

The English version is a translation of the original Japanese version.  
Please note that if there is any discrepancy, the Japanese version will take priority.

## Summary of FY2023 2nd Quarter Earnings Results

## 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.

# Renewable energy development target 1,500MW over by FY2025

- Realization of up-front investment for future expansion of renewable energy value through our accumulated development experience, know-how, and data
- Maximize the value of renewable energy through various sales methods such as corporate PPA, aggregation, etc., in addition to the use of FIT/FIP schemes.

Compared to  
FY2017

**1,500MW** over

Renewable energy  
development target  
by FY2025

More than 400 billion yen by FY2030  
Strategic investment in renewable energy\*



Contributing to CO<sub>2</sub> reduction in Japan and around the world

Target: Domestic and international on/offshore wind  
geothermal, hydroelectric, and solar power

Financing through various frameworks

## J-POWER Green Bond Financing Achievements

<b>1st J-POWER Green Bonds</b>	January 21, 2021
Period:10 years	Issue amount:¥20 billion
<b>2nd J-POWER Green Bonds</b>	January 20, 2022
Period:10 years	Issue amount:¥10 billion
<b>3rd J-POWER Green Bonds</b>	November 17, 2022
Period:10 years	Issue amount:¥17 billion

## Use of Proceeds

- Setana Osato Windfarm
- Nikaho No.2 Windfarm
- Kuzumaki No.2 Windfarm
- Kaminokuni No.2 Windfarm
- Minami Ehime No.2 Windfarm
- New Shimamaki Windfarm (Replacement)

## External Evaluation

J-POWER has been evaluated by DNV Business Assurance Japan K.K. (an independent evaluation organization) and they have verified that the company is eligible under various standards relating to Green Bond issuance.

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## 1. Summary of FY2023 2nd Quarter Earnings Results

# Summary of FY2023 2nd Quarter Earnings Results

## Decreased revenue and profit

- Main reason for decrease in consolidated operating revenue
  - Decreased due to lower electricity sales volume resulting from lower utilization of thermal power plants and lower electricity sales prices, etc.
  
- Main reasons for decrease in consolidated operating profit and ordinary profit
  - Decreased due to lower gross profit from JEPX sales
  - Decreased in profit of a subsidiary in Australia that owns coal mining interests

(Unit: billion yen)

Consolidated	FY2022	FY2023	Year-on-year change	
	2nd Quarter (Apr.-Sep.)	2nd Quarter (Apr.-Sep.)		
Operating Revenue	839.7	631.5	(208.2)	(24.8)%
Operating Profit	86.3	44.9	(41.3)	(47.9)%
Ordinary Profit	86.1	42.4	(43.7)	(50.8)%
Profit attributable to owners of parent	58.4	27.7	(30.6)	(52.5)%

Non-consolidated	FY2022	FY2023	Year-on-year change	
	2nd Quarter (Apr.-Sep.)	2nd Quarter (Apr.-Sep.)		
Operating Revenue	630.9	392.2	(238.6)	(37.8)%
Operating Profit	19.4	(4.7)	(24.2)	-
Ordinary Profit	49.1	30.2	(18.8)	(38.4)%
Profit	43.6	30.6	(12.9)	(29.8)%

# Key Data (Electric Power Sales)

	FY2022 2nd Quarter (Apr.-Sep.)	FY2023 2nd Quarter (Apr.-Sep.)	Year-on-year change	
Electric Power Sales (TWh)				
Electric Power Business	33.5	27.3	(6.1)	(18.3)%
Hydroelectric Power	5.3	5.2	(0.0)	(1.0)%
Thermal Power	21.5	16.1	(5.3)	(25.0)%
Wind Power	0.4	0.4	0.0	6.0 %
Other <sup>*1</sup>	6.2	5.5	(0.7)	(11.4)%
Overseas Business <sup>*2</sup>	5.7	11.3	5.6	98.2 %
Water supply rate	96%	92%	(4) points	
Load factor <sup>*3</sup>	61%	46%	(15) points	

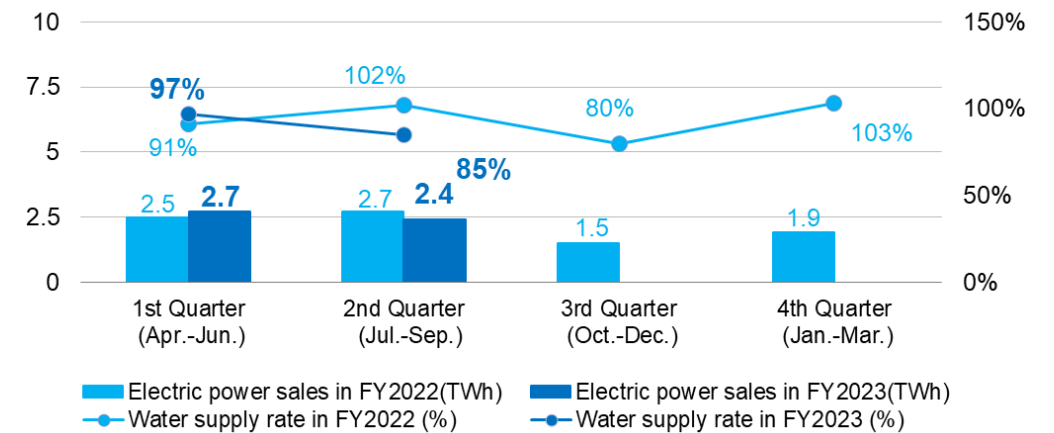
\*1 Electric power sales volume of electricity procured from wholesale electricity market, etc.

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

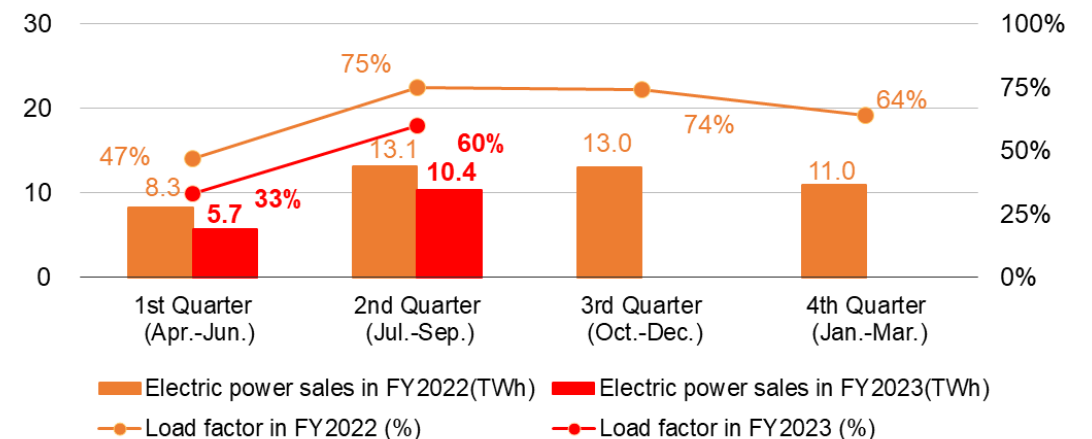
\*3 Load factor of thermal power shows the results for non-consolidated only

## 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 utilization of thermal power plants and lower electricity sales prices, etc.
- **Overseas Business**
  - The revenue increased due to increasing electricity sales volume in Thailand projects
- **Other Business**
  - The sales decreased due to falling coal prices at a subsidiary in Australia that owns coal mining interests

	FY2022 2nd Quarter (Apr.-Sep.)	FY2023 2nd Quarter (Apr.-Sep.)	Year-on-year change	
Operating Revenue (Billion yen)	839.7	631.5	(208.2)	(24.8)%
Electric Power Business	650.9	417.9	(233.0)	(35.8)%
Electric Power Sales	624.3	392.3	(231.9)	(37.2)%
Renewables <sup>*1</sup>	76.0	71.2	(4.7)	(6.3)%
Transmission / Transformation	24.5	23.8	(0.7)	(3.1)%
Overseas Business <sup>*2</sup>	120.6	158.4	37.7	31.3 %
Other Business <sup>*3</sup>	68.1	55.2	(12.9)	(19.0)%

	FY2022 2nd Quarter (Apr.-Sep.)	FY2023 2nd Quarter (Apr.-Sep.)
Foreign exchange rate		
(Yen/USD) at the end of June	136.68	144.99
(Yen/THB) at the end of June	3.85	4.07
(Yen/AUD) at the end of June	93.90	95.77
(THB/USD) at the end of June	35.30	35.59

\*1 Hydroelectric, wind and geothermal power

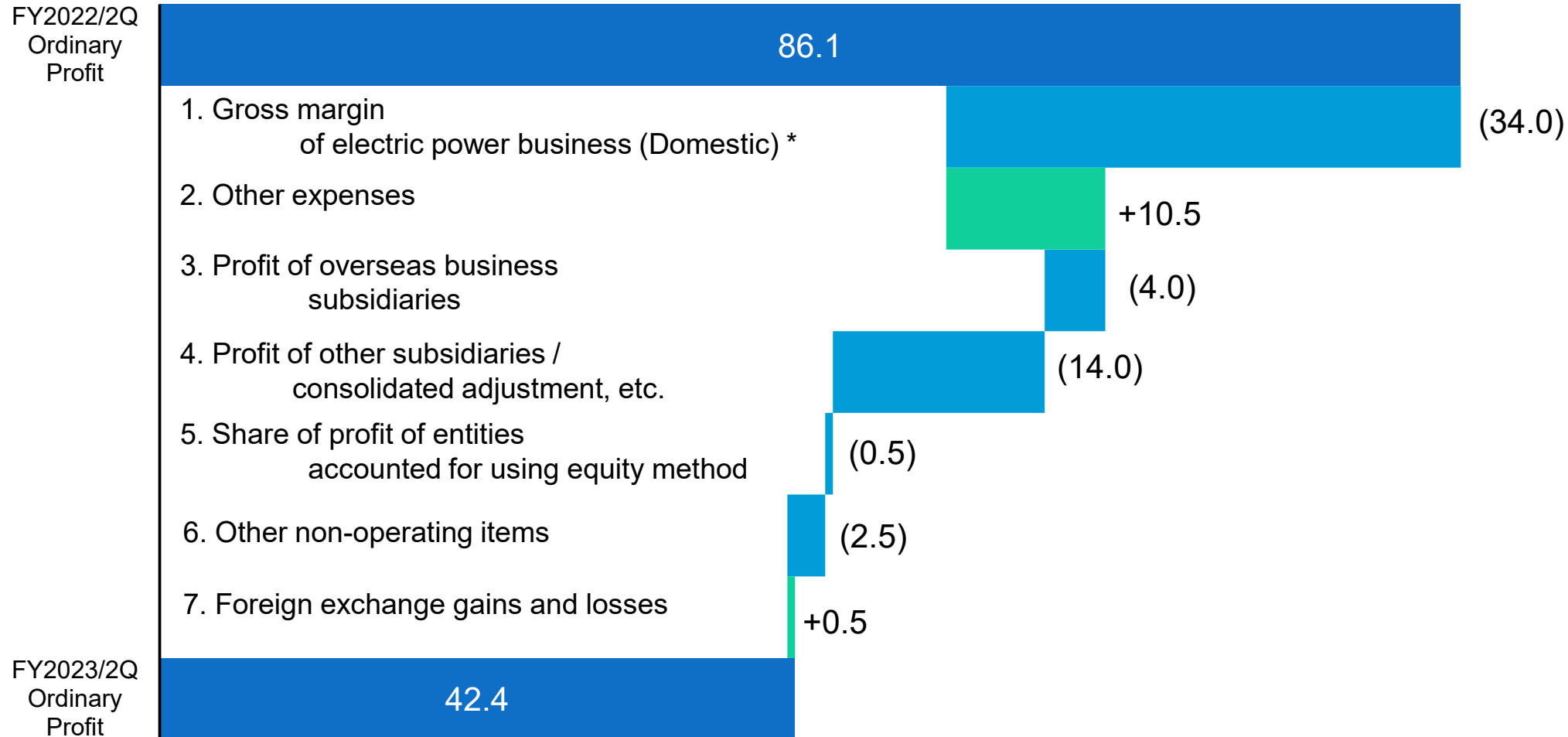
\*2 Sales for the overseas business segment (Sales from overseas consolidated subsidiaries and overseas consulting business, etc.)

\*3 "Other Business" is composed of "Electric Power-Related Business" segment and "Other Business" segment. See Appendix p.40 for details.



