurred.



# (1) -6. Non-consolidated: Balance Sheet

	(Unit: million yen)	
	FY2022 End of FY	FY2023 End of FY
<b>Assets</b>		
Non-current assets	2,139,352	2,163,426
Electric utility plant and equipment	844,678	854,179
Hydroelectric power production facilities	391,674	396,572
Thermal power production facilities	392,875	377,962
Renewable power production and other facilities	-	18,902
Communication facilities	7,193	7,541
General facilities	52,935	53,200
Incidental business facilities	2,456	2,296
Non-operating facilities	1,043	798
Construction in progress	467,413	464,881
Construction in progress	467,413	464,881
Nuclear fuel	76,226	77,101
Nuclear fuel in processing	76,226	77,101
Investments and other assets	747,534	764,168
Long-term investments	54,701	68,693
Long-term investment for subsidiaries and associates	649,501	662,271
Long-term prepaid expenses	3,308	2,702
Deferred tax assets	40,023	30,500
Current assets	349,091	369,698
Cash and deposits	153,611	64,090
Accounts receivable-trade	49,911	39,468
Other accounts receivable	6,396	1,282
Short-term investments	-	149,992
Supplies	91,096	58,176
Prepaid expenses	1,575	1,941
Short-term receivables from subsidiaries and associates	10,995	12,032
Other current assets	35,503	42,714
<b>Total assets</b>	<b>2,488,443</b>	<b>2,533,125</b>

Note) For consolidated balance sheet, please refer to the Financial Results disclosed on May 9, 2024

	(Unit: million yen)	
	FY2022 End of FY	FY2023 End of FY
<b>Liabilities</b>		
Non-current liabilities	1,420,629	1,414,420
Bonds payable	772,595	727,596
Long-term borrowings	601,887	643,612
Long-term accrued liabilities	5,849	5,887
Lease liabilities	80	42
Long-term debt to subsidiaries and associates	2,101	1,925
Provision for retirement benefits	30,114	26,547
Asset retirement obligations	6,383	6,339
Other non-current liabilities	1,617	2,469
Current liabilities	295,372	293,018
Current portion of non-current liabilities	184,399	172,001
Short-term borrowings	7,950	7,950
Accounts payable-trade	7,991	8,452
Accounts payable-other	7,445	11,357
Accrued expenses	11,728	12,552
Accrued taxes	9,849	11,374
Deposits received	408	575
Short-term debt to subsidiaries and associates	56,083	67,103
Other advances	578	1,334
Other current liabilities	8,937	315
<b>Total liabilities</b>	<b>1,716,002</b>	<b>1,707,438</b>
<b>Net assets</b>		
Shareholders' equity	764,312	799,280
Share capital	180,502	180,502
Capital surplus	109,904	109,904
Legal capital surplus	109,904	109,904
Retained earnings	474,283	509,236
Legal retained earnings	6,029	6,029
Other retained earnings	468,254	503,207
Reserve for special disaster	82	79
Exchange-fluctuation preparation reserve	1,960	1,960
General reserve	392,861	432,861
Retained earnings brought forward	73,350	68,305
Treasury shares	(378)	(362)
Valuation and translation adjustments	8,129	26,406
Valuation difference on available-for-sale securities	13,573	25,485
Deferred gains or losses on hedges	(5,444)	920
<b>Total net assets</b>	<b>772,441</b>	<b>825,687</b>
<b>Total liabilities and net assets</b>	<b>2,488,443</b>	<b>2,533,125</b>

# (1) -7. Non-consolidated: Statement of Income

	(Unit: million yen)	
	FY2022 (Apr.-Mar.)	FY2023 (Apr.-Mar.)
Operating revenue	1,370,724	843,229
Electric utility operating revenue	1,353,379	835,924
Sold power to retailers	1,168	253
Sold power to other suppliers	1,337,307	821,456
Other electricity revenue	14,904	14,213
Incidental business operating revenue	17,344	7,304
Operating revenue-consulting business	1,275	1,267
Operating revenue-coal sale business	14,917	4,911
Operating revenue-other businesses	1,150	1,125
Operating expenses	1,324,162	838,086
Electric utility operating expenses	1,307,562	831,527
Hydroelectric power production expenses	68,234	65,361
Thermal power production expenses	885,143	541,469
Internal combustion engine power production expenses	110	-
Renewable power production expenses	92	-
Renewable power production and other expenses	-	2,242
Purchased power from other suppliers	276,941	153,046
Selling expenses	1,769	1,730
Communicating expenses	4,674	4,726
General and administrative expenses	51,619	52,591
Expenses for third party's power transmission service	7,002	2,757
Enterprise tax	11,975	7,601
Incidental business operating expenses	16,600	6,558
Operating expenses-consulting business	895	887
Operating expenses-coal sale business	14,831	4,789
Operating expenses-other businesses	872	881
Operating profit	46,561	5,142

	(Unit: million yen)	
	FY2022 (Apr.-Mar.)	FY2023 (Apr.-Mar.)
Non-operating income	48,315	66,862
Financial revenue	38,528	54,684
Dividend income	34,559	50,052
Interest income	3,969	4,632
Non-operating revenue	9,786	12,177
Gain on sales of non-current assets	3,870	4,604
Miscellaneous revenue	5,916	7,572
Non-operating expenses	19,543	16,833
Financial expenses	11,726	12,335
Interest expenses	11,318	12,175
Bond issuance cost	407	159
Non-operating expenses	7,817	4,498
Loss on sales of non-current assets	629	14
Miscellaneous loss	7,187	4,483
Total ordinary revenue	1,419,039	910,091
Total ordinary expenses	1,343,706	854,919
Ordinary profit	75,333	55,171
Extraordinary income	3,795	-
Gain on liquidation of subsidiaries and associates	3,795	-
Extraordinary losses	6,009	-
Loss on valuation of shares of subsidiaries and associates	6,009	-
Profit before income taxes	73,119	55,171
Income taxes-current	3,769	28
Income taxes-deferred	9,251	2,800
Total income taxes	13,021	2,829
Profit	60,097	52,342

Note) For consolidated statement of income, please refer to the Financial Results disclosed on May 9, 2024

# Monthly Electricity Sales: Domestic Power Generation Business (Thermal Power)

## ► Apr. 2022 - Mar. 2023 Results (cumulative)

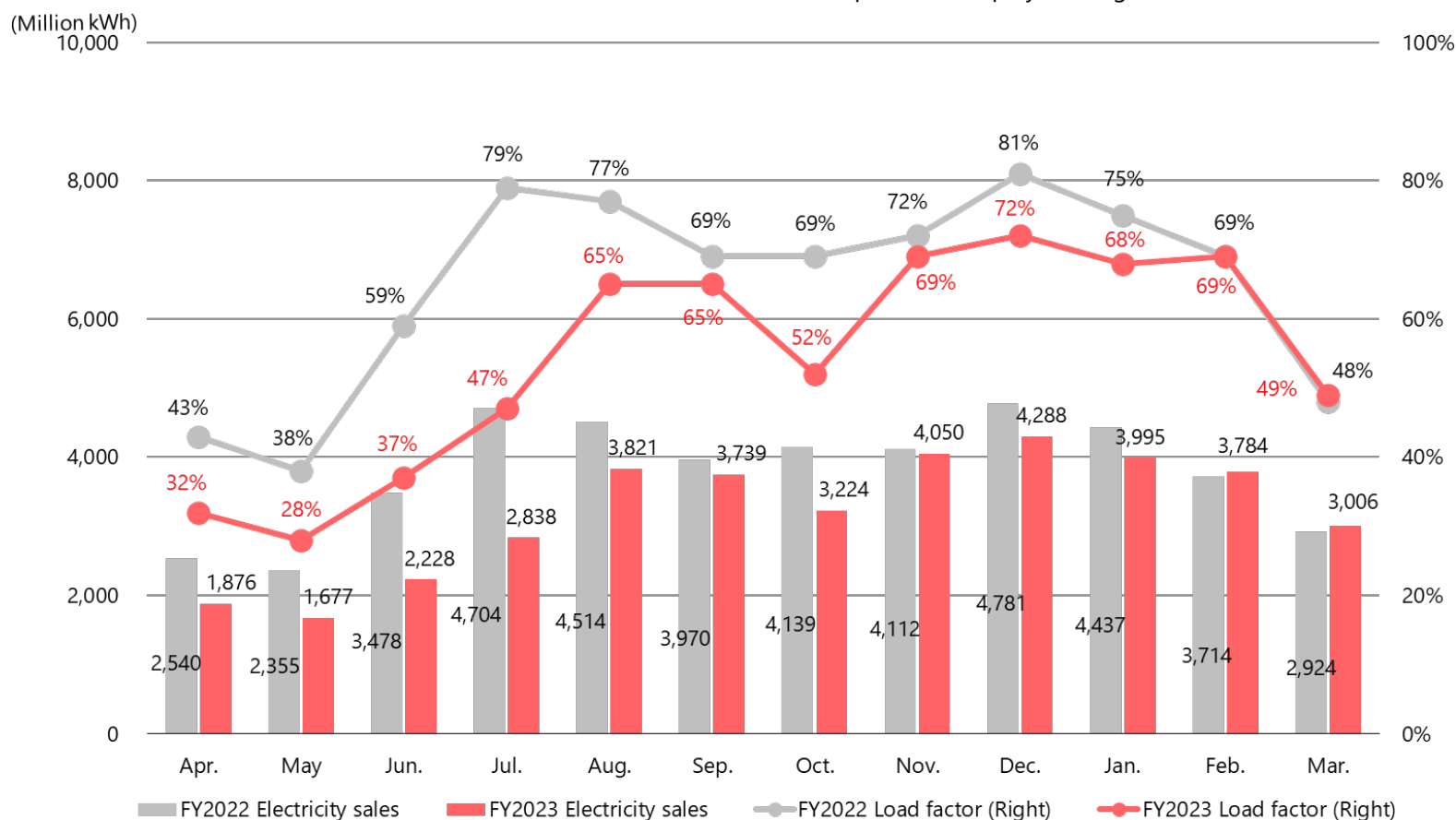
Load factor ⇒ 65%  
Electricity sales ⇒ 45.6 TWh

## ► Apr. 2023 - Mar. 2024 Results (cumulative)

Load factor ⇒ 55%  
Electricity sales ⇒ 38.5 TWh

\* Load factor of thermal power shows the results for non-consolidated only.

\* Proportion of equity holding is not taken into account.

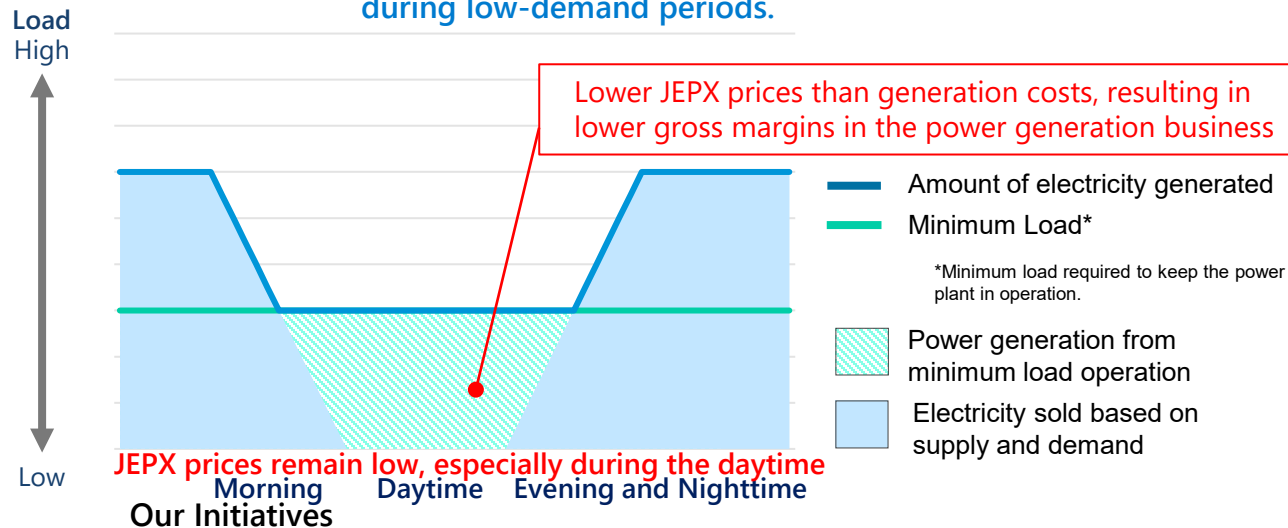


# Changes in the Operational Pattern of Thermal Power Plants and Impact on Gross margin of electric power business (Domestic) in the Current Fiscal Year

## Change in Operational Pattern

- Increased generation from renewable energy sources in western Japan and the restart of nuclear power plants have led to lower generation from thermal power plants, especially during the daytime during low-demand periods
- On the other hand, solar power generation decreases during the evening and nighttime hours, which must be supplemented by load-following middle power sources.
- In the case of our coal-fired thermal power plants, the output is reduced to the minimum load during the daytime, and the load is increased to meet the increase in demand mainly from the evening to nighttime hours.  
(The role of coal-fired power is changing from a traditional base power source to a middle power source.)

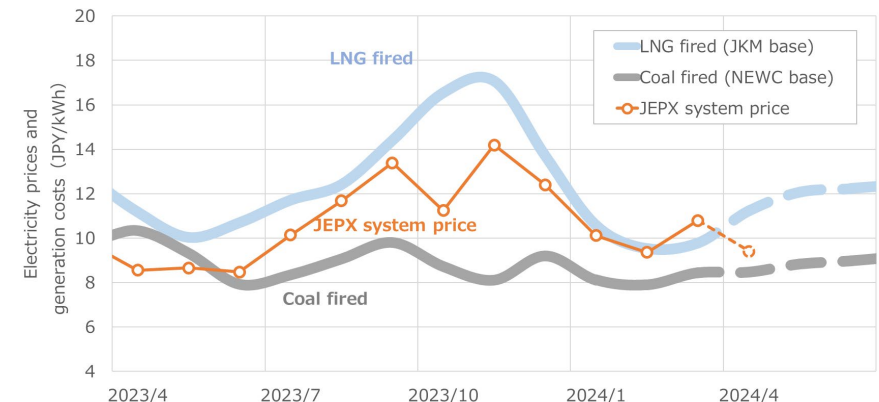
Image of the daily operating pattern of thermal power plants during low-demand periods.



- Implementing initiatives to improve operational performance, including lowering minimum loads.
- Operational shutdowns on a weekly basis, based on forecasts of electricity supply and demand and market prices.
- Implement initiatives to reduce fuel costs, such as coal blending

## Relation to resource price trends

Fluctuations in resource prices



- Fuel price difference between LNG and coal affects gross margins of coal-fired power generation
- From the end of 2022 to mid-2023, the fuel price difference between LNG and coal narrowed and reversed, making it difficult to secure gross margins for coal-fired power generation.
- Generation costs calculated from actual and futures prices after the second half of 2023 are LNG-fired > Coal-fired

# Monthly Electricity Sales: Domestic Power Generation Business (Hydroelectric Power)

## ▶ Apr. 2022 - Mar. 2023 Results (cumulative)

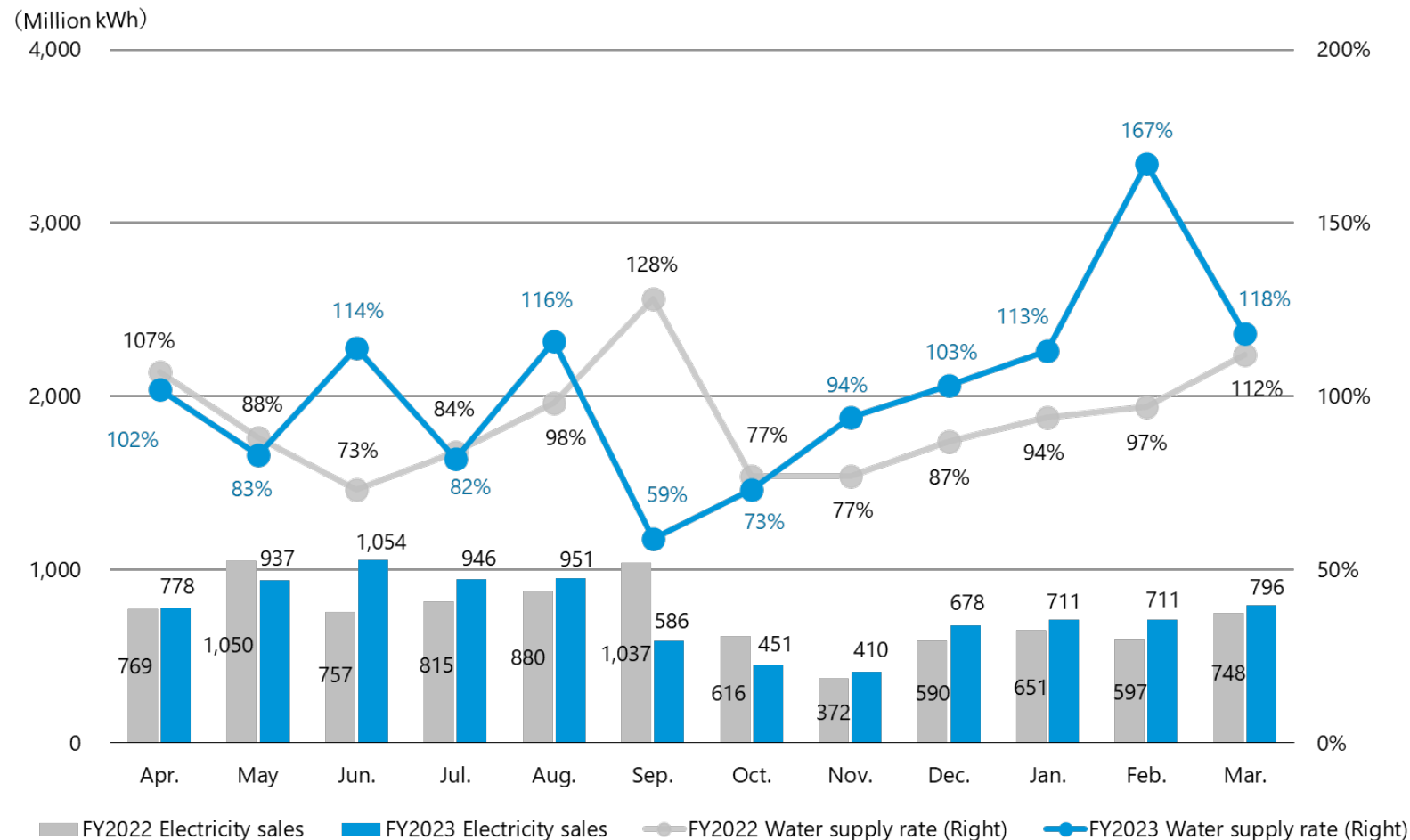
Water supply rate ⇒ 94%

Electricity sales ⇒ 8.8 TWh

## ▶ Apr. 2023 - Mar. 2024 Results (cumulative)

Water supply rate ⇒ 96%

Electricity sales ⇒ 9.0 TWh



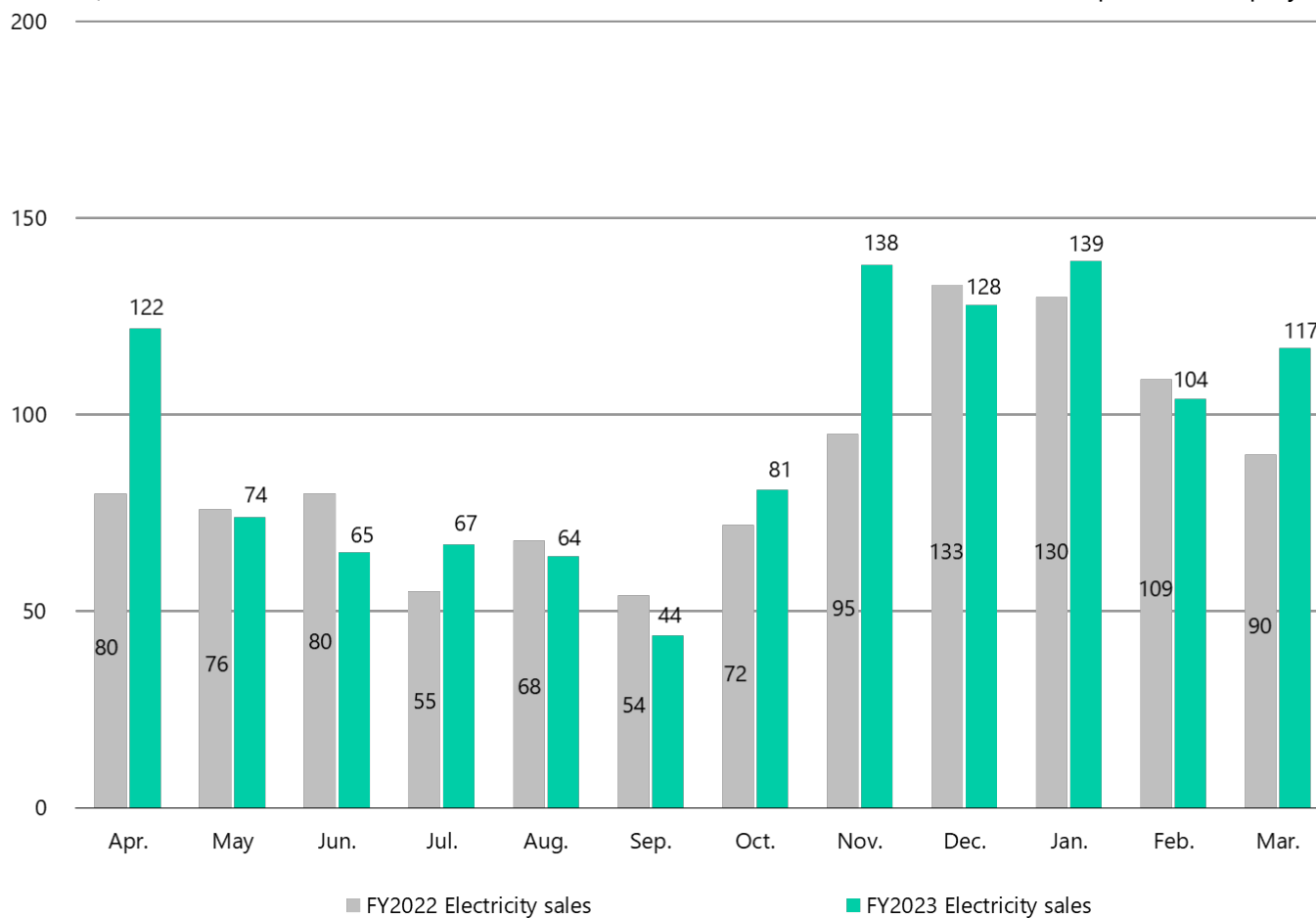
# Monthly Electricity Sales: Domestic Power Generation Business (Wind Power)

Apr. 2022 - Mar. 2023 Results (cumulative) ⇒ 1.04 TWh

Apr. 2023 - Mar. 2024 Results (cumulative) ⇒ 1.14 TWh

(Million kWh)

\* Proportion of equity holding is not taken into account.