# FY2023 2nd Quarter Earnings Results (Main Factors for Change)

(Unit: billion yen)



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

# Breakdown of Increase / Decrease Factors of Consolidated Ordinary Profit

<p><b><u>1.Gross margin of electric power business (Domestic) (34.0)</u></b></p> <ul style="list-style-type: none"> <li>Decrease in gross profit from JEPX sales due to lower JEPX prices and resource price impact, etc.</li> <li>Decrease in revenue of renewable energy (Reference) JEPX average price (Apr-Sep) FY2022: approx. 22 yen/kWh → FY2023: approx. 10 yen/kWh</li> </ul>	<p><b><u>5.Share of profit of entities accounted for using equity method (0.5)</u></b></p> <ul style="list-style-type: none"> <li>Overseas...(0.5)</li> <li>Domestic...±0.0</li> </ul>									
<p><b><u>2.Other expenses +10.5</u></b></p> <ul style="list-style-type: none"> <li>Decrease in facilities maintenance costs...+6.5</li> <li>Increase in labor costs...(2.5)</li> <li>Decrease in other expenses...+6.5 Decrease in waste disposal costs, etc.</li> </ul>	<p><b><u>6.Other non-operating items (2.5)</u></b></p> <ul style="list-style-type: none"> <li>Increase in financing costs etc.</li> <li>Reactionary decrease in gain on valuation of derivatives</li> </ul>									
<p><b><u>3.Profit of overseas business subsidiaries (4.0)</u></b></p> <ul style="list-style-type: none"> <li>Jackson Generation Power Plant in North America (3.0) Decrease in market selling price Increase in facilities maintenance costs due to start of operation, etc.</li> <li>Power generation projects in Thailand (1.0) Scheduled decrease in fixed revenue etc.</li> </ul>	<p><b><u>7.Foreign exchange gains and losses +0.5</u></b></p> <ul style="list-style-type: none"> <li>Reduction of foreign exchange valuation loss on U.S. dollar denominated debt in the Thailand consolidation project +2.5</li> </ul> <p>Q2 Foreign exchange rate (THB/USD)</p> <table border="1" data-bbox="1352 839 2405 1043"> <thead> <tr> <th></th> <th>At the end of December of the previous year</th> <th>2Q (At the end of June)*</th> </tr> </thead> <tbody> <tr> <td>FY2022</td> <td>33.42</td> <td>35.30</td> </tr> <tr> <td>FY2023</td> <td>34.56</td> <td>35.59</td> </tr> </tbody> </table> <p>* The fiscal year of overseas subsidiaries is from January to December</p> <ul style="list-style-type: none"> <li>Decrease in foreign exchange valuation gains on U.S. dollar-denominated receivables, etc. (2.0)</li> </ul>		At the end of December of the previous year	2Q (At the end of June)*	FY2022	33.42	35.30	FY2023	34.56	35.59
	At the end of December of the previous year	2Q (At the end of June)*								
FY2022	33.42	35.30								
FY2023	34.56	35.59								
<p><b><u>4.Profit of other subsidiaries / consolidated adjustment, etc. (14.0)</u></b></p> <ul style="list-style-type: none"> <li>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-Jun) FY2022: approx.US\$320/t → FY2023: approx.US\$200/t</li> </ul>										

## Consolidated: Revenue / Expenditure Comparison

(Unit: billion yen)

	FY2022 2nd Quarter (Apr.-Sep.)	FY2023 2nd Quarter (Apr.-Sep.)	Year-on-year change	Main factors for change
<b>Operating Revenue</b>	<b>839.7</b>	<b>631.5</b>	<b>(208.2)</b>	
Electric power business	650.9	417.9	(233.0)	
Overseas business	120.6	158.4	37.7	
Other business	68.1	55.2	(12.9)	
<b>Operating Expenses</b>	<b>753.4</b>	<b>586.5</b>	<b>(166.8)</b>	Electric power business(209.7), Overseas business+42.2, Other business+0.6
<b>Operating Profit</b>	<b>86.3</b>	<b>44.9</b>	<b>(41.3)</b>	
<b>Non-operating Revenue</b>	<b>14.7</b>	<b>16.2</b>	<b>1.4</b>	
Share of profit of entities accounted for using equity method	7.5	7.1	(0.4)	
Other	7.1	9.0	1.9	
<b>Non-operating Expenses</b>	<b>14.8</b>	<b>18.7</b>	<b>3.8</b>	
Interest expenses	12.6	15.6	3.0	
Other	2.2	3.0	0.8	
<b>Ordinary Profit</b>	<b>86.1</b>	<b>42.4</b>	<b>(43.7)</b>	Electric power business (24.0), Overseas business(6.8),Other business(14.4)
Total income taxes	25.6	13.4	(12.1)	
<b>Profit attributable to owners of parent</b>	<b>58.4</b>	<b>27.7</b>	<b>(30.6)</b>	

# Consolidated: Balance Sheet

(Unit: billion yen)

	FY2022 End of FY	FY2023 End of 2Q	Change from prior year end	Main factors for change
<b>Non-current Assets</b>	<b>2,701.3</b>	<b>2,754.0</b>	<b>52.6</b>	
Electric utility plant and equipment	1,065.5	1,060.0	(5.4)	
Overseas business facilities	447.2	472.2	25.0	
Other non-current assets	89.2	92.5	3.2	
Construction in progress	572.1	568.3	(3.7)	
Nuclear fuel	76.2	76.2	0.0	
Investments and other assets	451.0	484.5	33.5	Long-term investments +36.2 (Includes impact of foreign exchange revaluation+29.1)
<b>Current Assets</b>	<b>661.3</b>	<b>694.9</b>	<b>33.6</b>	
<b>Total Assets</b>	<b>3,362.6</b>	<b>3,448.9</b>	<b>86.3</b>	
Interest-bearing debt	1,885.8	1,907.2	21.4	Non-consolidated +12.8, Subsidiaries and others +8.6
Other	284.1	267.7	(16.3)	
<b>Total Liabilities</b>	<b>2,169.9</b>	<b>2,175.0</b>	<b>5.0</b>	
Shareholders' equity	977.8	996.3	18.5	
Accumulated other comprehensive income	106.8	162.6	55.7	Foreign currency translation adjustment +41.8 Deferred gains or losses on hedges+9.2
Non-controlling interests	108.0	114.9	6.8	
<b>Total Net Assets</b>	<b>1,192.7</b>	<b>1,273.9</b>	<b>81.2</b>	
D/E ratio (x)	1.7	1.6		
Shareholders' equity ratio	32.3%	33.6%		



## 2. Revision of FY2023 Earnings Forecast

# Summary of FY2023 Earnings Forecast

※Compared to initial forecast

We revised the earnings forecast released on May 10, 2023.

- Operating revenue is estimated to decrease due to the decrease in sales volume and the fall in sales prices in Electric power business, and the fall in sales prices in Overseas business
- Operating profit and ordinary profit is estimated to decrease due to the effect of unplanned thermal power plant outage and the decrease in gross profit from JEPX, despite the increase in profit from a subsidiary in Australia that owns coal mining interest

(Unit: billion yen)

Consolidated	FY2022 Result	FY2023 Forecast	Comparison with FY2022 Result		FY2023 Initial Forecast*	Comparison with Initial Forecast	Cash dividends per share			
							Interim	Year end	Annual	
Operating Revenue	1,841.9	1,307.0	(534.9)	(29.0)%	1,513.0	(206.0)	FY2022	40 yen	50 yen	90 yen
Operating Profit	183.8	87.0	(96.8)	(52.7)%	111.0	(24.0)	FY2023	45 yen	45 yen (forecast)	90yen (forecast)
Ordinary Profit	170.7	97.0	(73.7)	(43.2)%	110.0	(13.0)				
Profit attributable to owners of parent	113.6	67.0	(46.6)	(41.1)%	76.0	(9.0)				

	Cash dividends per share		
	Interim	Year end	Annual
FY2022	40 yen	50 yen	90 yen
FY2023	45 yen	45 yen (forecast)	90yen (forecast)

※No change in dividend forecast

\* Initial Forecast: Earnings forecast released on May 10, 2023

Non-consolidated	FY2022 Result	FY2023 Forecast	Comparison with FY2022 Result		FY2023 Initial Forecast*	Comparison with Initial Forecast
Operating Revenue	1,370.7	863.0	(507.7)	(37.0)%	1,048.0	(185.0)
Operating Profit	46.5	(3.0)	(49.5)	-	32.0	(35.0)
Ordinary Profit	75.3	59.0	(16.3)	(21.7)%	62.0	(3.0)
Profit	60.0	59.0	(1.0)	(1.8)%	55.0	4.0

# Key Data

※Compared to initial forecast

■ Electric Power Business

Revenue is expected to decrease due to the decrease in electricity sales volume, and the fall in electricity sales prices

■ Overseas Business

Revenue is expected to decrease due to the fall in sales prices in the Jackson Generation Power Plant in North America

■ Other Business

Revenue is expected to increase due to the increase in coal sales volume etc. at a subsidiary in Australia that owns coal mining interests

	FY2022 Result	FY2023 Forecast	Comparison with FY2022 Result		FY2023 Initial Forecast <sup>*5</sup>	Comparison with Previous Forecast		FY2022 Result	FY2023 Forecast	FY2023 Initial Forecast <sup>*5</sup>
<b>Electric Power Sales (TWh)</b>										
<b>Electric Power Business</b>	<b>68.4</b>	<b>61.4</b>	<b>(7.0)</b>	<b>(10.2)%</b>	<b>71.4</b>	<b>(9.9)</b>	Water supply rate	94%	95%	100%
Hydroelectric Power	8.8	9.0	0.1	1.8%	9.1	(0.1)	Load factor	65%	57%	68%
Thermal Power	45.6	40.1	(5.5)	(12.2)%	48.5	(8.4)	Foreign exchange rate at term end			
Wind Power	1.0	1.1	0.1	12.0%	1.2	(0.0)	Yen/USD	132.70	145.00	130.00
Other <sup>*1</sup>	12.8	11.2	(1.6)	(12.5)%	12.4	(1.2)	Yen/THB	3.80	4.00	3.80
<b>Overseas Business<sup>*2</sup></b>	<b>14.2</b>	<b>20.5</b>	<b>6.2</b>	<b>44.0%</b>	<b>19.0</b>	<b>1.5</b>	Yen/AUD	89.57	95.00	90.00
							THB/USD	34.56	34.56	34.56
<b>Operating Revenue (Billion yen)</b>	<b>1,841.9</b>	<b>1,307.0</b>	<b>(534.9)</b>	<b>(29.0)%</b>	<b>1,513.0</b>	<b>(206.0)</b>				
<b>Electric Power Business</b>	<b>1,417.9</b>	<b>921.0</b>	<b>(496.9)</b>	<b>(35.0)%</b>	<b>1,100.0</b>	<b>(179.0)</b>				
Electric Power Sales	1,362.4	858.0	(504.4)	(37.0)%	1,022.0	(164.0)				
Renewables	146.0	135.0	(11.0)	(7.5)%	136.0	(1.0)				
Transmission/Transformation	49.5	48.0	(1.5)	(3.0)%	48.0	0.0				
<b>Overseas Business<sup>*3</sup></b>	<b>277.5</b>	<b>291.0</b>	<b>13.5</b>	<b>4.9%</b>	<b>326.0</b>	<b>(35.0)</b>				
<b>Other Business<sup>*4</sup></b>	<b>146.4</b>	<b>95.0</b>	<b>(51.4)</b>	<b>(35.1)%</b>	<b>87.0</b>	<b>8.0</b>				

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

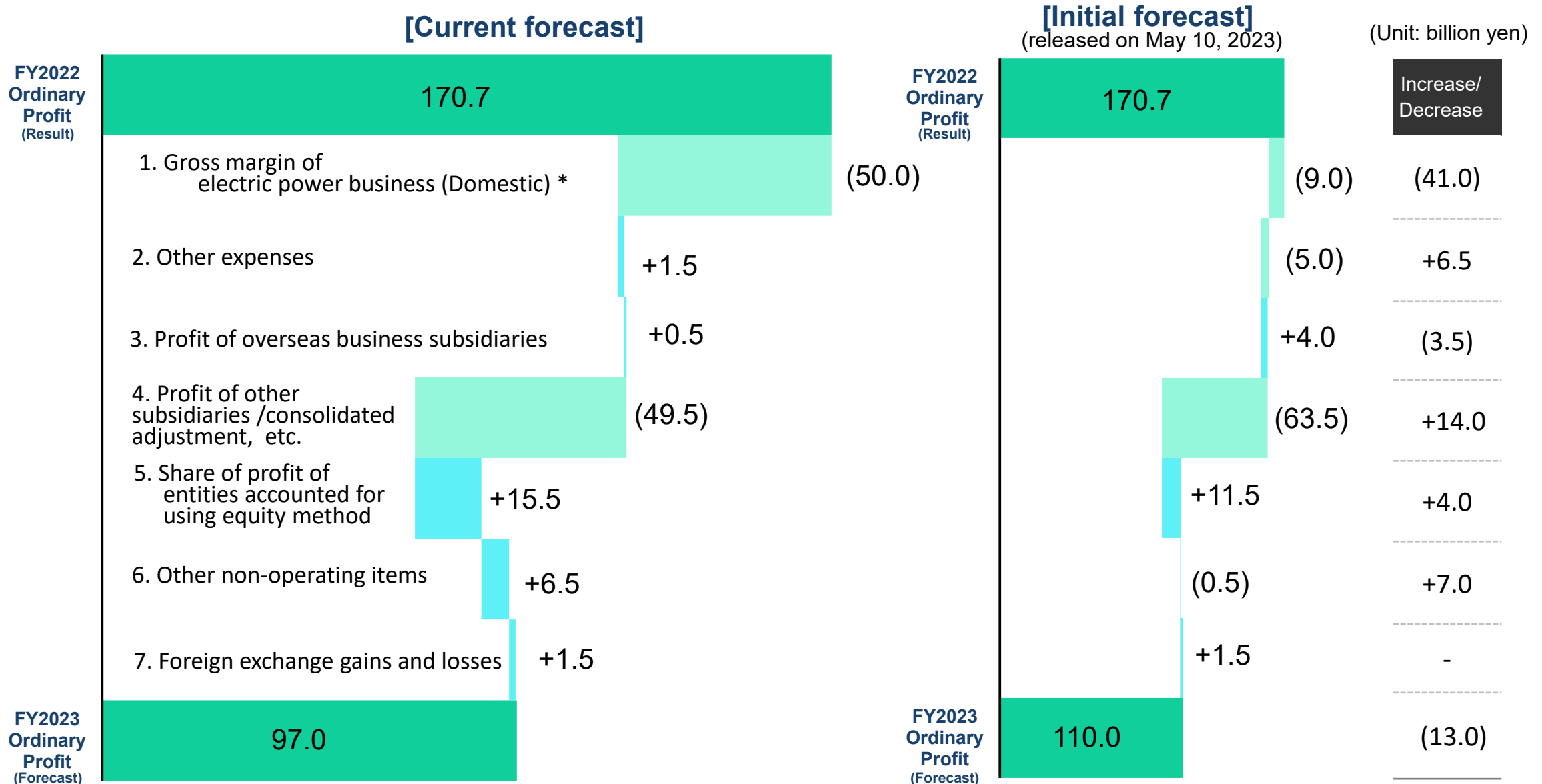
\*2 Electric power sales volume of overseas consolidated subsidiaries (Electric power sales volume of equity method affiliated companies is not included.)

\*3 Sales for the overseas business segment (Sales from overseas consolidated subsidiaries and overseas consulting business, etc.)

\*4 "Other business" is composed of "Electric power-related business" segment and "Other business" segment.

\*5 Earnings forecast released on May 10, 2023

# FY2023 Earnings Forecast (Main Factors for Change)



\* Domestic electric power business revenue (hydro, thermal, wind and other) – Fuel costs, etc.



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

(Unit: billion yen)

※Compared to initial forecast

<p><b><u>1. Gross margin of electric power business (Domestic) (41.0)</u></b></p> <ul style="list-style-type: none"> <li>• Decrease in gross profit from JEPX sales due to lower JEPX prices and resource price impact, etc.</li> <li>• Increase in unplanned outages</li> <li>• Decrease in revenue of renewable energy</li> </ul>	<p><b><u>4. Profit of other subsidiaries / consolidated adjustment, etc. +14.0</u></b></p> <ul style="list-style-type: none"> <li>• A subsidiary in Australia that owns coal mining interests Increase in sales volume, foreign exchange effects, etc.</li> </ul>
<p><b><u>2. Other expenses +6.5</u></b></p> <ul style="list-style-type: none"> <li>• Decrease in other expenses Decrease in waste disposal costs, etc.</li> </ul>	<p><b><u>5. Share of profit of entities accounted for using equity method +4.0</u></b></p> <ul style="list-style-type: none"> <li>• Overseas...+4.0</li> <li>• Domestic...±0.0</li> </ul>
<p><b><u>3. Profit of overseas business subsidiaries (3.5)</u></b></p> <ul style="list-style-type: none"> <li>• Jackson Generation Power Plant in North America (4.0) Decrease in electricity sales prices</li> <li>• Power generation projects in Thailand +0.5 Foreign exchange effect, etc.</li> </ul>	<p><b><u>6. Other non-operating items +7.0</u></b></p> <ul style="list-style-type: none"> <li>• Gain on sales of fixed assets and sales of securities, etc.</li> </ul> <p><b><u>7. Foreign exchange gains and losses -</u></b></p> <ul style="list-style-type: none"> <li>• No change from the initial forecast (Initial forecast: Decrease in foreign exchange losses...+1.5)</li> </ul>

A background image of a blue molecular structure with glowing spheres and connecting rods, set against a dark blue gradient.

### **3. Initiatives Aimed at Enhancing Corporate Value**

# Initiatives Aimed at Enhancing Corporate Value

- J-POWER is working to improve capital efficiency by replacing its business portfolio and considering the introduction of indicators for capital efficiency management.
- We recognize that our stock price incorporates risks inherent in our business, in addition to the growing uncertainty of the electric power business. We will consider measures to improve capital efficiency while appropriately responding to these risks, and plan to reflect them in the new medium-term management plan to be announced in FY2024.

## Analysis/ Valuation

1

### Return on capital Cost of capital

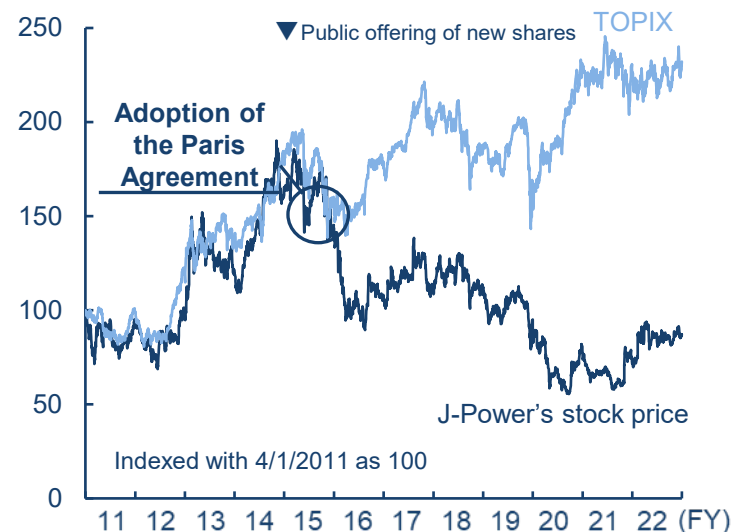
- ✓ ROE in the last two years has remained above CAPM-based cost of Shareholders Capital, while PBR has been stagnant.
- ✓ In comparison with other companies in the same industry, we confirmed the trend that the higher the ROE, the higher the PBR.

	2019	2020	2021	2022
ROE	5.3%	2.8%	8.1%	11.4%
Shareholders Capital Cost	6% CAPM-based			
PBR				
At the end of fiscal year	0.5x	0.4x	0.3x	0.4x

2

### Market Valuation

- ✓ We understand that the market is looking for a higher return than the above cost of Shareholders Capital, incorporating as risk the progress of thermal power transitions in the face of the expected decline in coal-fired power business, Ohma nuclear power plan, and uncertainty about the contribution of renewable energy projects to earnings.
- ✓ Our stock price deviated significantly from TOPIX around the time of adoption of the Paris Agreement, reflecting concerns about the future of the coal-fired power business.



## Direction for Improvement

- ✓ Aggressively invest management resources in renewable energy and overseas businesses, positioning them as growth areas
  - Renewable energy business will strengthen profitability through diversification of sales, etc.
- ✓ Improve predictability of medium- and long-term issues such as thermal power transitions and Ohma nuclear power plan.
  - Clear path for thermal power transitions and future conversion to hydrogen power generation
- ✓ Establish a system to measure capital efficiency and take appropriate improvement measures by introducing indicators for capital efficiency management
- ✓ Continuous efforts to enhance disclosure and engage in active dialogue with the capital market

Date of disclosure of improvement initiatives, etc.

- ✓ The new medium-term management plan for FY2024 and beyond, which is currently under consideration, will reflect and disclose specific initiatives based on the direction of improvement described above.

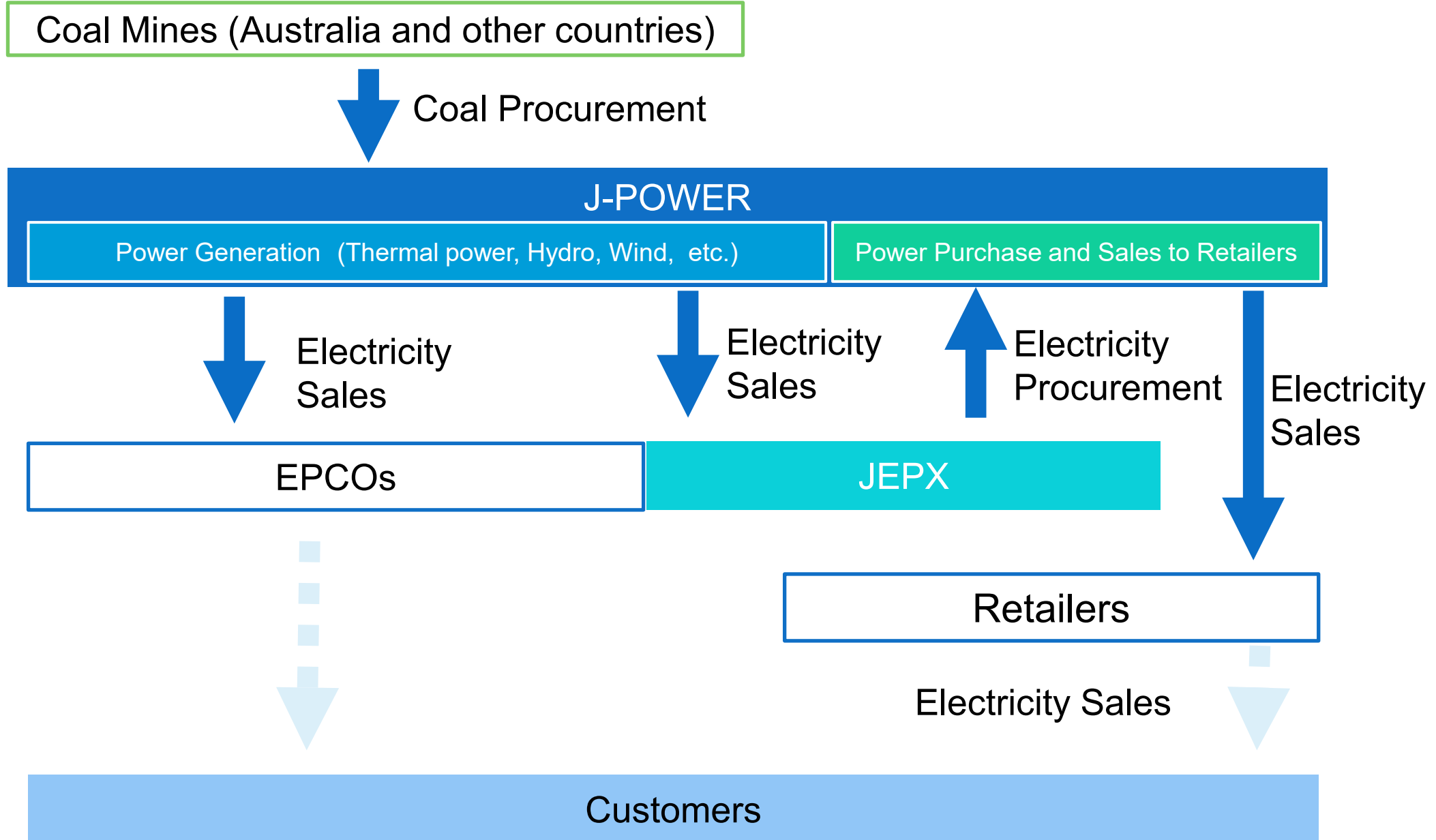
A photograph of several offshore wind turbines in the ocean under a clear blue sky. The turbines are white with yellow bases. The image is partially obscured by a white diagonal shape on the right side of the slide.