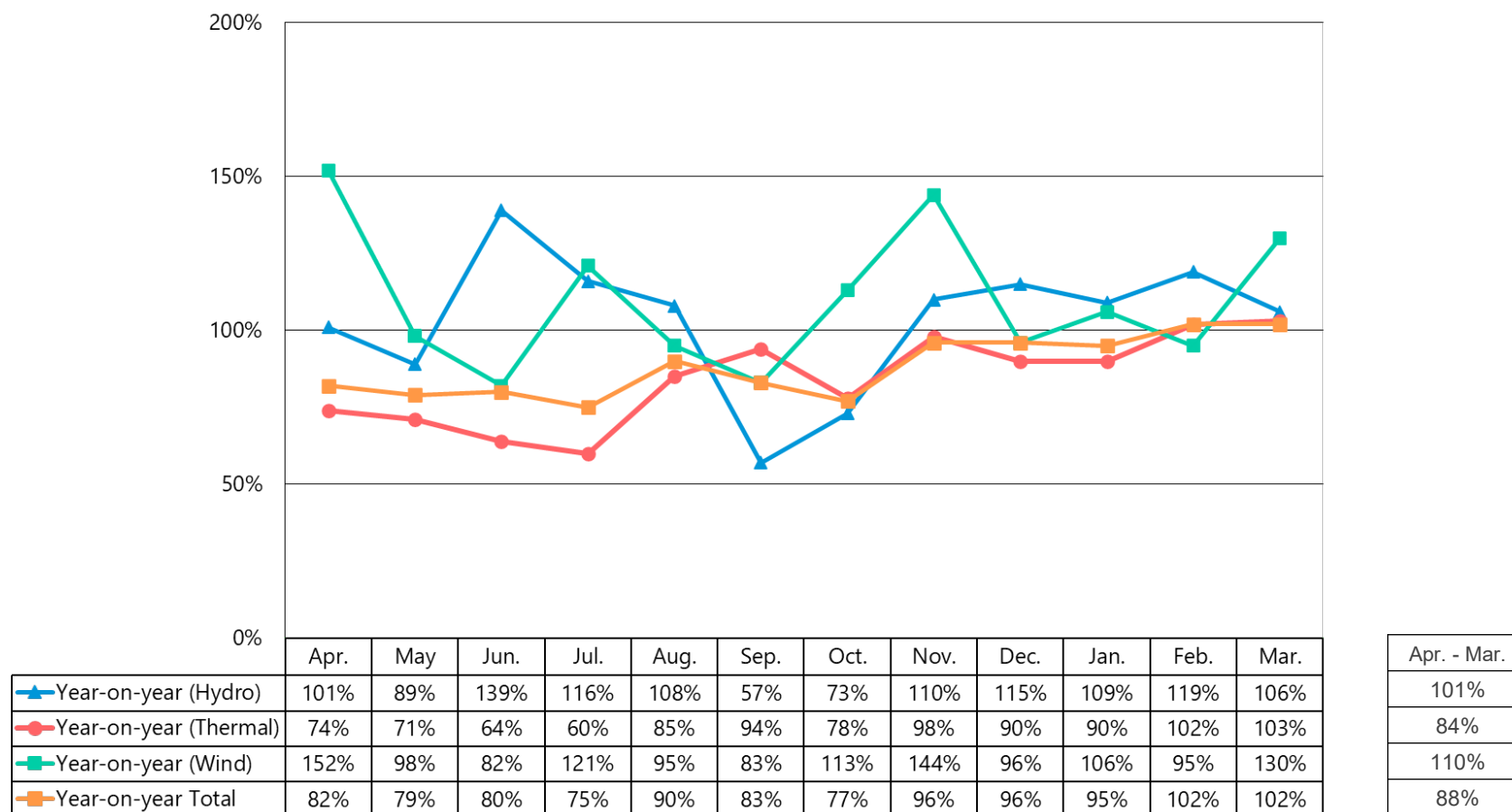




# Change in Monthly Electricity Sales: Domestic Power Generation Business

Apr. 2022 - Mar. 2023 Total Results (cumulative) ⇒ 68.4 TWh

Apr. 2023 - Mar. 2024 Total Results (cumulative) ⇒ 60.3 TWh



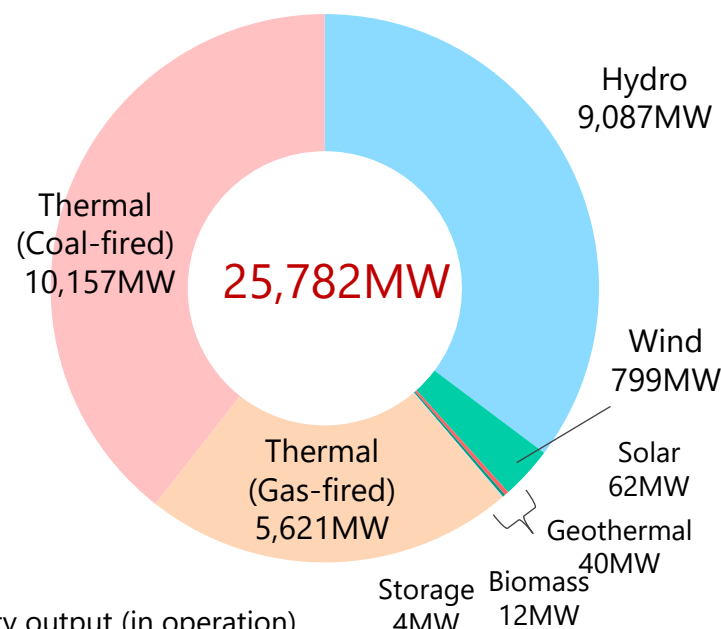
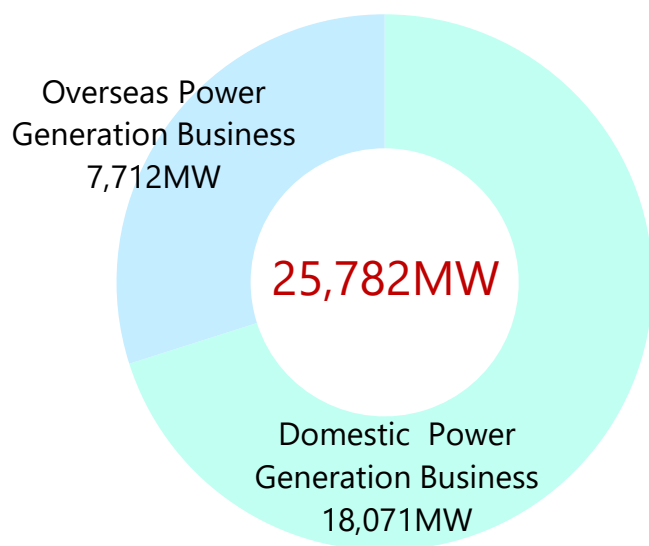
\* Total volume includes electricity sales volume of hydro, thermal, wind and electricity procured from wholesale electricity market, etc.

## (2) Business Data Contents

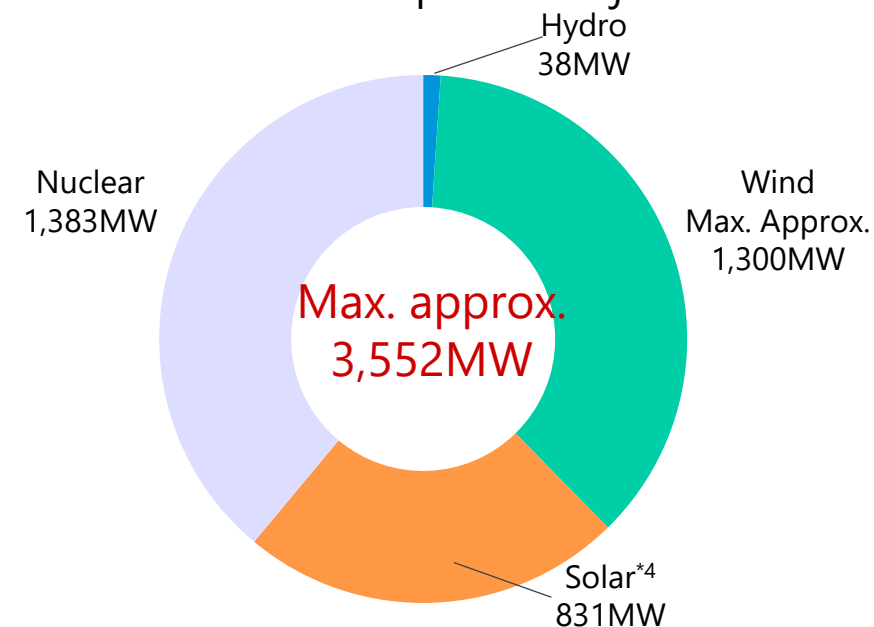
1.	Overview of J-POWER Group Power Generation Facilities	...	34	8.	Hydrogen production and use in existing thermal power plants GENESIS Matsushima	...	45
	Domestic Electric Power Business Facilities	...	35	9.	Establishment of joint venture for CCS in Japan	...	46
	Overseas Power Generation Projects	...	37	10.	Feasibility Study for Large-scale CCS in Japan	...	47
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3.	Expansion of Renewable Energy	...	40	12.	Overview of Overseas Projects under Development	...	49
4.	Renewable Energy Development Projects (Wind)	...	41	13.	Contributing to the enhancement of power networks	...	51
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6.	Upcycling to next-generation hydropower plants NEXUS Sakuma	...	43	15.	J-POWER Group's Green/Transition Finance Framework	...	53
7.	Ohma Nuclear Power Project	...	44				

# (2) -1. Overview of J-POWER Group Power Generation Facilities (As of March 31, 2024)

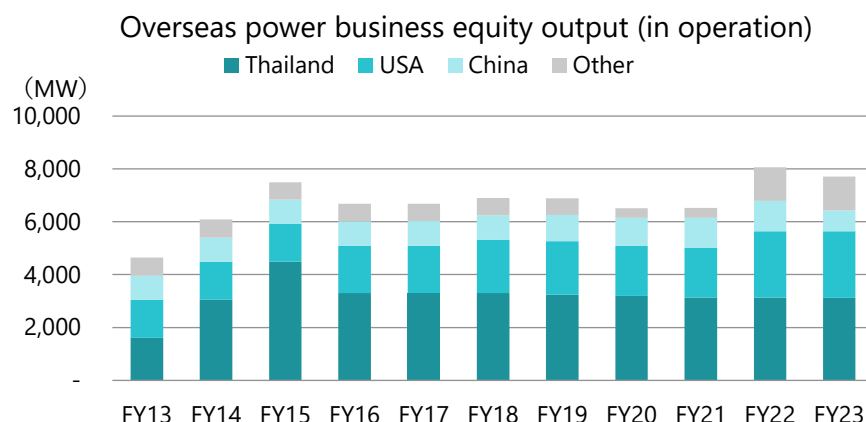
Consolidated Power Generation Capacity\*<sup>1</sup> (in operation)



Construction & Development Projects\*<sup>1</sup>\*<sup>2</sup>\*<sup>3</sup>



In addition to projects counted in the above graphs, domestic offshore wind projects outside of port areas are under preparation for development, one geothermal project is under research for development



\*<sup>1</sup> Capacity figures show owned capacity which takes into account of equity ratio \*<sup>2</sup> For replacement project, only change amount in capacity is counted

\*<sup>3</sup> In case capacity is to be determined, maximum capacity at environmental impact assessment is used \*<sup>4</sup> Bulli Creek's project (Australia) reflects only the first phase of construction.

## (2) -1. Domestic Electric Power Business Facilities (As of March 31, 2024)

Hydroelectric: 61 power plants, 8,577MW\*1

Power plant	Location	Beginning of operation	Capacity (MW)
Shimogo	Fukushima	1988	1,000
Okutadami	Fukushima	1958	560
Otori	Fukushima	1963	182
Tagokura	Fukushima	1959	400
Okukiyotsu	Niigata	1978	1,000
Okukiyotsu No.2	Niigata	1996	600
Numappara	Tochigi	1973	675
Shintoyone	Aichi	1972	1,125
Sakuma	Shizuoka	1956	350
Miboro	Gifu	1961	215
Nagano	Fukui	1968	220
Tedorigawa No.1	Ishikawa	1979	250
Ikehara	Nara	1964	350
Sendaigawa No.1	Kagoshima	1965	120
Other 47 power plants			

\*1 Including 3,275MW of pure pumped storage type.

\*2 Owned capacity: Output capacity of each facility is multiplied by J-POWER's investment ratio (equity ratio).

Wind Power: 24wind farms, 560MW\*2

Wind farm	Location	Ownership	Output capacity (MW)
Setana Osato	Hokkaido	100%	50.0
Kaminokuni	Hokkaido	100%	28.0
Green Power Kuzumaki	Iwate	100%	21.0
Kuzumaki No.2	Iwate	100%	44.6
Nikaho No.2	Akita	100%	41.4
Koriyama-Nunobiki Kogen	Fukushima	100%	66.0
Hiyama Kogen	Fukushima	100%	28.0
Irouzaki	Shizuoka	100%	34.0
Tahara Bayside	Aichi	100%	22.0
Awara-Kitagata	Fukui	100%	20.0
Minami Ehime	Ehime	100%	28.5
Other 13 wind farms			

## (2) -1. Domestic Electric Power Business Facilities (As of March 31, 2024)

Thermal (J-POWER): 7 power plants, 8,412MW

	Power plant (Location)		Beginning of operation	Capacity (MW)
Coal	Isogo (Kanagawa)	New No.1	2002	600
		New No.2	2009	600
	Takasago (Hyogo)	No.1	1968	250
		No.2	1969	250
	Takehara (Hiroshima)	New No.1	2020	600
		No.3	1983	700
	Tachibanawan (Tokushima)	No.1	2000	1,050
		No.2	2000	1,050
	Matsushima (Nagasaki)	No.1	1981	500
		No.2	1981	500
	Matsuura (Nagasaki)	No.1	1990	1,000
		No.2	1997	1,000
	Ishikawa Coal (Okinawa)	No.1	1986	156
		No.2	1987	156

Thermal (Others): 3 power plants, 481MW\*1

Power plant	Location	Fuel	Ownership	Output capacity (MW)
Tosa	Kochi	Coal	45%	167
Kashima	Ibaraki	Coal	50%	645
Osaki CoolGen	Hiroshima	Coal	50%	166

Geothermal: 3 power plants, 40MW\*1

Power plant	Location	Ownership	Output capacity (MW)
Onikobe	Miyagi	100%	15
Appi	Iwate	15%	15
Wasabisawa	Akita	50%	46

\*1 Owned capacity: Output capacity of each facility is multiplied by J-POWER's investment ratio (equity ratio).