## Appendix

## Appendix

1.	Main Flow of Domestic Electricity Business	...	21	10.	Global Business Expansion and J-POWER Group's Integrated Strengths	...	30
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5.	Upcycling to next-generation hydropower plants NEXUS Sakuma	...	25	14.	Investments for Transition	...	35
6.	Ohma Nuclear Power Project	...	26	15.	J-POWER Group's Green/Transition Finance Framework	...	36
7.	Hydrogen production and use in existing thermal power plants GENESIS Matsushima	...	27	Non-Consolidated and Consolidated Financial Data		...	38
8.	Establishment of joint venture for CCS in Japan	...	28	Monthly Electricity Sales		...	43
9.	Feasibility Study for Large-scale CCS in Japan	...	29				

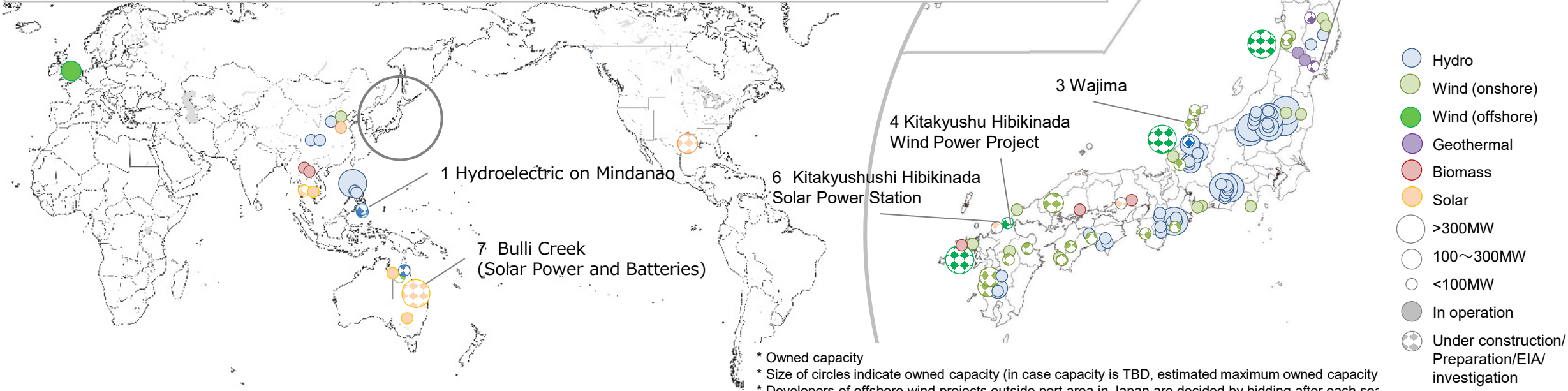
# 1. Main Flow of Domestic Electricity Business



## 2. Expansion of Renewable Energy

Hydroelectric	Participation in hydroelectric power generation projects on Mindanao, the Republic of the Philippines (Bulanog Batang Hydro)	1
Onshore wind	Under construction of “Ishikari Hachinosawa wind farm”	2
	Under preparation for construction of “Wajima wind farm”	3
Offshore wind	Started construction of Kitakyushu Hibikinada Offshore Wind Power Project	4
Geothermal	Under resource volume research in Takahinatayama-area	5
Solar Power	Under construction of “Kitakyushushi Hibikinada Solar Power Station”	6
Solar Power and Batteries	Signed joint development agreement for Solar Power and Batteries Project at Bulli Creek	7
Biomass	Signed MoU with Vinafor for Joint Examination of Biomass Business Development in Vietnam	

**Strategic investment plan**  
**More than 400 billion yen by FY2030**  
**Strategic investment in renewable energy**



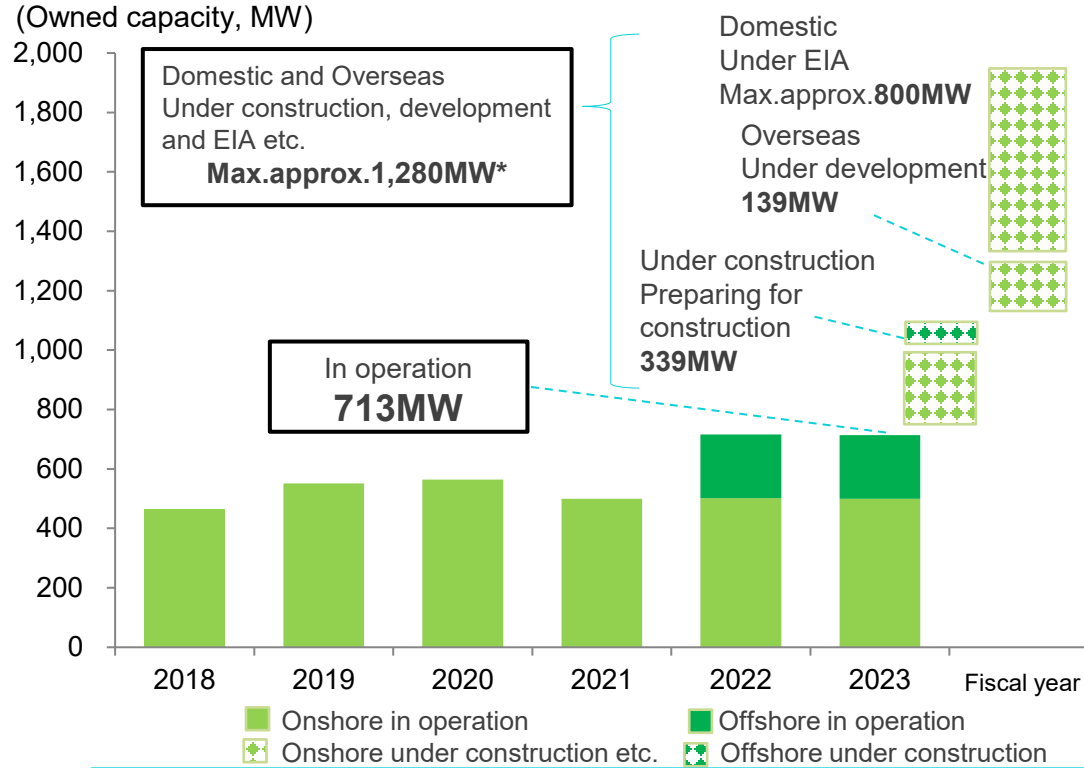
(As of September 30, 2023)

\* 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.

# 3. Renewable Energy Development Projects (Wind)

(As of September 30, 2023)

**Projects** \*Excluding domestic outside port and port area offshore wind power



<u>Under construction</u> Kaminokuni No.2*1 Minami Ehime No.2*2 etc.	<u>Preparing for construction</u> Wajima etc.	<u>Under renewal construction</u> New Tomamae*4 New Nikaho Kogen etc.
<u>Under development</u> Kidston Stage 3 Wind(Australia)*3	<u>Under environmental impact assessment</u> Reihoku Kunimiyama Kita-Kagoshima, etc.	

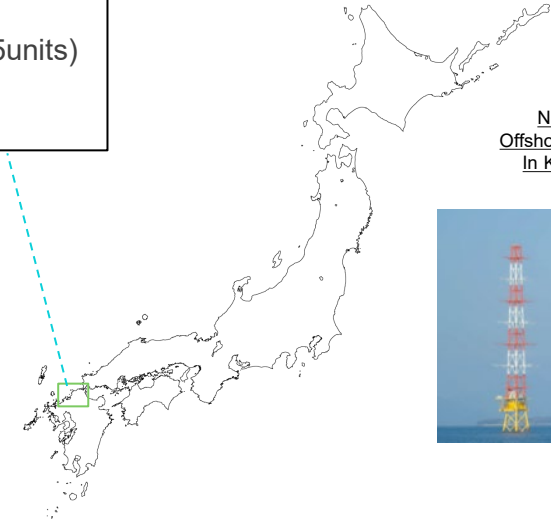
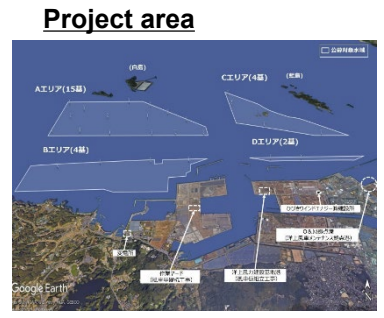
\*1 Presents only phase 1 construction. Total plan amounts up to 120.4MW  
 \*2 Total plan amounts up to 40.8MW  
 \*3 Conducted jointly with Genex Power Limited.  
 The owned capacity includes 7.7% stake in Genex, in addition to the 50% stake held by the Company under the development funding agreement.

\*4 Commercial operation starts on October 20, 2023

\*5 Conducted jointly with Kyuden Mirai Energy Company, Incorporated, Hokutaku Co., LTD, Saibu Gas Co. Ltd. and Kyudenko Corp.

## Domestic Offshore

**Kitakyushyu-Hibikinada\*5**  
 Start of Construction :March 2023  
 Start of operation :FY2025(planned)  
 Port area  
 Max.approx.220MW  
 (Rated power output 9.6MW\*25units)  
 Owned capacity 40%  
 =Max.approx.88MW



\*We will consider and respond to each location for open tendering toward the realization of offshore wind power in outside port area.

## Overseas Offshore

**Triton Knoll**  
 Start of commercial operation :April 2022  
 UK  
 857MW  
 Ownership 25%  
 Owned Capacity 214MW





## 4. Renewable Energy Development Projects (Hydro, Geothermal, Solar)

(As of September 30,2023)

Hydro	Project	Capacity	Ownership	Owned capacity	Note
	Ogamigo Repowering	20.0MW→21.3MW	100%	20.0MW→21.3MW	Start of operation : FY2024 (planned)
	Suezawa Repowering	1.5MW→2.2MW	100%	1.5MW→2.2MW	Start of operation : FY2024 (planned)
	Nagayama Repowering	37.0MW→39.5MW	100%	37.0MW→39.5MW	Start of operation : After FY2025 (planned)
	Onabara	0.9MW	100%	0.9MW	Start of operation : FY2026 (planned)
	K2 Hydro (Australia, Pumped hydro)	250MW	7.7%	19.3MW	Start of operation : 2024 (planned)
	Bulanog Batang Hydro (Philippines)	33.5MW	40%	13.4MW	Start of operation : 2029 (planned)
Geo-thermal	Project	Capacity	Ownership	Owned capacity	Note
	Appi	14.9MW	15%	2.2MW	Start of operation : April 2024 (planned)
	Takahinatayama-area	-	-	-	Under research for development
Solar	Project	Capacity	Ownership	Owned capacity	Note
	Kitakyushushi Hibikinada	30.0MW	100%	30.0MW	Start of operation : FY2024 (planned)
	Himejishi Oshio	2.0MW	100%	2.0MW	Start of operation : FY2024 (planned)
	Refugio (USA)	400.0MW	25%	100.0MW	Start of operation : After 2023 (planned)
	Rooftop solar (Thailand, 7 projects)	total 9.6MW	60%	5.8MW	Start of operation : After 2023 (planned)
Bulli Creek* <sup>1</sup> (Australia)	2,000MW	53.9% <sup>2</sup>	1,077MW	Scheduled to be developed in phases	

\*<sup>1</sup>Plans to develop up to 2,000 MW of solar power and batteries combined.

\*<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%.

## 5. Upcycling to next-generation hydropower plants NEXUS Sakuma

- Under the NEXUS Sakuma project, we are proceeding with design of main electric facilities and buildings and preliminary preparation construction for the start of construction.
- By focusing on not only repowering for aged facilities, but also hydropower generation / areas and basins / people, we keep challenging to realize next-generation hydropower plants.