## (2) -1. Overseas Power Generation Projects (As of March 31, 2024)

Project	Type	Output capacity (MW)	Ownership	Owned capacity (MW)	Power purchaser	Purchase agreement valid through
<b>Thailand (14 projects)</b>		<b>5,563</b>		<b>3,124</b>		
Roi-Et	Biomass (Chaff)	9	24.7%	2	EGAT	2024
EGCO Cogen	CCGT*2	74	20%	15	EGAT/ Companies in the industrial park etc.	Each company
Yala	Biomass (Rubber wood waste)	20	49%	10	EGAT	2031
Kaeng Khoi 2	CCGT*2	1,468	49%	719	EGAT	2033
Rooftop Solar	Solar	2	60%	1	Companies in the industrial park etc.	-
7 SPPs*1	CCGT*2	790	57.7%	456	EGAT/ Companies in the industrial park etc.	2038
Nong Saeng	CCGT*2	1,600	60%	960	EGAT	2039
U-Thai	CCGT*2	1,600	60%	960	EGAT	2040

\*1 7 SPP projects (KP1,KP2,TLC,NNK,NLL,CRN,NK2). J-POWER holds 45% stake in NLL and 60% stake in other 6 plants.

<b>United States (11 projects)</b>		<b>6,402</b>		<b>2,511</b>		
Tenaska Frontier	CCGT*2	830	31%	257	ERCOT market and MISO market	-
Elwood Energy	SCGT*3	1,350	50%	675	PJM market	-
Green Country	CCGT*2	795	50%	398	SPP market	-
Pinelawn	CCGT*2	80	50%	40	Long Island Power Authority	2025
Equus	SCGT*3	48	50%	24	NYISO market	-
Fluvanna	CCGT*2	885	15%	133	Shell Energy North America	2024
Edgewood	SCGT*3	88	50%	44	NYISO market	-
Shoreham	Jet Fuel (Simple cycle)	90	50%	45	NYISO market	-
Orange Grove	SCGT*3	96	50%	48	San Diego Gas & Electric	2035
Westmoreland	CCGT*2	940	25%	235	PJM market	-
Jackson generation	CCGT*2	1,200	51%	612	PJM market	-

## (2) -1. Overseas Power Generation Projects (As of March 31, 2024)

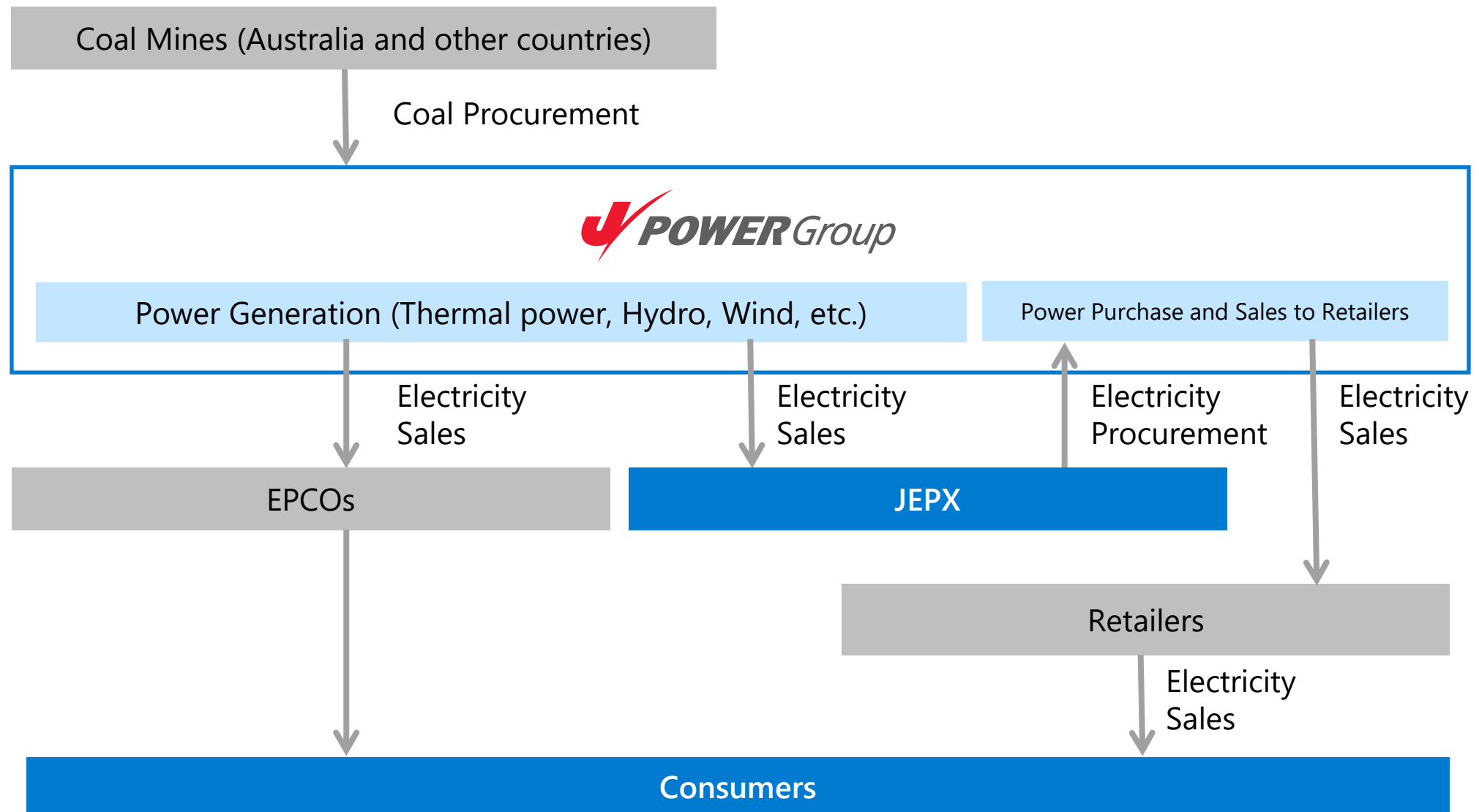
Project	Type	Output capacity (MW)	Ownership	Owned capacity (MW)	Power purchaser	Purchase agreement valid through
<b>China (3 projects)</b>		<b>10,108</b>		<b>798</b>		
Hanjiang (Xihe, Shuhe)	Hydro	450	27%	122	Shaanxi EPCO	1 year update * 1
Gemeng* 2	Wind, solar, pumping, coal-fired	9,658	7%	676	Shanxi EPCO	-
<b>Other countries (7 projects)</b>		<b>3,760</b>		<b>1,280</b>		
Triton Knoll (UK)	Offshore Wind	857	25%	214	Orsted	2037
Batang (Indonesia)	Coal-fired	2,000	34%	680	PLN	2047
CBK (3 projects) (Philippines)	Hydro / pumping	728	50%	364	Philippine Electric Power Corporation	2026
Lake Mainit Hydro (Philippines)	Hydro	25	40%	10	ANECO	2048
Kidston Stage 1 (Australia)	Solar	50	7.7%	4	NEM market	-
Gemaron Solar (Australia)	Solar	50	7.7%	4	NEM market	-
Bouldercombe (Australia)	Storage	50	7.7%	4	NEM market	-

\*1 Although the power sales contract is renewed for one year, in principle, continuous power sales during the operation period will be carried out according to the "Transmission Network Connection Management Agreement" separately concluded with the power transmission and distribution company at the provincial level.

\*2 Gemeng International Energy Co., Ltd. is an electric power company that owns 16 power generation companies.



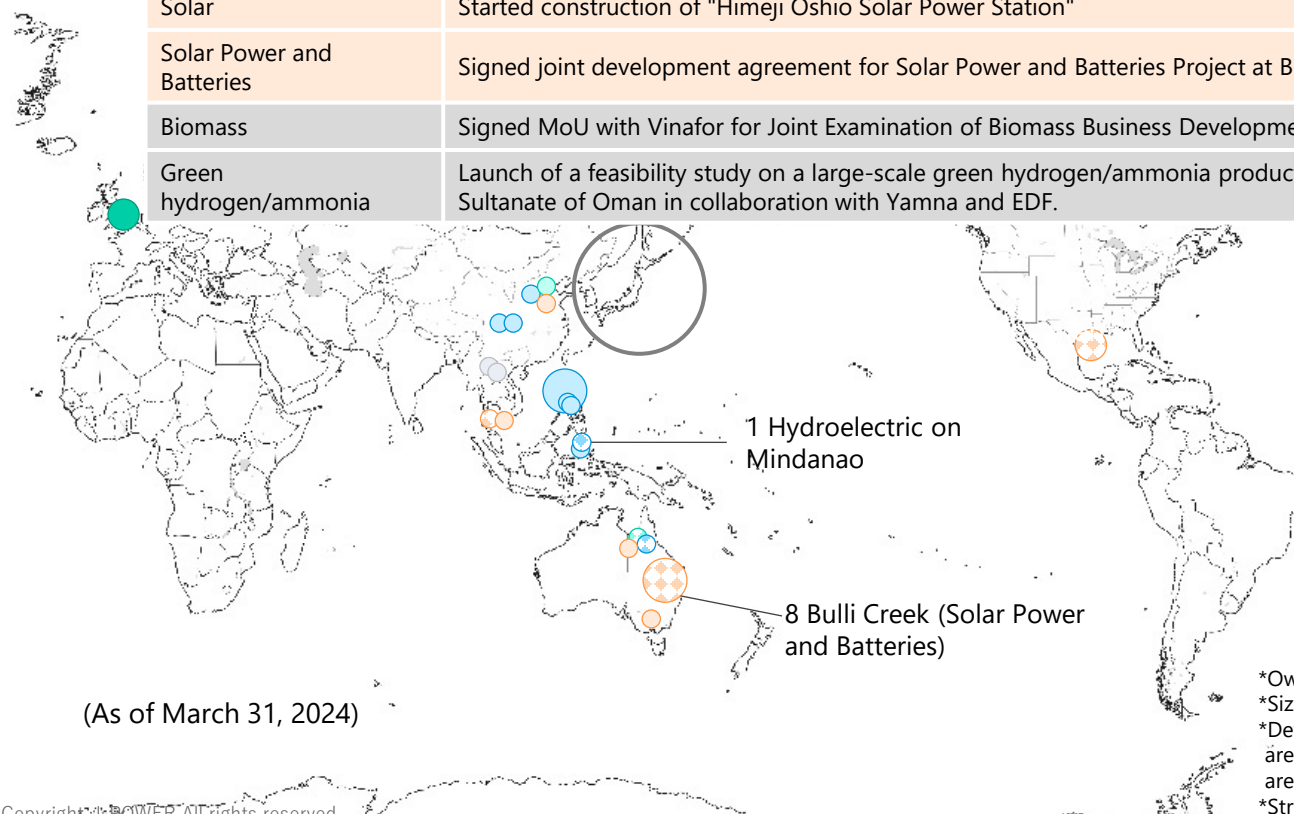
## (2) -2. Main Flow of Domestic Electricity Business



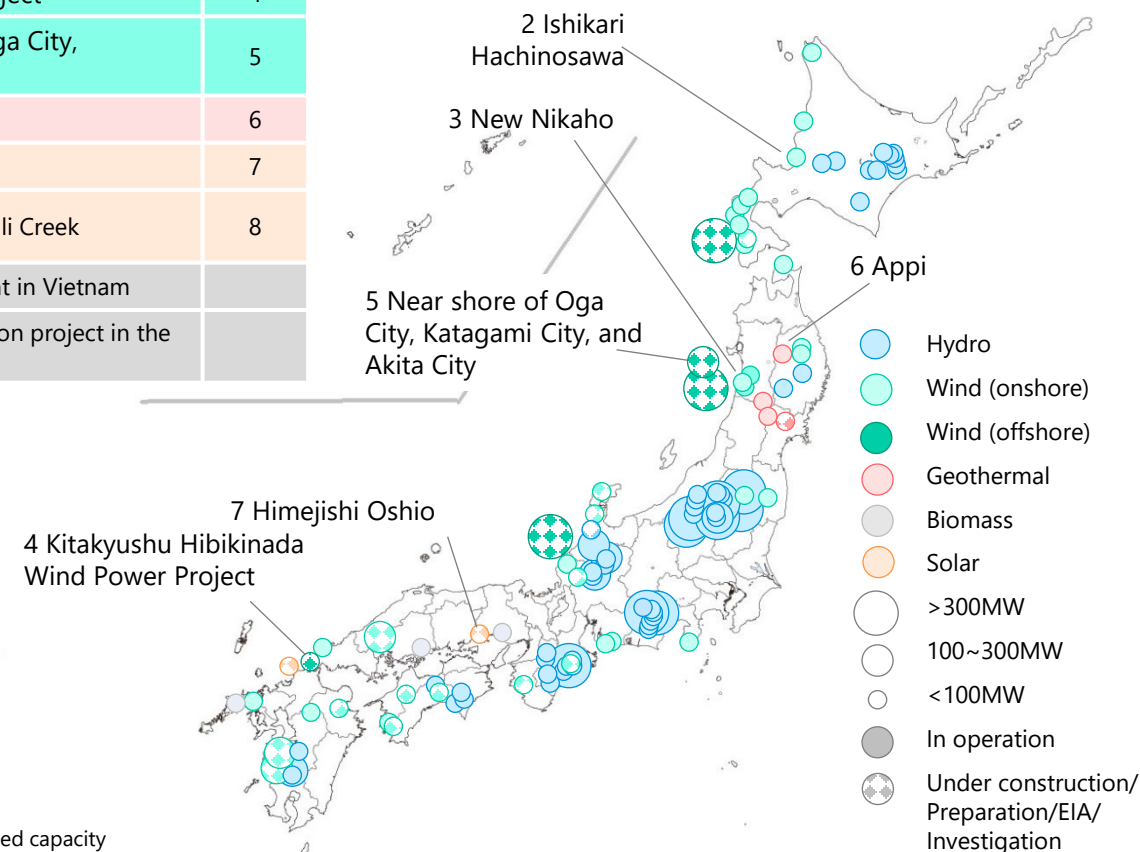
## (2) -3. Expansion of Renewable Energy

### Latest Status of Our Initiatives

Hydro	Participation in hydroelectric power generation projects on Mindanao, the Republic of the Philippines (Bulanog Batang Hydro)	1
Onshore Wind	Started commercial operation of "Ishikari Hachinosawa Wind Farm"	2
	Started commercial operation of "New Nikaho Kogen Wind Farm"	3
Offshore Wind	Started construction of "Kitakyushu Hibikinada Offshore Wind Power Project"	4
	Selected as business operators for an offshore wind power project off Oga City, Katagami City, and Akita City in Akita Prefecture	5
Geothermal	Started commercial operation of "Appi Geothermal Power Plant"	6
Solar	Started construction of "Himeji Oshio Solar Power Station"	7
Solar Power and Batteries	Signed joint development agreement for Solar Power and Batteries Project at Bulli Creek	8
Biomass	Signed MoU with Vinafor for Joint Examination of Biomass Business Development in Vietnam	
Green hydrogen/ammonia	Launch of a feasibility study on a large-scale green hydrogen/ammonia production project in the Sultanate of Oman in collaboration with Yamna and EDF.	



(As of March 31, 2024)



\*Owned capacity

\*Size of circles indicate owned capacity (in case capacity is TBD, estimated maximum owned capacity)

\*Developers of offshore wind projects outside port area in Japan are decided by bidding after each sea area is designated as a promoting area. The indicated capacities for offshore wind projects outside port area which are jointly implemented with other companies are estimated maximum gross capacities

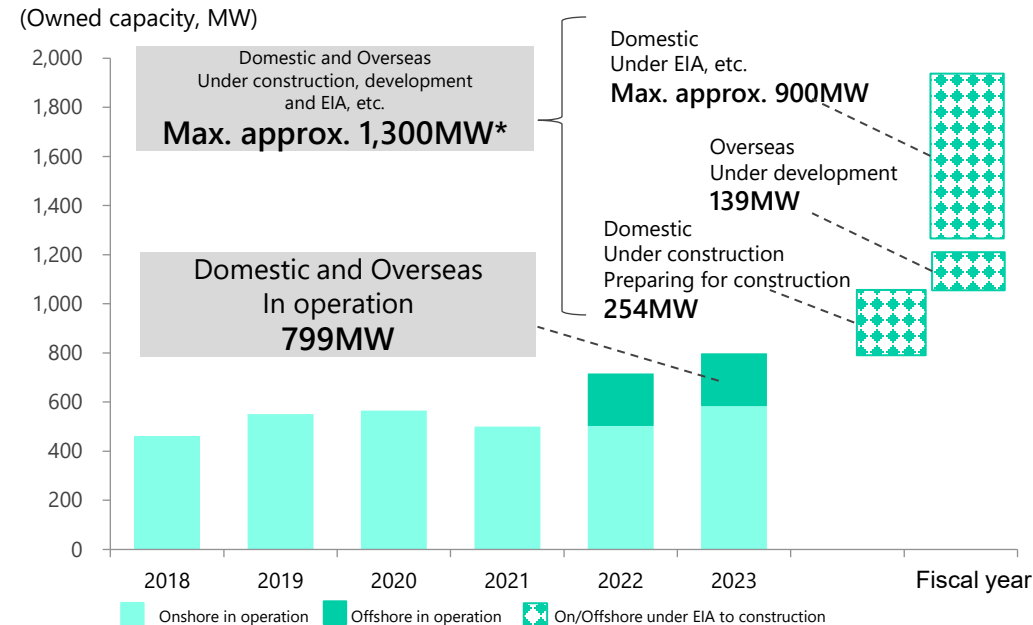
\*Strategic investment plan does not include offshore wind power in outside port areas.

## (2) -4. Renewable Energy Development Projects (Wind)

(As of March 31, 2024)

### Projects (Onshore/Offshore)

\*Domestic offshore wind power in outside port areas includes only publicly solicited bids.



Under construction  
Kaminokuni No. 2<sup>\*1</sup> (Hokkaido)  
Minami Ehime No. 2<sup>\*2</sup> (Ehime)  
Kitakyushu-Hibikinada Offshore<sup>\*3</sup> (Fukuoka), etc.

Preparing for construction  
Wajima (Ishikawa), etc.

Under environmental impact assessment  
Reihoku Kunimiyama (Kochi)  
Kita-Kagoshima (Kagoshima), etc.

Under development (Overseas)  
Kidston Stage 3 Wind<sup>\*4</sup> (Australia)

Under development (Domestic)  
Offshore Wind Power Project Off Oga City, Katagami City, and Akita City<sup>\*5</sup> (Akita)

\*1 Presents only phase 1 construction. Total plan amounts up to 120.4MW

\*2 Total plan amounts up to 40.8MW

\*3 Conducted jointly with Kyuden Mirai Energy Company, Incorporated, Hokutaku Co., LTD, Saibu Gas Co. Ltd. and Kyudenko Corp.

\*4 Conducted jointly with Genex Power Limited. The owned capacity includes 7.7% stake in Genex, in addition to the 50% stake held by the Company under the development funding agreement

\*5 Conducted jointly with JERA Co., Inc., Tohoku Electric Power Co., Inc., and ITOCHU Corporation

### Domestic Offshore

#### Kitakyushu-Hibikinada

Start of operation: FY2025 (planned)

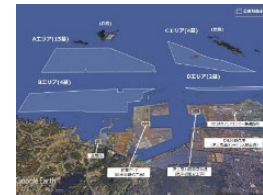
Start of construction: March 2023

Port area

Max. 220MW

(Rated power output 9.6MW\*25 units)

Owned capacity 40%=Max. 88MW



Project area

NEDO pilot test

Offshore wind power plant in Kitakyushu coast  
2011 to March 2017

#### Offshore Wind Power Project Off Oga City, Katagami City, and Akita City in Akita Prefecture

June 2028 Planned Start of Commercial Operation

Project area  
(The promotion area)



Outside port area

Max. 315MW

Rated output 15MW\*21 units

Owned capacity 37%=Max. approx.116MW

Dec. 13, 2023  
Selected as  
Business  
Operators

### Overseas Offshore

#### Triton Knoll

Start of commercial operation: April 2022

UK

Capacity 857MW

Ownership 25%

Owned Capacity 214MW



## (2) -5. Renewable Energy Development Projects (Hydro, Geothermal, Solar)

(As of March 31, 2024)

Hydro	Project	Capacity	Ownership	Owned capacity	Note
	Ogamigo Repowering (Gifu)	20.0MW->21.3MW	100%	20.0MW->21.3MW	Start of operation: FY2024 (planned)
	Suezawa Repowering (Niigata)	1.5MW->2.2MW	100%	1.5MW->2.2MW	Start of operation: FY2024 (planned)
	Nagayama Repowering (Kochi)	37.0MW->39.5MW	100%	37.0MW->39.5MW	Start of operation: After FY2025 (planned)
	Onabara (Ishikawa)	1.0MW	100%	1.0MW	Start of operation: FY2026 (planned)
	K2 Hydro (Australia, Pumped hydro)	250MW	7.7%	19.3MW	Start of operation: 2024 (planned)
	Bulanog Batang Hydro (Philippines)	32.5MW	40%	13.0MW	Start of operation: 2030 (planned)

Geothermal	Project	Capacity	Ownership	Owned capacity	Note
	Takahinatayama-area (Miyagi)	-	-	-	Under research for development

Solar	Project	Capacity	Ownership	Owned capacity	Note
	Kitakyushushi Hibikinada (Fukuoka)	30MW	100%	30MW	Start of operation: FY2024 (planned)
	Himejishi Oshio (Hyogo)	2MW	100%	2MW	Start of operation: FY2024 (planned)
	Refugio (USA)	375MW	100%	375MW	Start of operation: After 2026 (planned)
	Rooftop solar (GJP1) (Thailand, 9 projects)	Total 10.5MW	60%	6.3MW	Start of operation: After 2024 (planned)
	Rooftop solar (EGCO Cogen) (Thailand, 1 project)	2.4MW	20%	0.5MW	Start of operation: FY2024 (planned)
	Bulli Creek* <sup>1</sup> (Australia)	775MW	53.9%* <sup>2</sup>	417.4MW	Scheduled to be developed in phases

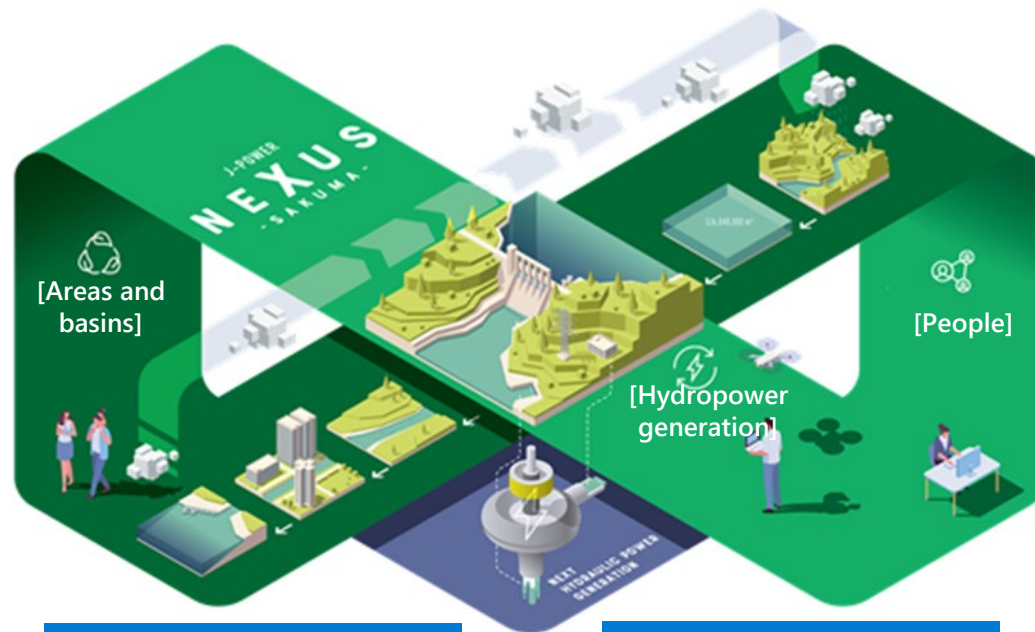
\*<sup>1</sup>Plans to develop up to 2,000MW of solar power and batteries combined. At present, only 775MW of solar power development phase 1 is included

\*<sup>2</sup>J-POWER owns 50% stake of the project, and with its 7.7% stake in Genex Power Limited, J-POWER's overall stake is 53.9%.