### NEXUS Sakuma project



[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)



Maximum output	350MW
Annual power generation	Approx. 1.4 billion kWh
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

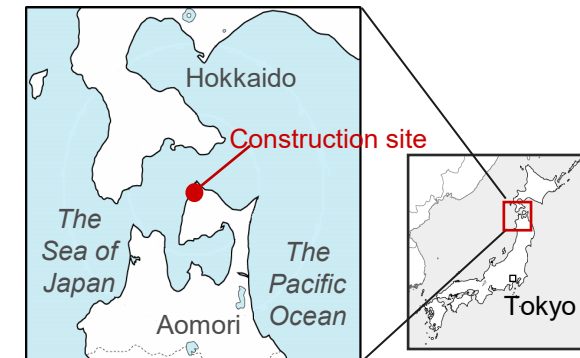
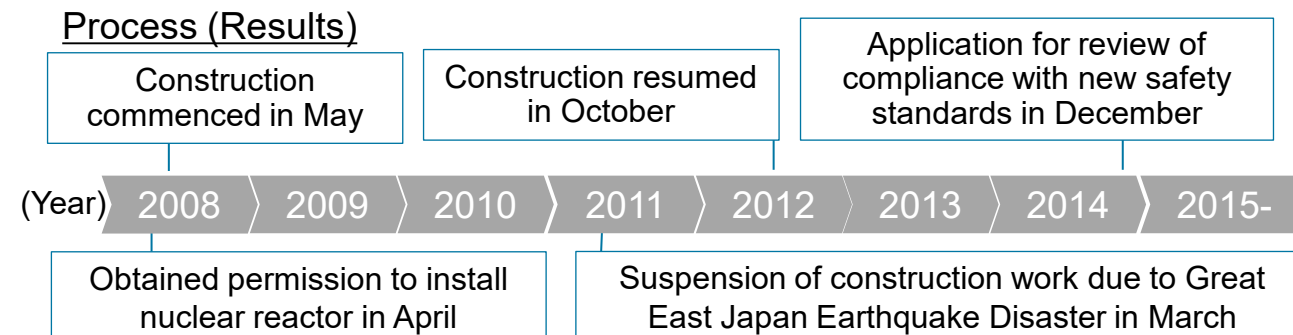
Shizuoka Tenryugawa river system

## 6. Ohma Nuclear Power Project

- In December 2014, J-POWER submitted to NRA\* 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 is 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

\* Nuclear Regulation Authority

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

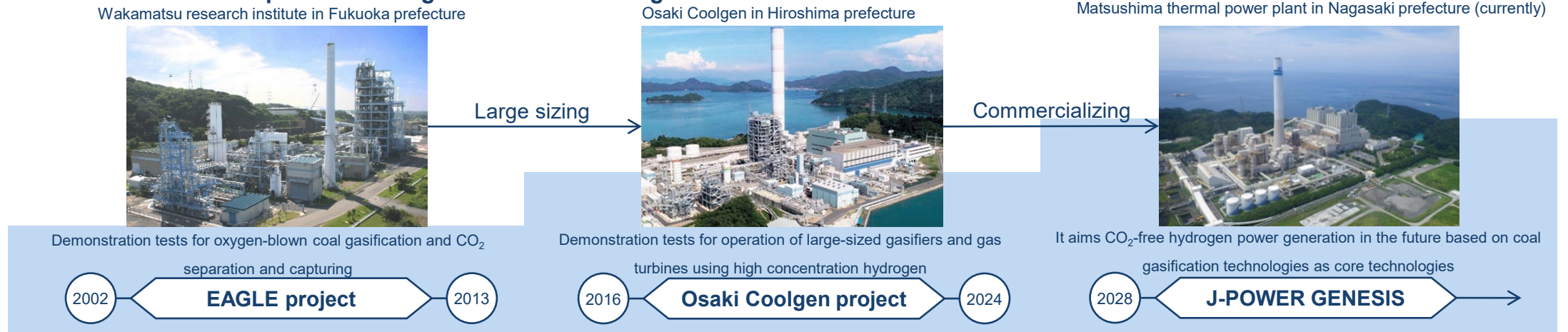


Status of construction (as of September 30, 2023)

# 7. Hydrogen production and use in existing thermal power plants GENESIS Matsushima

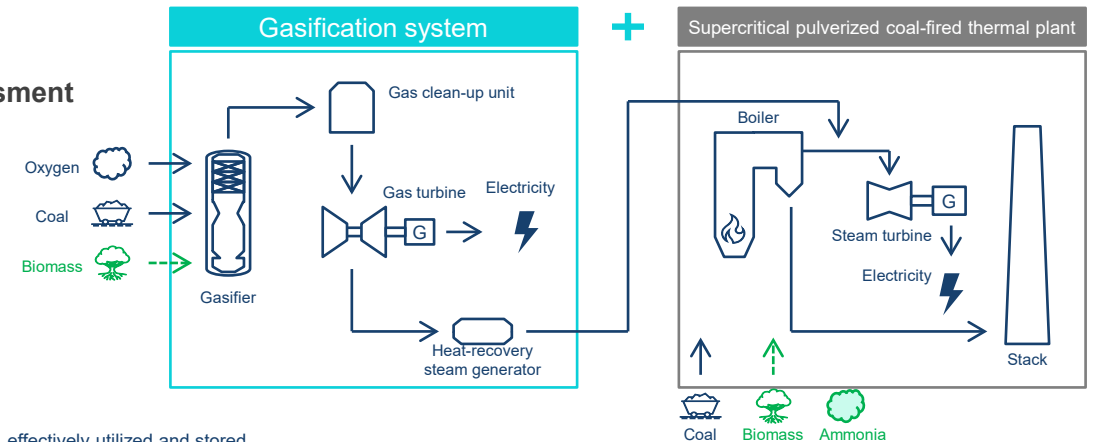
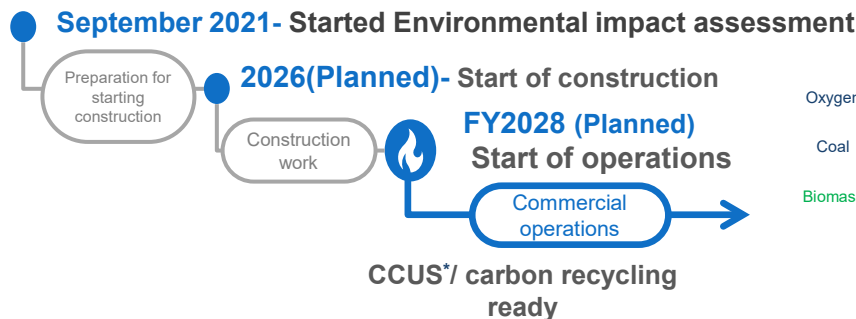
- First step toward CO<sub>2</sub>-free hydrogen power generation by commercializing the technology demonstrated in Osaki CoolGen Project.
- Upcycling by adding a gasification system to the existing facility of Matsushima thermal power plant. Enabling production and generation of electricity from gas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

- Low geopolitical risk
- Low power generation cost
- High output control function
- Improved power generation efficiency
- CO<sub>2</sub> emission reductions



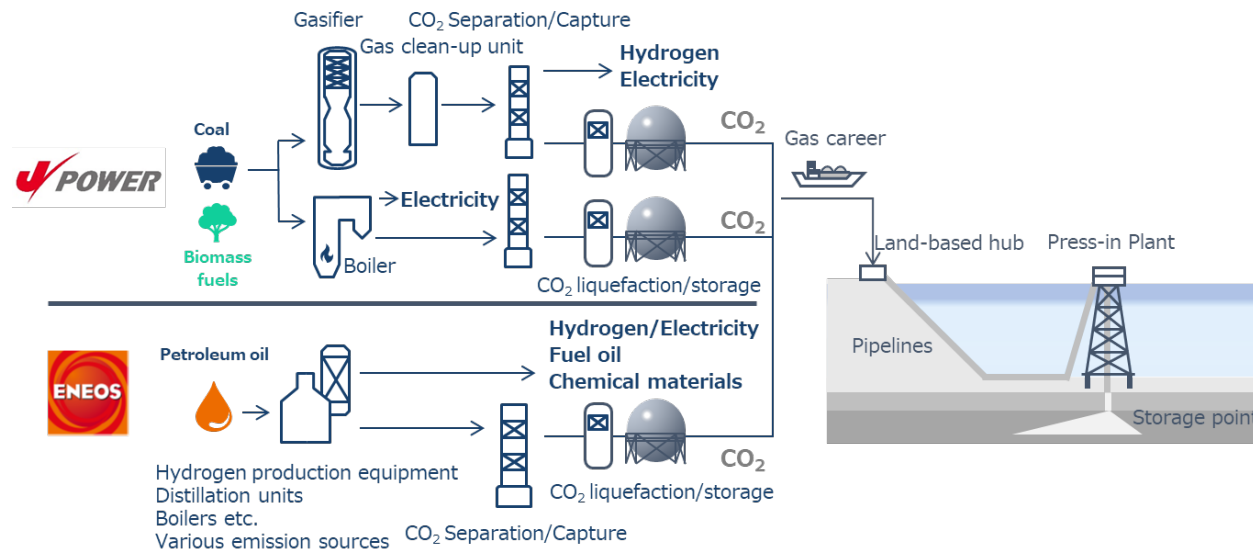
\* Carbon dioxide Capture, Utilization and Storage, meaning that CO<sub>2</sub> is separated, captured, effectively utilized and stored

## 8. 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



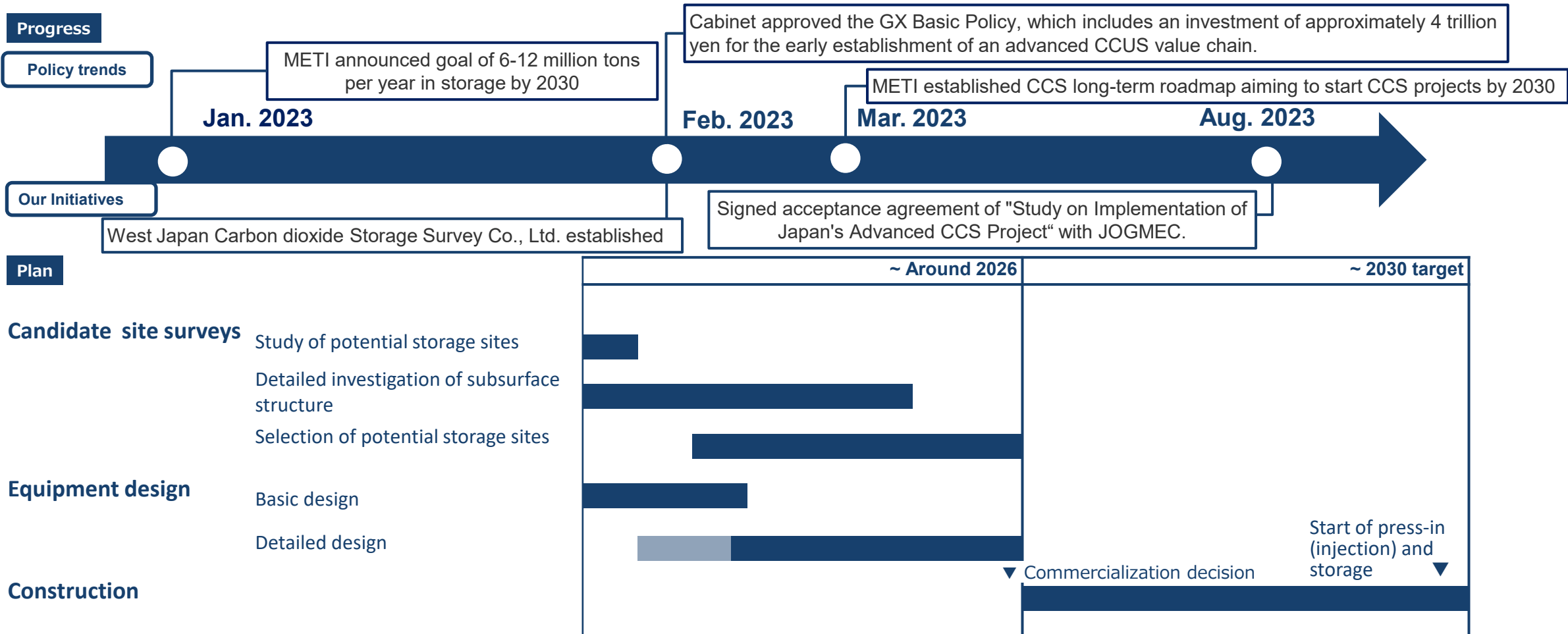
Name	West Japan Carbon dioxide Storage Survey Co., Ltd.
Established	Feb.2023
Capital	150 million yen
Location	Chiyoda ward, Tokyo

✓ 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.

# 9. 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 from 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.



# 10. Global Business Expansion and J-POWER Group's Integrated Strengths


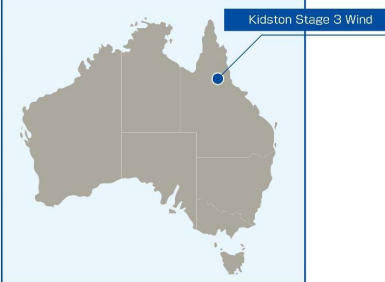

- The J-POWER group is expanding its overseas business based on and combining its unique strengths in (1)project development, (2) project promotion, and (3) portfolio management (profitability improvement and risk management)
- J-POWER group as a developer acquires wide knowledge and earns profits through 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>• Gas combined power plant replacement project (EGCO Cogen)</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>

\* Genex Power Limited: Renewable power company in Australia



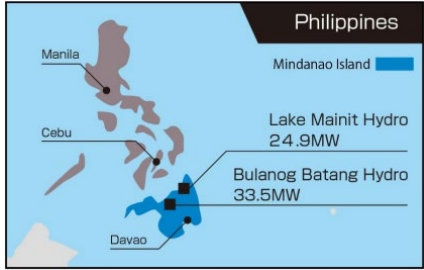
# 11. Overview of Overseas Projects under Development (As of September 30, 2023)

Project	Overview
<p><b>Refugio (USA)</b></p> <p>Capacity: 400MW            Type: Solar            Ownership: 25%            Status: Under development            Start of operation (planned) : After 2023</p>	<ul style="list-style-type: none"> <li>The joint project with AP Solar (local developer for solar power generation in Texas)</li> <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> 
<p><b>Kidston Stage-3 Wind (Australia)</b></p> <p>Capacity: 258MW            Type: Onshore wind            Ownership: 53.9%*            Status: Under development            Start of operation (planned) : 2026</p>	<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> 
<p><b>Bulli Creek (Australia)</b></p> <p>Capacity: 2,000MW (maximum)            Type: Solar power and batteries            Ownership: 53.9%*            Status: Under development</p>	<ul style="list-style-type: none"> <li>Plans to develop up to 2,000 MW of solar power and batteries in phases with Genex at Bulli Creek site in southern Queensland</li> <li>Signed a Joint Development Agreement with Genex to acquire a 50% interest in the business</li> </ul> 