## (2) -6. Upcycling to next-generation hydropower plants NEXUS Sakuma

- Under the NEXUS Sakuma project, increase the amount of water used for power generation to achieve a maximum output of +50 MW and an annual output of +55 GWh.
- Contributes to the stable supply of electricity in both Eastern Japan area and Western Japan area by utilizing the characteristics of generators that can operate at both 50 Hz and 60 Hz.

### NEXUS Sakuma project



**Phase 1 construction**  
Start of work in 2026  
Completion of work in 2030

**Phase 2 construction**  
Start of work in 2031  
Completion of work in 2035

#### [Accomplishment schematic view]

- ✓ It depicts a circulation image of hydropower generation/areas and basins/people in conjunction with each other around a power plant based on an infinity symbol and the circulation flow of atmospheric air and water.

### "Next-generation hydropower plants" that bring new values and energy



#### Hydropower generation

By applying modern technologies to renovate aged facilities, we aim to further increase both output and amount in electricity to be generated, as well as to drastically solve issues in the existing facilities.



#### Areas and basins

To deploy our sustainable hydropower business under the understanding and cooperation by those who are living in the involving areas, we live together with them in the basins around our facilities and take efforts to create together new values.



#### People

With a fusion of the local employees' force (people) and digital technologies, we realize highly-advanced, highly-efficient maintenance services, as well as we create time and motivation for new challenges.

### Sakuma power plant (present)



Shizuoka Tenryugawa river system

Maximum output	350MW
Annual power generation	Approx. 1,400GWh
Basin area	4,156.5km <sup>2</sup>
Total water storage capacity	326.85 million m <sup>3</sup>
Other	Power supply to both 50 and 60 Hz areas



## (2) -7. Ohma Nuclear Power Project

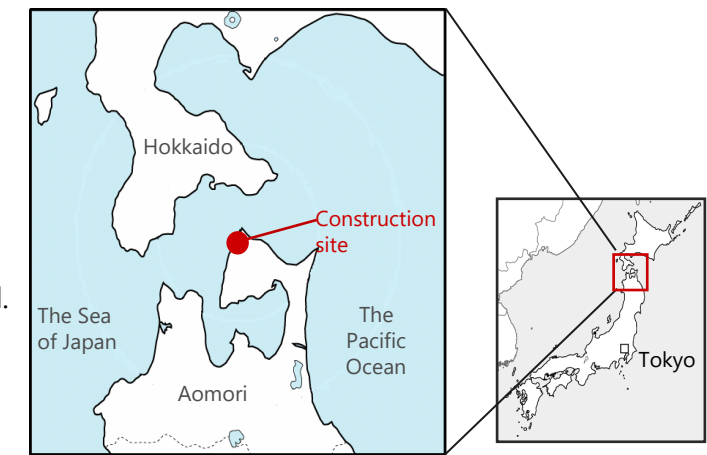
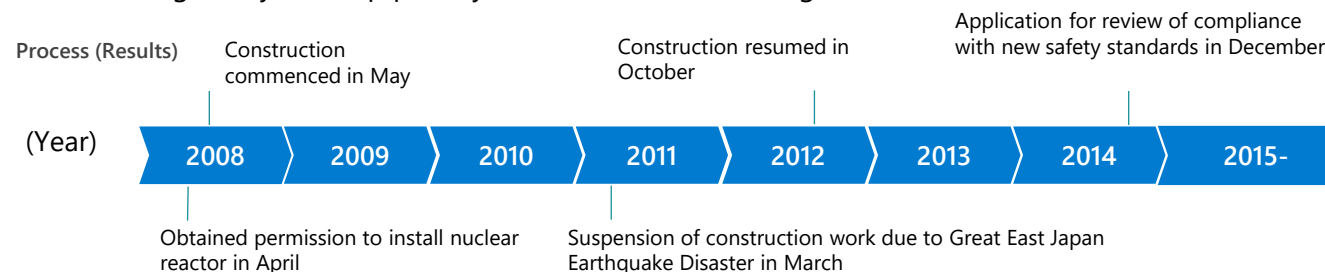
- In December 2014, J-POWER submitted to NRA (Nuclear Regulation Authority) an application for permission for alteration of reactor installment license and an application for construction plan approval in order to undertake review of compliance with the new safety standards.
- Standard seismic motion and standard tsunami are under review by NRA.
- Once the review has been passed, we will begin construction on facility safety reinforcement in the latter half of 2024 based on the review findings, with the aim of completion in the latter half of 2029.
- Sincerely respond to compliance reviews and steadily implement safety measures based on the latest reviews result as for constantly pursuit of further safety improvements.
- Strive for more polite information communication so that we can gain the understanding and trust of the community.



Status of construction (as of March 31, 2024)

Overview of the Project	Location	Ohma-machi, Shimokita-gun, Aomori Prefecture
	Capacity	1,383MW
	Type of nuclear reactor	Advanced Boiling Water Reactor (ABWR)
	Fuel	Enriched uranium and uranium-plutonium mixed oxide (MOX)
	Commencement of operations	To be determined

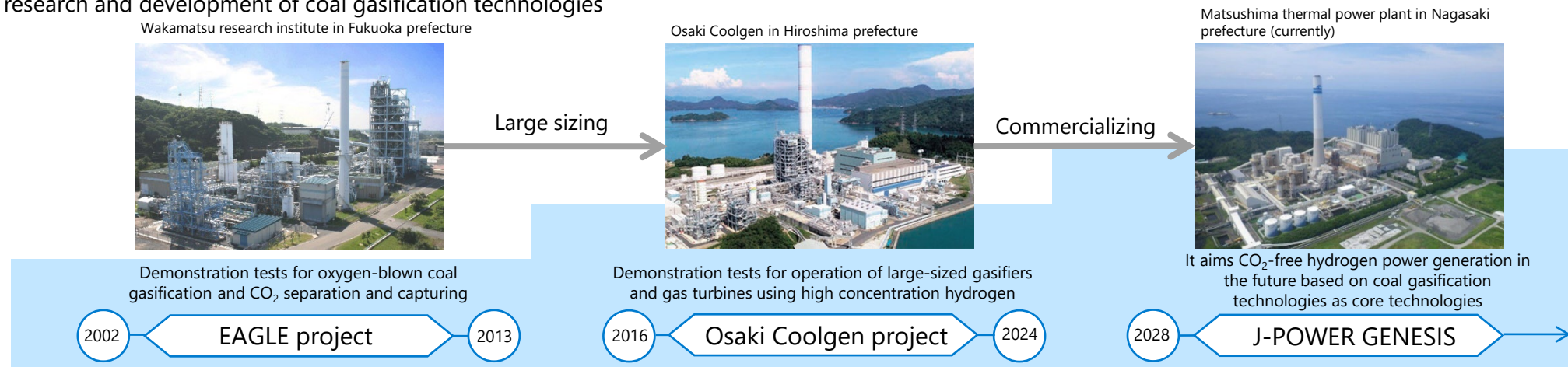
➤ Promoting safety as a top priority, with the use of the Long-Term Decarbonisation Power Auction Scheme in mind.



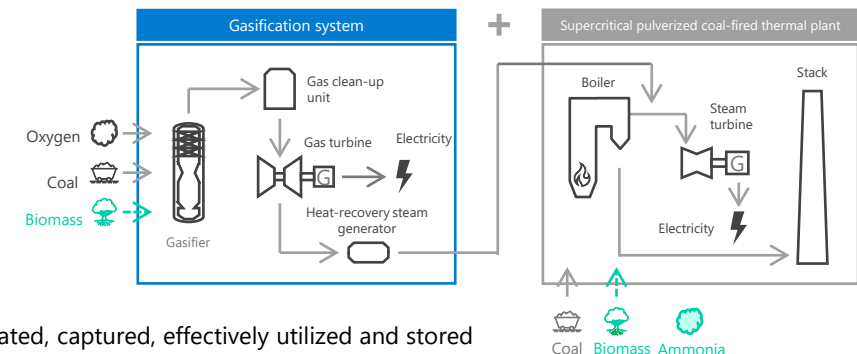
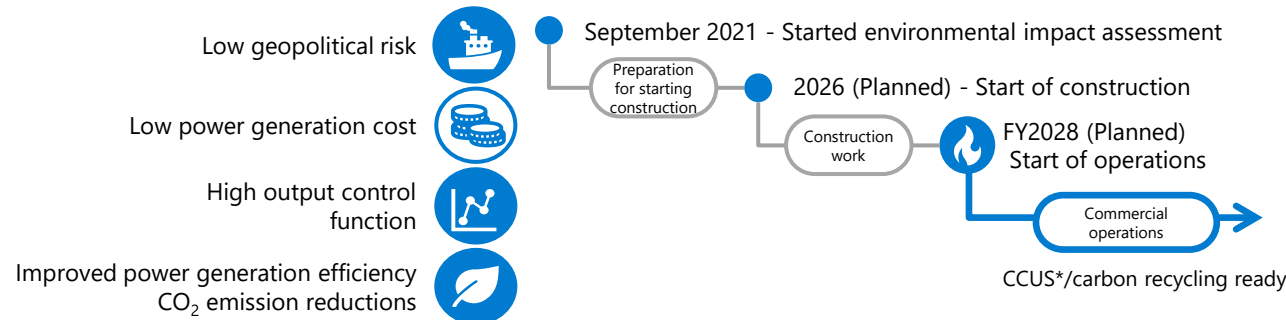
## (2) -8. Hydrogen production and use in existing thermal power plants GENESIS Matsushima

- First step toward CO<sub>2</sub>-free hydrogen power generation by commercializing the technology demonstrated in Osaki CoolGen Project.
- Upcycling by adding a gasification system to the existing facility of Matsushima thermal power plant. Enabling production and generation of electricity from gas containing hydrogen
- GENESIS Matsushima aims to start construction in 2026 and operation in FY2028.

### Flow of research and development of coal gasification technologies



### GENESIS Matsushima



\*Carbon dioxide Capture, Utilization and Storage, meaning that CO<sub>2</sub> is separated, captured, effectively utilized and stored

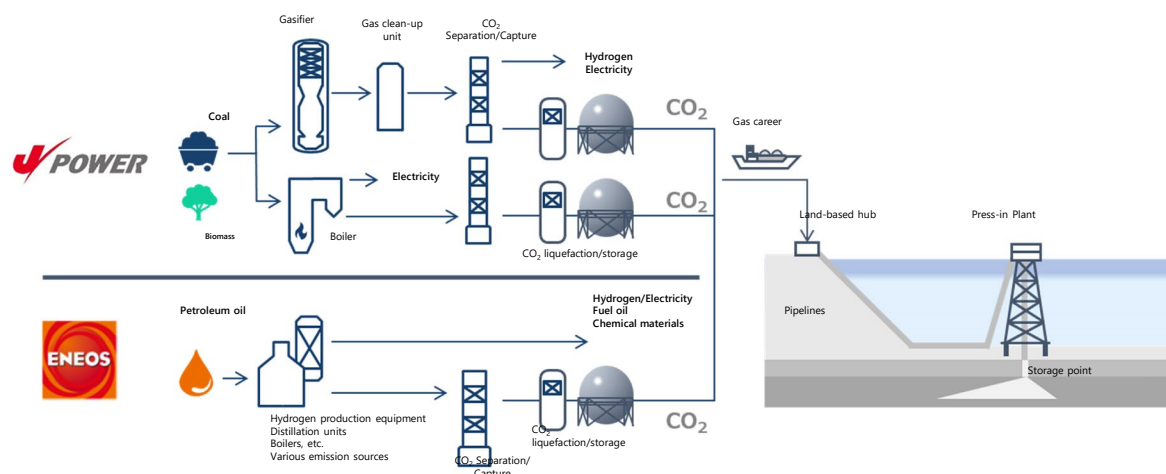


## (2) -9. Establishment of joint venture for CCS in Japan

- J-POWER, ENEOS Corporation, and JX Nippon Oil & Gas Exploration Corporation are jointly working on the possibility of starting a CCS project to capture, transport, and store CO<sub>2</sub> from J-POWER's thermal power plants and ENEOS' refineries in western Japan by FY2030.
- In February 2023, the three companies have established "West Japan Carbon dioxide Storage Survey Co., Ltd." to promote preparations for commercialization, including exploration and evaluation for the selection of candidate sites for CO<sub>2</sub> storage.
- In August 2023, the CCS project plan proposed by the above three companies was selected by JOGMEC for the FY2023 "Study on Implementation of Japan's Advanced CCS Project," and acceptance agreement was signed with JOGMEC.