\*The 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%



# 11. Overview of Overseas Projects under Development (As of September 30, 2023)

Project	Overview	
<p><b>EGCO Cogen power plant replacement project (Thailand)</b></p> <p>Type : Gas combined cycle            Output : Electricity 74MW            Ownership: 20%            Schedule : Under construction            Commercial operation (planned); January 2024</p>	<ul style="list-style-type: none"> <li>J-POWER participated in a replacement project for the EGCO Cogeneration Company Limited (“EGCO Cogen”) that is invested jointly with Electricity Generating Public Company Limited (“EGCO”)</li> <li>J-POWER’s first contribution to replacing a power plant in Thailand.</li> <li>Sells electricity and steam to Electricity Generating Authority of Thailand (EGAT) and neighboring industrial users</li> <li>By introducing the latest technology, energy utilization efficiency will improve. As well, greenhouse gas emissions will be reduced, helping to achieve low carbonization goals</li> </ul>	
<p><b>Rooftop solar (7 projects, Thailand)</b></p> <p>Capacity: total 9.6MW            Type: Solar            Ownership: 60%            Status: Under development and construction            Start of operation: Each project will commence commercial operation after 2023</p>	<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>	
<p><b>Hydroelectric power generation projects on Mindanao (Philippines)</b></p> <p>Bulanog Batang Hydro            Capacity: 33.5MW            Type: Hydro            (run-of-river system)            Ownership: 40%            Status: Under development            Start of operation (planned) : 2029</p>	<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>	
<p><b>Biomass Business Development (Vietnam)</b></p>	<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>	

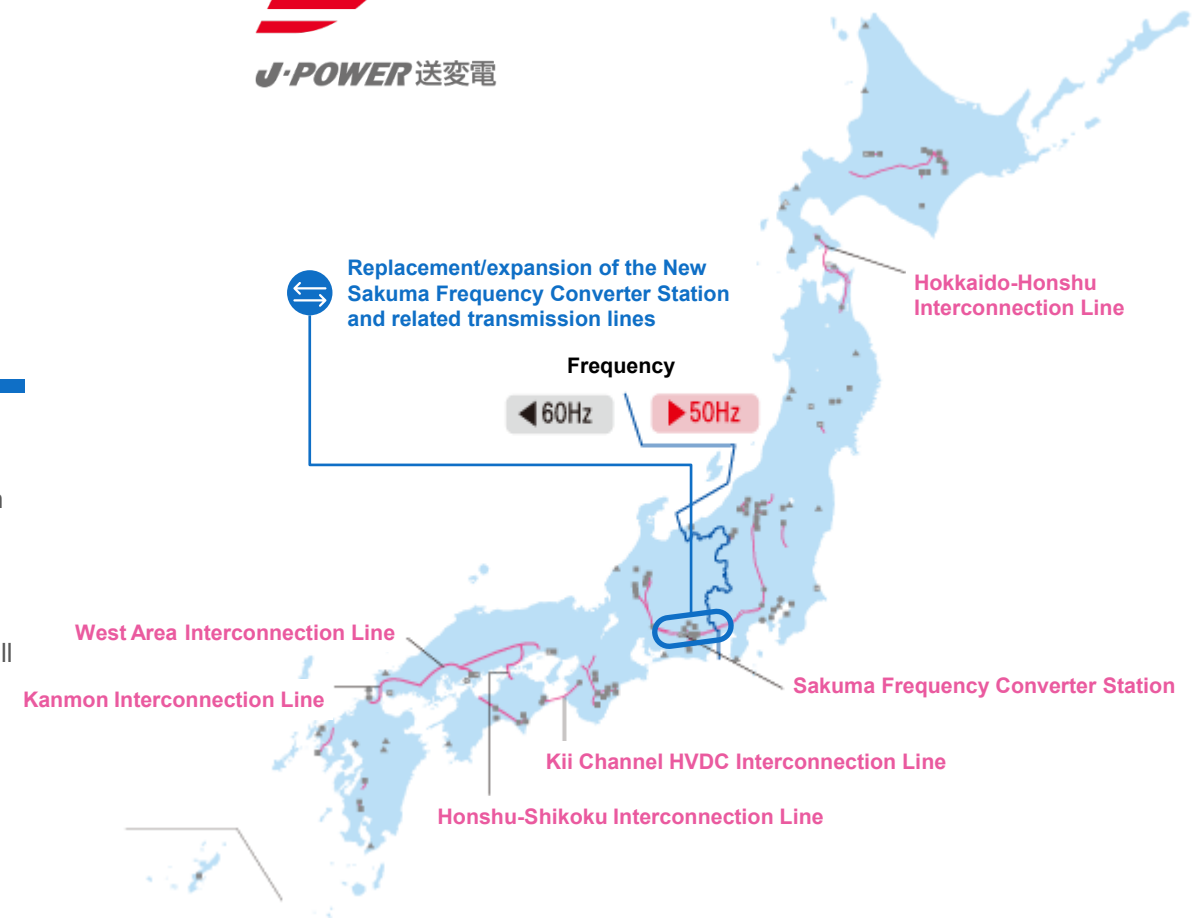
# 12. Contributing to the enhancement of power networks

- 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	<b>Transmission lines</b>	<b>Substations</b>
	Total length: approximately <b>2,400km</b>	<b>4 locations</b>
	<b>AC/DC converter stations</b>	<b>Frequency converter stations</b>
	<b>4 locations</b>	<b>1 location</b>



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

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.

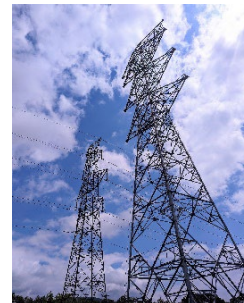
Today's most pressing issues also include the need to sophisticate maintenance due to over-aging deterioration and strengthen resilience against intensifying natural disasters. J-POWER will continue to contribute to a stable power supply through these efforts.

In the construction phase

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

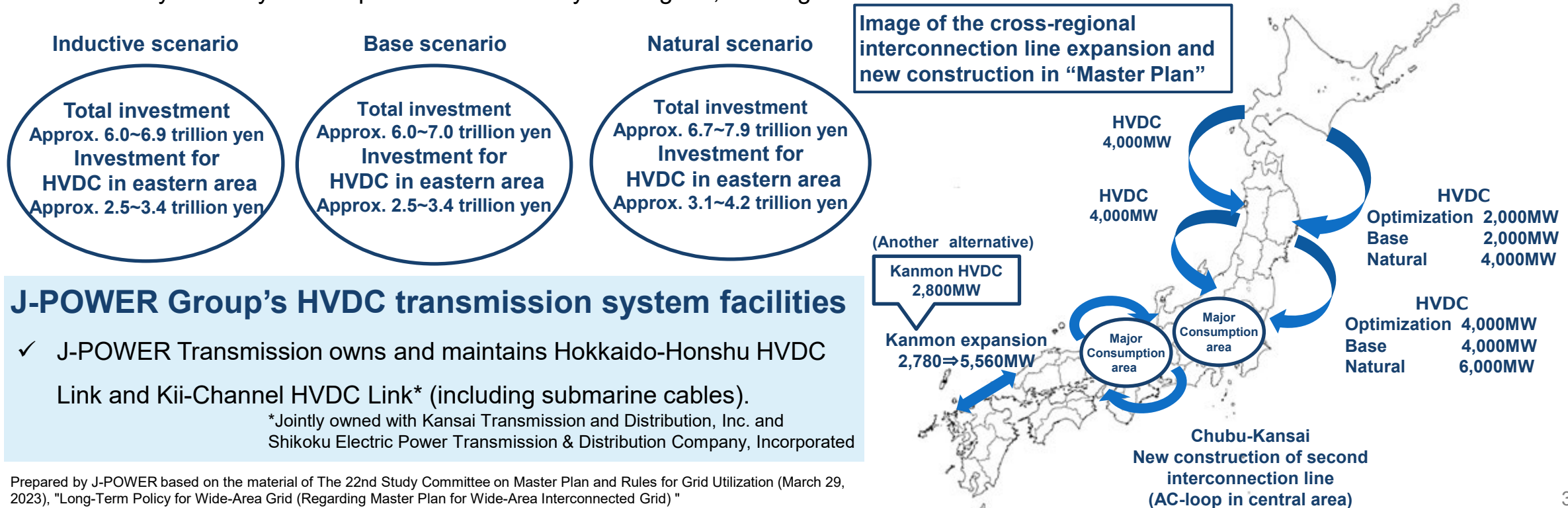
- New Sakuma Frequency Converter Station **300MW**
- Sakuma East Trunk Line etc. **Approx. 141km**

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



# 13. Actions Taken towards HVDC Transmission System

- Japanese government has announced “Master Plan” (reinforcement of the national grids) considering the future power development on March 29, 2023.
- Three assumed scenarios for demand based on changes in load factors such as EVs, heat pumps, and location of renewable energy demand were published.
- Suitable places for renewable power generation such as off-shore, on-shore, solar power generation are mainly located in Kyushu, Hokkaido, and Tohoku area. Because of this utilization of renewable power requires long-distance transmission of massive power to the point of consumption. Therefore, the introduction of HVDC transmission system, which has benefits from the viewpoint of cost, efficiency flexibility of the operation and stability of the grids, is being studied.

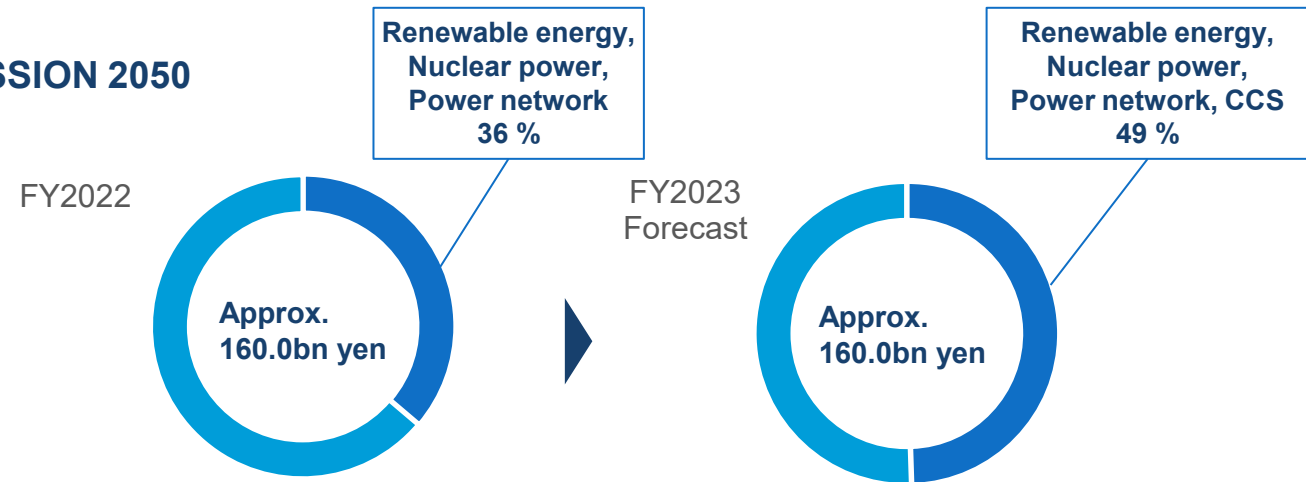


# 14. Investments for Transition

## Investment result and forecast Investment Cash Flow

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

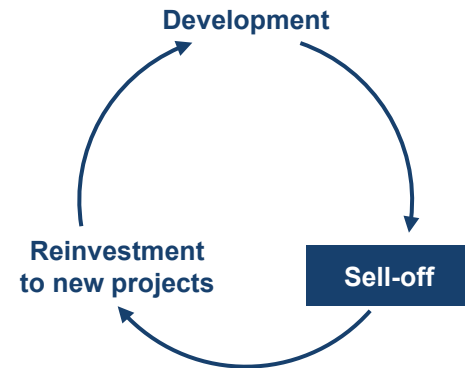
Expansion of CO <sub>2</sub> -free power sources	Renewable energy
	Nuclear power
Push for zero-emission power sources	CO <sub>2</sub> -free hydrogen power generation
	CO <sub>2</sub> -free hydrogen production
Electric power network	Stabilization of electric power networks
	Enhancement of electric power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



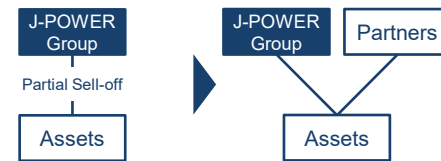
\*The above figures are current estimates and may change depending on future conditions.  
 \*The above graphs do not include the recovery of investments and loans in the investment CF.

## 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. Furthermore, we have started studying of introducing Return on Invested Capital (ROIC) for improving capital efficiency.

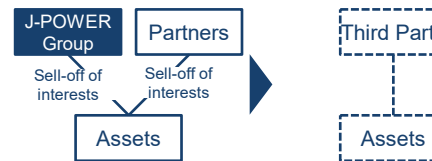


### Development → Partial Sell-off and Operation



**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.

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

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

J-POWER"BLUE MISSION 2050"'s 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 generation 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.

\*Potential Funding Objectives of Green Finance ※The use of funds is defined on a case-by-case basis, undecided at this time.

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

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

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

\*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

\*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.

Examples of Transition-Linked Loan Financing			
Borrowing date	February 28, 2023	September 29, 2023	September 29, 2023
Borrowing Amount	30 billion yen	10 billion yen	10 billion yen
Borrowing period	5 years	7 years	10 years
Lender	Domestic financial institutions	Domestic financial institutions	Domestic financial institutions
Third-party evaluator	DNV BUSINESS ASSURANCE JAPAN K.K.		

## Consolidated: Revenues and Expenses

(Unit: 100 million yen)

	FY2019	FY2020	FY2021	FY2022	FY2022 2Q	FY2023 2Q
<b>Operating revenue</b>	<b>9,137</b>	<b>9,091</b>	<b>10,846</b>	<b>18,419</b>	<b>8,397</b>	<b>6,315</b>
Electric utility operating revenue	6,841	7,313	8,764	14,179	6,509	4,179
Overseas business operating revenue	1,790	1,380	1,451	2,775	1,206	1,584
Other business operating revenue	505	397	630	1,464	681	552
<b>Operating expenses</b>	<b>8,301</b>	<b>8,313</b>	<b>9,976</b>	<b>16,580</b>	<b>7,534</b>	<b>5,865</b>
<b>Operating profit</b>	<b>836</b>	<b>777</b>	<b>869</b>	<b>1,838</b>	<b>863</b>	<b>449</b>
<b>Non-operating income</b>	<b>265</b>	<b>112</b>	<b>225</b>	<b>247</b>	<b>147</b>	<b>162</b>
Share of profit of entities accounted for using equity method	113	27	142	91	75	71
Foreign exchange gains	74	6	-	-	-	-
Other	77	77	82	156	71	90
<b>Non-operating expenses</b>	<b>320</b>	<b>280</b>	<b>366</b>	<b>378</b>	<b>148</b>	<b>187</b>
Interest expenses	262	237	224	273	126	156
Foreign exchange losses	-	-	75	11	6	3
Other	57	43	66	93	15	27
<b>Ordinary profit</b>	<b>780</b>	<b>609</b>	<b>728</b>	<b>1,707</b>	<b>861</b>	<b>424</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>584</b>	<b>277</b>

## Non-consolidated: Operating Revenues & Expenses

(Unit: 100 million yen)

	FY2019	FY2020	FY2021	FY2022	FY2022 2Q	FY2023 2Q
<b>Operating revenue</b>	<b>5,712</b>	<b>5,899</b>	<b>7,900</b>	<b>13,707</b>	<b>6,309</b>	<b>3,922</b>
<b>Electric power business</b>	<b>5,638</b>	<b>5,838</b>	<b>7,810</b>	<b>13,533</b>	<b>6,203</b>	<b>3,893</b>
Sold power to retailers	-	-	6	11	5	1
Sold power to other suppliers	5,104	5,660	7,672	13,373	6,132	3,829
Other*	533	177	132	149	65	62
<b>Incidental business</b>	<b>74</b>	<b>61</b>	<b>89</b>	<b>173</b>	<b>106</b>	<b>29</b>
<b>Operating expenses</b>	<b>5,464</b>	<b>5,120</b>	<b>7,721</b>	<b>13,241</b>	<b>6,114</b>	<b>3,970</b>
<b>Electric power business</b>	<b>5,397</b>	<b>5,065</b>	<b>7,637</b>	<b>13,075</b>	<b>6,013</b>	<b>3,944</b>
Personnel expense	358	318	201	206	97	123
Amortization of the actuarial difference in retirement benefits	24	28	(70)	(75)	(37)	(19)
Fuel cost	2,332	1,937	2,985	7,621	3,276	2,035
Repair and maintenance cost	666	441	515	419	241	188
Depreciation	527	552	559	589	293	291
Other	1,512	1,814	3,375	4,238	2,104	1,304
<b>Incidental business</b>	<b>66</b>	<b>55</b>	<b>84</b>	<b>166</b>	<b>101</b>	<b>26</b>
<b>Operating profit</b>	<b>248</b>	<b>778</b>	<b>178</b>	<b>465</b>	<b>194</b>	<b>(47)</b>

\* "Other" shows transmission revenue and other electricity revenue. Due to the split of transmission business in April, 2020, "Other" for FY2020 shows only other electricity revenue



# Consolidated: Segment Information

(Unit: 100 million yen)

		FY2019	FY2020	FY2021	FY2022	FY2022 2Q	FY2023 2Q	YoY
Electric power	Sales	6,860	7,334	8,788	14,202	6,521	4,191	(2,330)
	Ordinary profit	274	190	266	545	271	31	(240)
Electric power-related	Sales	4,005	3,741	2,439	3,217	1,334	1,135	(198)
	Ordinary profit	185	122	258	928	414	275	(138)
Overseas	Sales	1,790	1,380	1,451	2,775	1,206	1,584	377
	Ordinary profit	339	308	220	226	179	110	(68)
Other	Sales	221	184	210	293	154	74	(80)
	Ordinary profit	5	10	12	18	7	1	(6)
Subtotal	Sales	12,878	12,641	12,889	20,489	9,216	6,985	(2,231)
	Ordinary profit	805	633	757	1,719	872	419	(453)
Elimination*	Sales	(3,740)	(3,550)	(2,043)	(2,069)	(818)	(669)	149
	Ordinary profit	(24)	(24)	(29)	(11)	(11)	5	16
Consolidated	Sales	9,137	9,091	10,846	18,419	8,397	6,315	(2,082)
	Ordinary profit	780	609	728	1,707	861	424	(437)

### “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

## Consolidated: Cash Flow

(Unit: 100 million yen)

	FY2019	FY2020	FY2021	FY2022	FY2022 2Q	FY2023 2Q
<b>Operating activities</b>	<b>1,592</b>	<b>1,679</b>	<b>1,283</b>	<b>1,558</b>	<b>(202)</b>	<b>954</b>
Profit before income taxes	655	646	728	1,707	861	424
Depreciation	830	964	969	1,076	516	532
Share of (profit) loss of entities accounted for using equity method	(113)	(27)	(142)	(91)	(75)	(71)
<b>Investing activities</b>	<b>(1,617)</b>	<b>(1,432)</b>	<b>(1,788)</b>	<b>(1,508)</b>	<b>(772)</b>	<b>(227)</b>
Purchase of non-current assets	(1,495)	(1,592)	(1,352)	(1,448)	(769)	(365)
Investments and loan advances	(109)	(25)	(497)	(78)	(13)	(9)
<b>Free cash flow</b>	<b>(24)</b>	<b>246</b>	<b>(504)</b>	<b>49</b>	<b>(975)</b>	<b>727</b>

## Consolidated: Key Ratios and Key Data

(Unit: 100 million yen)

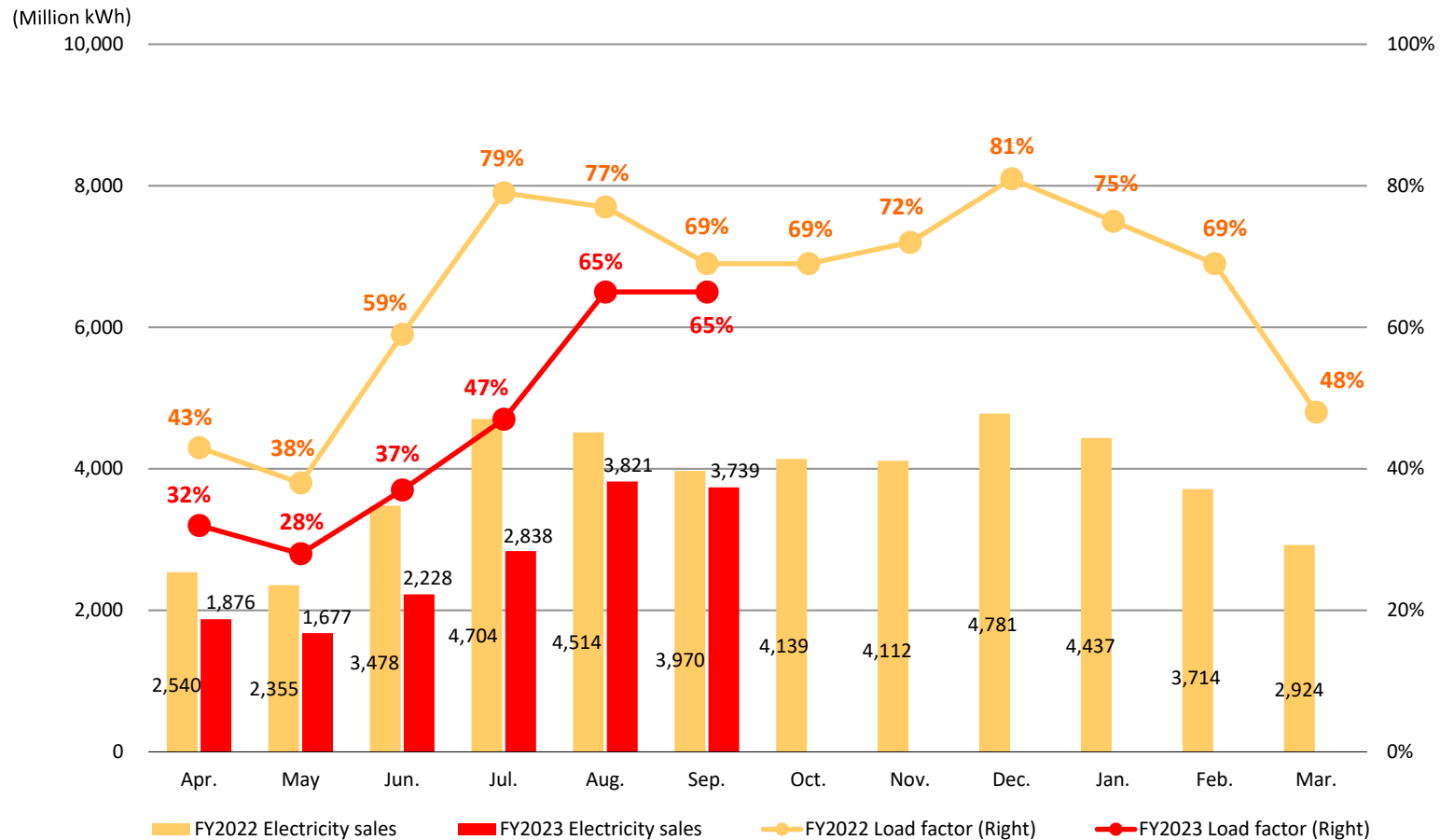
	FY2019	FY2020	FY2021	FY2022	FY2022 2Q	FY2023 2Q
<b>(PL)</b> Operating revenue	9,137	9,091	10,846	18,419	8,397	6,315
Operating profit	836	777	869	1,838	863	449
Ordinary profit	780	609	728	1,707	861	424
Profit attributable to owners of parent	422	223	696	1,136	584	277
<b>(BS)</b> Total assets	28,053	28,419	30,661	33,626	34,234	34,489
Construction in progress	6,471	5,882	6,765	5,721	5,485	5,683
Shareholders' equity	8,077	8,091	9,160	10,846	10,532	11,590
Net assets	8,573	8,536	9,641	11,927	11,119	12,739
Interest-bearing debt	16,484	16,646	17,864	18,858	20,023	19,072
<b>(CF)</b> Investing activities	(1,617)	(1,432)	(1,788)	(1,508)	(772)	(227)
Free cash flow	(24)	246	(504)	49	(975)	727
(Ref) CAPEX* <sup>1</sup>	(1,626)	(1,715)	(1,321)	(1,218)	(487)	(334)
(Ref) Depreciation	830	964	969	1,076	516	532
ROA (%)	2.8	2.2	2.5	5.3	-	-
ROA (ROA excl. Construction in progress) (%)	3.6	2.8	3.1	6.6	-	-
ROE (%)	5.3	2.8	8.1	11.4	-	-
EPS (¥)	230.96	121.85	380.70	621.50	319.14	151.65
BPS (¥)	4,412.84	4,420.39	5,004.31	5,931.68	5,759.78	6,338.22
Shareholders' equity ratio (%)	28.8	28.5	29.9	32.3	30.8	33.6
D/E ratio (x)	2.0	2.1	2.0	1.7	1.9	1.6
Number of shares issued* <sup>2</sup> (thousand)	183,048	183,048	183,048	182,861	182,862	182,870

\*<sup>1</sup> 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)

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

<ul style="list-style-type: none"> <li>Apr. 2022 - Sep. 2022 Results (cumulative)</li> <li>Load factor ⇒ 61%</li> <li>Electricity sales ⇒ 21.5 TWh</li> </ul>	<ul style="list-style-type: none"> <li>Apr. 2023 - Sep. 2023 Results (cumulative)</li> <li>Load factor ⇒ 46%</li> <li>Electricity sales ⇒ 16.1 TWh</li> </ul>
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\* Load factor of thermal power shows the results for non-consolidated only.