J-POWER and ENEOS Holdings are implementing the following initiatives

### Plan



Overview of joint venture for CCS in Japan



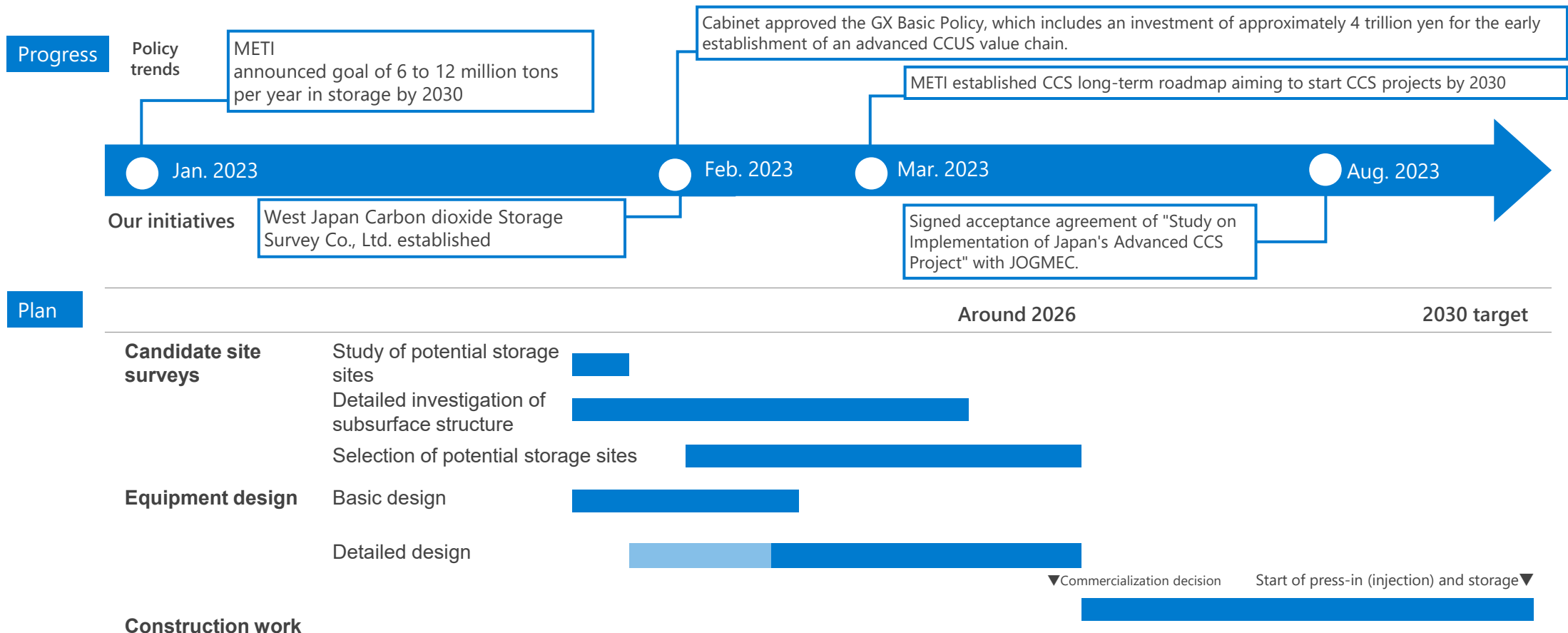
Name	West Japan Carbon dioxide Storage Survey Co., Ltd.
Established	Feb. 2023
Capital	150 million yen
Location	Chiyoda ward, Tokyo

Overview of selected CCS project plan

Proposer	J-POWER, ENEOS Corporation, JX Nippon Oil & Gas Exploration Corporation
Emission Sources	J-POWER thermal power plants and ENEOS refineries in western Japan
Transport Method	Vessels and pipelines
Candidate sites for CO <sub>2</sub> storage	Off the northern to western in Kyushu (offshore saline aquifers)
Storage Volume	3 million tons/year
Feature of the project	Promoting a large-scale CO <sub>2</sub> storage project in the sea for a wide area of western Japan, including the Setouchi Sea

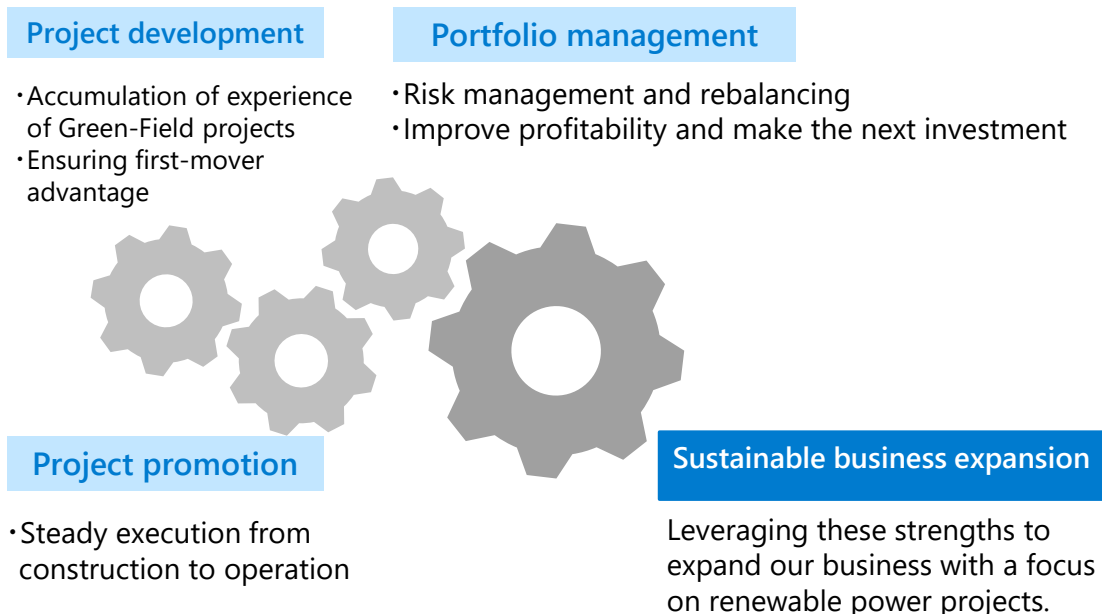
## (2) -10. Feasibility Study for Large-scale CCS in Japan











- It will take nearly 10 years—from the investigation of candidate sites to the start of press-in (injection) and storage—for surveys, design, and construction.
- By starting as early as possible, we will contribute to CO<sub>2</sub> reduction in Japan by FY2030.
- To achieve an early resolution of our goals, we will coordinate and collaborate with all stakeholders to resolve issues, such as business environment improvement, CCS chain formation, and reducing costs.



## (2) -11. Global Business Expansion and J-POWER Group's Integrated Strengths

- The J-POWER group is expanding its overseas business based on and combining its unique strengths in (1) project development, (2) project promotion, and (3) portfolio management (profitability improvement and risk management).
- J-POWER group as a developer acquires wide knowledge and earns profits through development of Green-Field projects, steady progress of construction projects, and stable operation. As change of business situation, we revise our portfolio such as rebalancing investments for ensuring profitability and business sustainability.
- Based on valuable knowledge and revenue from our existing projects, J-POWER group continues development of new projects mainly renewable power project. Through these new projects, J-POWER continues global business expansion and contribution to achieve carbon neutrality.

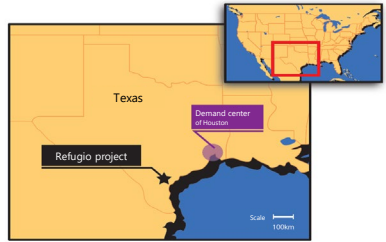
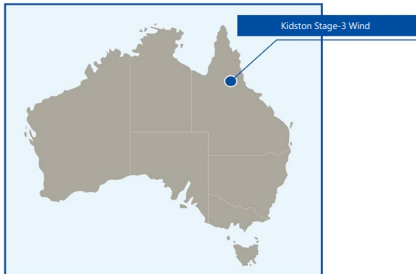
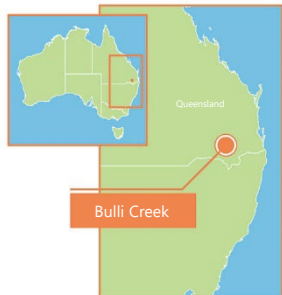


New projects under construction, development, investigation	
<b>USA</b>	
<ul style="list-style-type: none"> <li>• Development of solar power plants (Refugio)</li> </ul>	
<b>Asia</b>	   
<ul style="list-style-type: none"> <li>• Development and construction of rooftop solar in Thailand</li> <li>• Examination of biomass business development in Vietnam</li> <li>• Development of hydroelectric power generation projects in Philippines (Bulanog Batang Hydro)</li> </ul>	
<b>Australia</b>	  
<p>J-POWER participates in renewable power project with Genex*</p> <ul style="list-style-type: none"> <li>• Development of onshore wind (Kidston Stage-3 Wind)</li> <li>• Construction of pumped storage power plant (K2-Hydro)</li> <li>• Development of combined solar/batteries projects (Bulli Creek)</li> </ul>	
<b>Middle East</b>	 
<ul style="list-style-type: none"> <li>• Launch of a feasibility study on a large-scale green hydrogen/ammonia production project in the Sultanate of Oman</li> </ul>	

\*Genex Power Limited: Renewable power company in Australia

## (2) -12. Overview of Overseas Projects under Development

(As of March 31, 2024)


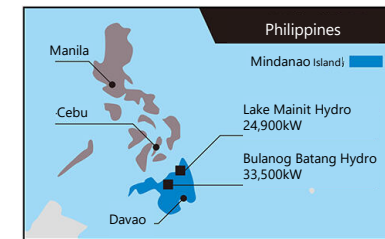

Project	Overview	
<b>Refugio (USA)</b>  Capacity: 375MW Type: Solar Ownership: 100% Status: Under development Start of operation (planned): After 2026	<ul style="list-style-type: none"> <li>Refugio is located close to Houston, a high power demand area</li> <li>Development issues such as procedures for land acquisition, permits have been largely resolved</li> </ul>	
<b>Kidston Stage-3 Wind (Australia)</b>  Capacity: 258MW Type: Onshore wind Ownership: 53.9%*2 Status: Under development Start of operation (planned): 2026	<ul style="list-style-type: none"> <li>First renewable project in Australia for J-POWER</li> <li>J-POWER executes Joint Development Agreement with Genex Power Limited for New Wind Project in May 2022</li> <li>Leveraging J-POWER's domestic and international wind energy expertise and Genex's renewable energy development capabilities in Australia</li> </ul>	
<b>Bulli Creek*1 (Australia)</b>  Capacity: 775MW Type: Solar power Ownership: 53.9%*2 Status: Under development	<ul style="list-style-type: none"> <li>Signed a Joint Development Agreement with Genex to acquire a 50% interest in the business</li> <li>Plans to develop up to 775MW of solar power at Bulli Creek site in southern Queensland</li> </ul>	

\*1Plans to develop up to 2,000MW of solar power and batteries combined At present, only 775MW of solar power development phase 1 is included

\*2The owned capacity which includes 7.7% stake in Genex in addition to the 50% stake held by the Company under the development funding agreement is 53.9%

## (2) -12. Overview of Overseas Projects under Development

(As of March 31, 2024)

Project	Overview
<b>Rooftop solar [GJP1/EGCO Cogen] (Thailand)</b>  Capacity: Total 10.5MW (9 projects)/2.4MW (1 project) Type: Solar Ownership: 60%/20% Status: Under development and construction Start of operation: Each project will commence commercial operation after 2024	<ul style="list-style-type: none"> <li>Utilizing the business foundation formed by large-scale gas-fired development</li> <li>Work for decentralized power sources to accommodate growing requirements of customers for decarbonization</li> <li>Aiming to supply CO<sub>2</sub>-free energy by installing solar photovoltaic systems on customers' factory roofs</li> </ul> 
<b>Hydroelectric power generation projects on Mindanao (Philippines)</b>  Bulanog Batang Hydro Capacity: 32.5MW Type: Hydro (run-of-river system) Ownership: 40% Status: Under development Start of operation (planned): 2030	<ul style="list-style-type: none"> <li>J-POWER will acquire a portion of the shares of subsidiaries of Markham Resources Corporation (MRC), a power generation company in the Republic of the Philippines, in order to participate in hydroelectric power generation projects on Mindanao Island, the Philippines.</li> <li>Mindanao has many undeveloped hydropower sites. The development of these sites is expected to help shift the island's electricity supply from fossil fuel-derived power sources, currently the major contributor, to carbon-free power sources. Both projects will play a role in this shift.</li> <li>Lake Mainit Hydro has started commercial operation on March 2023.</li> </ul> 
<b>Large-scale green hydrogen/ammonia production project (Oman)</b>  Salalah area, Sultanate of Oman Type: • Approx. 4.5 GW of wind and solar capacity coupled with battery storage • Approx. 2.5 GW electrolyser Status: • Launch of a feasibility study	<ul style="list-style-type: none"> <li>Consortium formed with Yamna and EDF to bid for the right to implement a large-scale green hydrogen/ammonia production project in the Sultanate of Oman.</li> <li>Business development agreement, etc. signed with Hydrom, responsible for the development of green hydrogen projects in the country.</li> <li>Aiming to produce approximately 1 million tonnes of green hydrogen/ammonia per year by making use of abundant renewable energy resources.</li> </ul>  <p>(April 30, 2024)</p>
<b>Biomass Business Development (Vietnam)</b>	<ul style="list-style-type: none"> <li>J-POWER signed a memorandum of understanding (MoU) with Vietnam Forestry Corporation (Vinafor) to jointly examine the development of the biomass business in Vietnam, including power generation and fuel production</li> <li>J-POWER intends to enter and expand the biomass power generation business in Vietnam and will strive to gain knowledge of the sustainable use of biomass fuels through a broad involvement in the supply chain for biomass fuels</li> </ul>

# (2) -13. Contributing to the enhancement of power networks

- Pursue business opportunities that contribute to the augmentation of power networks to support massive introduction of renewable energy
- Promote efforts to strengthen resilience in light of the increasing severity of natural disasters

## Transmission and transformation facilities

- ✓ J-POWER Transmission owns and operates critical transmission and transformation facilities throughout Japan, including the cross-regional interconnection facilities that interconnect the grids of different electric power companies.

Facilities in operation	Transmission lines	Substations	4 locations
	Total length: Approximately 2,400km	Frequency converter stations	1 location
	AC/DC converter stations	4 locations	

## Construction of the New Sakuma Frequency Converter Station and others

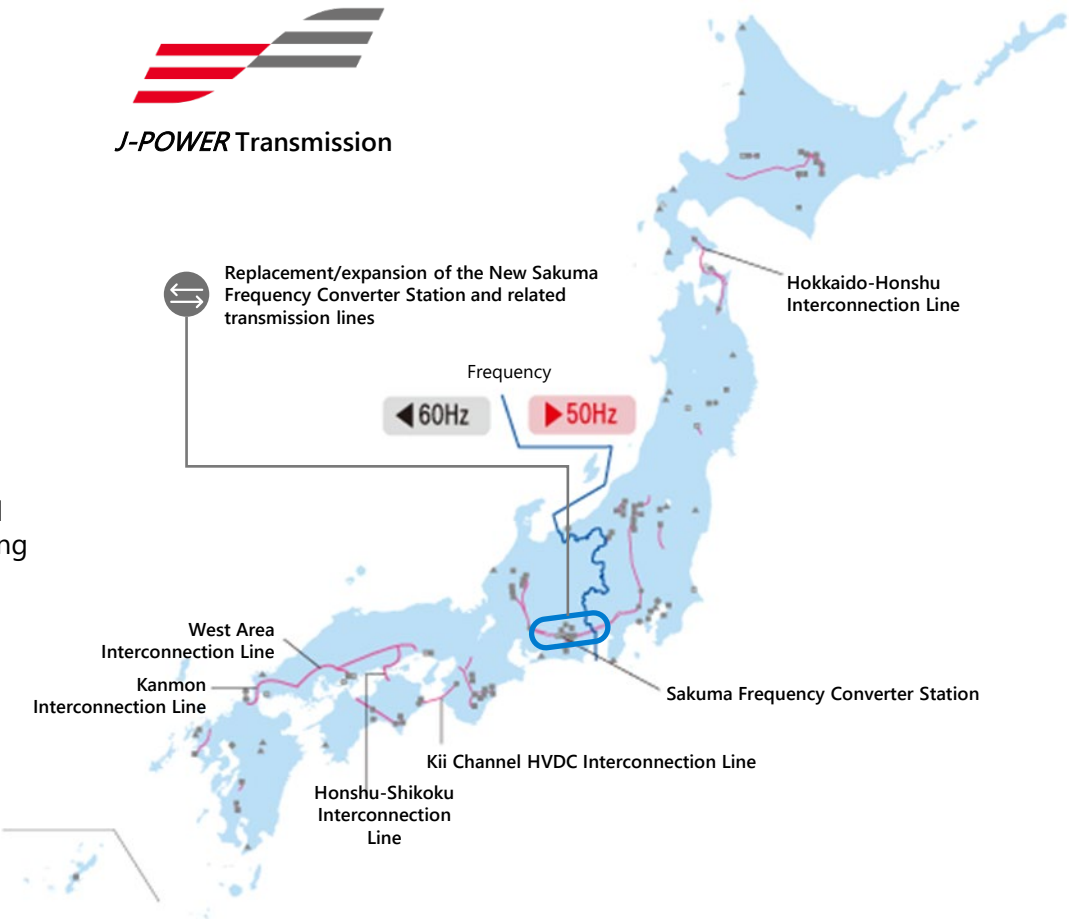
Start of construction in April 2022  
Operation scheduled to start in FY2027

- ✓ J-POWER will steadily promote the replacement/expansion of the New Sakuma Frequency Converter Station and related transmission lines to meet consumers' expectations for enhancing the capability to interchange electric power between 50Hz in eastern Japan and 60Hz in western Japan. J-POWER will continue to pursue business opportunities contributing to strengthening power networks.
- ✓ Today's most pressing issues also include the need to sophisticate maintenance due to strengthen resilience against intensifying natural disasters. J-POWER will continue to contribute to a stable power supply through these efforts.

In the construction phase

Construction of the New Sakuma Frequency Converter Station and others

- New Sakuma Frequency Converter Station 300MW
- Sakuma East Trunk Line, etc. Approx. 138km





## (2) -14. Investments for Transition

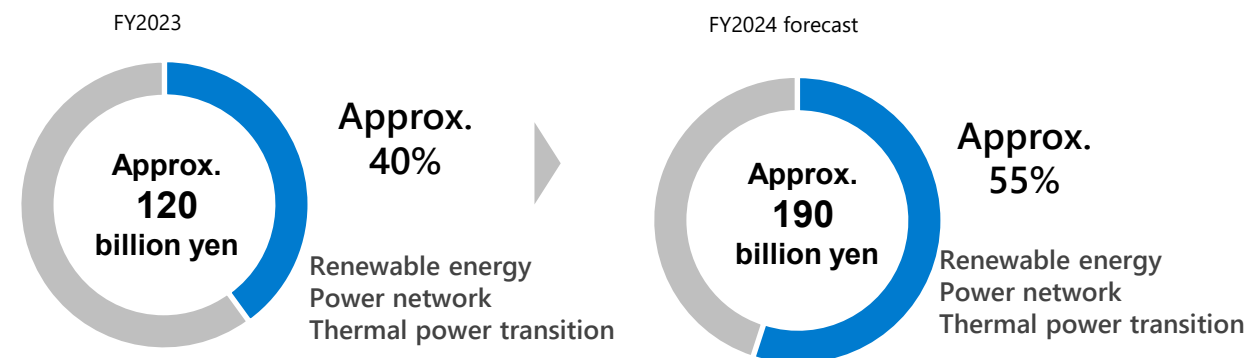
### Investment result and forecast Investment Cash Flow

Towards a carbon-neutral society, three initiatives in BLUE MISSION 2050

Expansion of CO <sub>2</sub> -free power sources	Renewable energy
	Nuclear power
Push for zero-emission power sources	CO <sub>2</sub> -free hydrogen power generation
	CO <sub>2</sub> -free hydrogen power production
Power network	Stabilization of electric power networks
	Enhancement of electric power networks

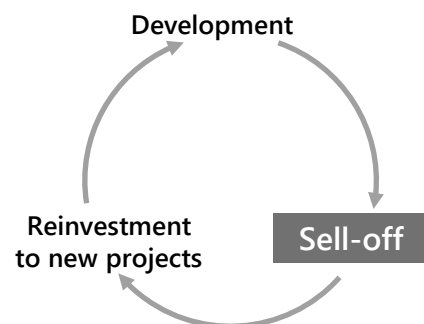
\*The below figures are current estimates and may change depending on future conditions.

\*The below graphs do not include the recovery of investments and loans in the investment CF.

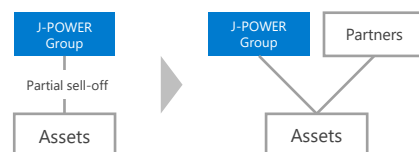


### Efforts for improvements in capital efficiency

We are working to improve capital efficiency by not only holding assets for the long term, but also replacing our business portfolio as appropriate, for example by selling assets and reinvesting in new projects using the proceeds from the sale. Through the introduction of ROIC, we will also build a system to measure capital efficiency by business and take appropriate improvement measures.

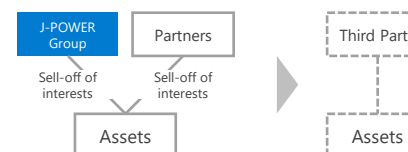


#### Development -> Partial sell-off and operation



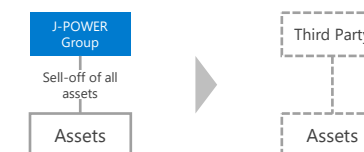
- Jackson Generation Power Plant in the US
- Sold partial interests in developed gas-fired power plants and acquired developer's profits.
  - Actively involved in the operation of the plant after partial-sells off.

#### Development -> Sell-off of all interests



- Wharton Solar Project in the US
- Sold all equity interests in solar power plants that have finished development and acquired developer's profits.

#### Development and Operation -> Withdrawal



- Three domestic thermal power projects (Ichihara, Shinminato and Itoigawa), etc.
- Withdrew through the transfer of assets to a third party, taking into account the age and competitiveness of the facilities.



## (2) -15. J-POWER Group's Green/Transition Finance Framework

### Potential Funding Objectives of Green/Transition Finance (Use of Proceeds instruments)

\*Potential Funding Objectives of Green Finance

\*The use of funds is defined on a case-by-case basis, undecided at this time.

J-POWER "BLUE MISSION 2050" Initiatives		Potential Funding Objectives
CO <sub>2</sub> -free Hydrogen energy	Hydrogen power generation	Upcycling (adding gasifier to existing assets) Upcycling (CO <sub>2</sub> separation and capture units) CO <sub>2</sub> -free hydrogen power generation facilities*
	Fuel production (CO <sub>2</sub> -free hydrogen)	CO <sub>2</sub> -free hydrogen power production facilities*
CO <sub>2</sub> -free power generation	Renewable energy	Hydro, wind, geothermal, solar*
	Nuclear power	The Ohma Nuclear Power Plant
Power network	Stabilization	Distributed energy service*
	Enhancement	Frequency converter station, etc. Network for renewable energy
Domestic coal-fired power plants		Gradual phasing out of aging plants
		Power generation facilities for mixed/mono combustion with biomass, ammonia, etc.

### Possible Candidates for Sustainability Targets of Transition Finance (General Corporate Purpose instruments)

KPI: Key Performance Indicator <sup>*1</sup>	SPT: Sustainability Performance Target <sup>*2</sup>
CO <sub>2</sub> emissions reduction from J-POWER Group's domestic power generation business	1.FY2025: -9.2 million tons 2.FY2030: -46%/-22.5 million tons (Both targets 1 and 2 compared to the actual emissions in FY2013)

\*Revised J-POWER Group Green/Transition Finance Framework in July 2023. The revised framework was assessed by DNV BUSINESS ASSURANCE JAPAN K.K., a third-party evaluation organization, for conformance with various standards related to green finance, transition finance, and sustainability-linked finance.

\*SPT (either or both 1. and 2.) and various conditions, including changes in interest rate terms based on achievement of goals are determined on individual occasions.

\*1 KPI stands for Key Performance Indicator.

\*2 SPT stands for Sustainability Performance Target, which is set as a target for a key performance indicator (KPI).

Examples of Transition-Linked Loan Financing			
Borrowing date	September 29, 2023	September 29, 2023	February 29, 2024
Borrowing amount	10 billion yen	10 billion yen	10 billion yen
Borrowing period	7 years	10 years	7 years
Lender	Domestic financial institutions	Domestic financial institutions	Domestic financial institutions
Third-party evaluator	DNV BUSINESS ASSURANCE JAPAN K.K.		



Electric Power Development Co.,Ltd.

<https://www.jppower.co.jp/english/>