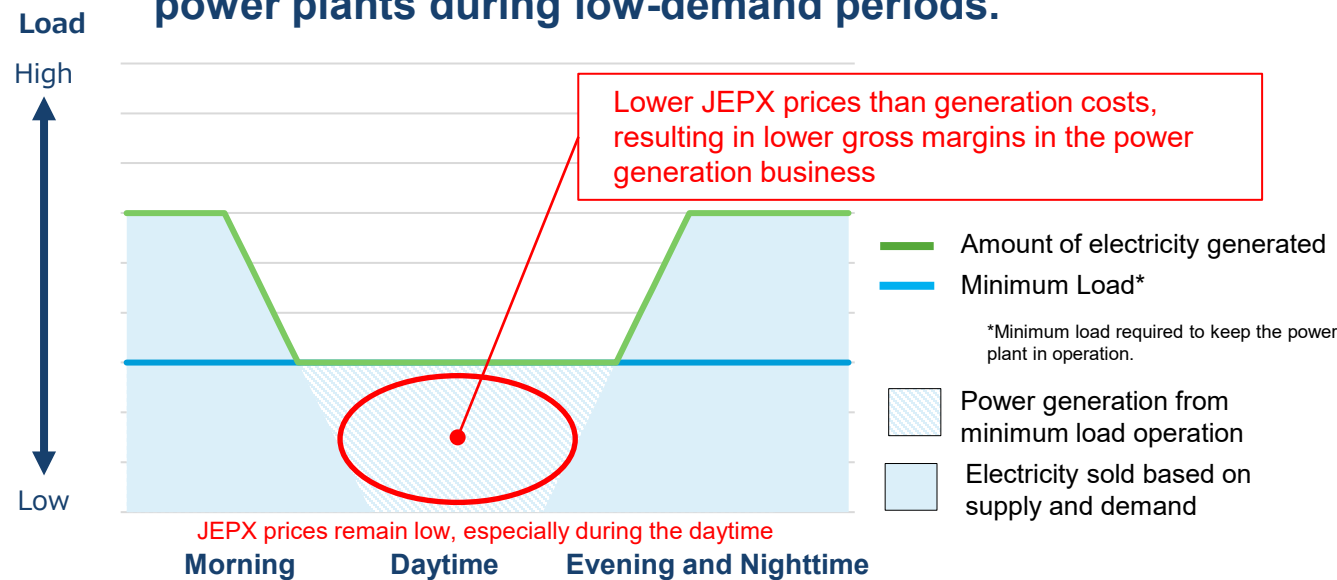
\* Proportion of equity holding is not taken into account.

# 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

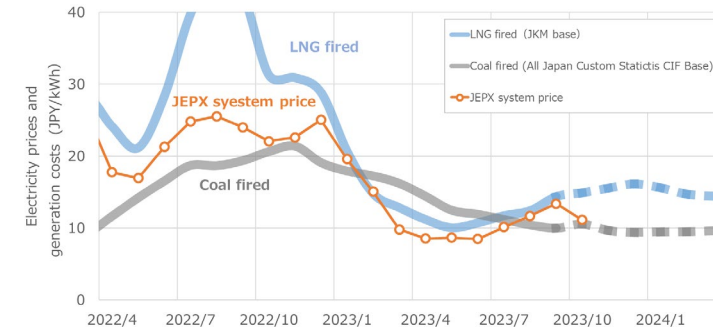
- Increased generation from renewable energy sources in western Japan and the restart of nuclear power plants have led to lower generation from thermal power plants, especially during the daytime during low-demand periods
- On the other hand, solar power generation decreases during the evening and nighttime 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.



## Relation to resource price trends

### Fluctuations in resource prices



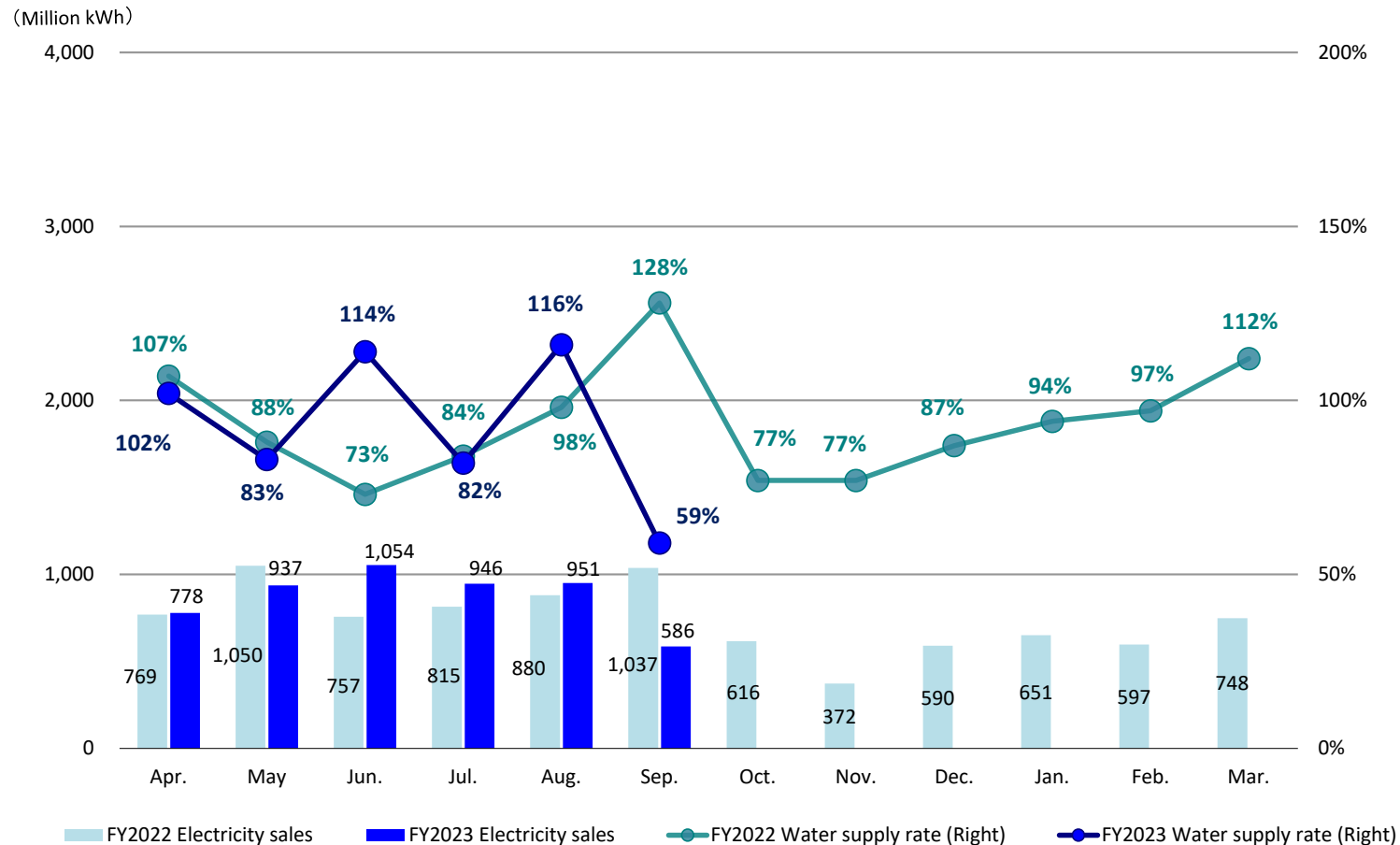
- Fuel price difference between LNG and coal affects gross margins of coal-fired power generation
- From the end of 2022 to mid-2023, the fuel price difference between LNG and coal narrowed and reversed, making it difficult to secure gross margins for coal-fired power generation.
- Generation costs calculated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

## Our Initiatives

- 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.

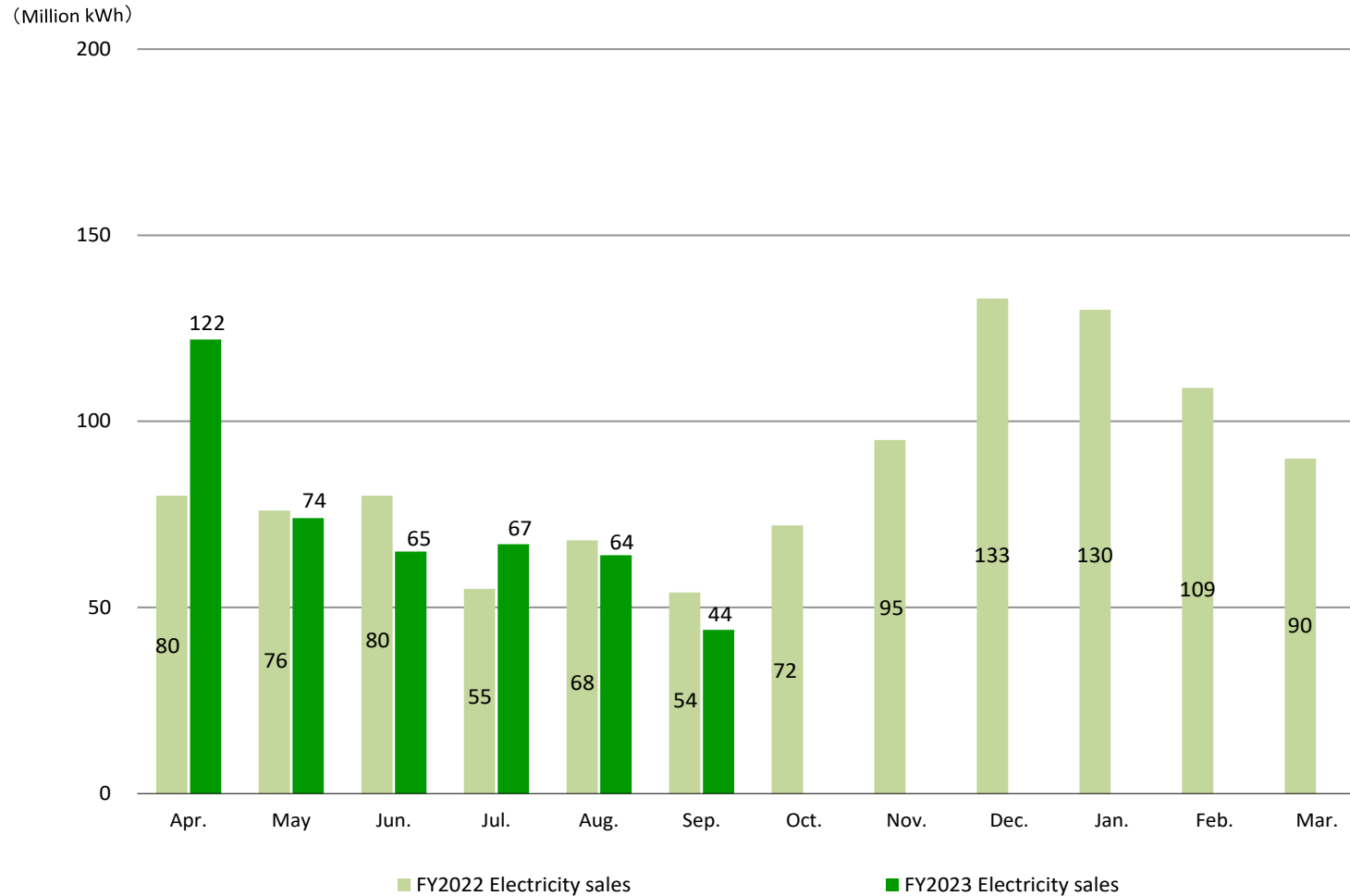
# Monthly Electricity Sales: Domestic Power Generation Business (Hydroelectric Power)

<ul style="list-style-type: none"> <li>Apr. 2022 - Sep. 2022 Results (cumulative)</li> <li>Water supply rate ⇒ 96%</li> <li>Electricity sales ⇒ 5.3 TWh</li> </ul>	<ul style="list-style-type: none"> <li>Apr. 2023 - Sep. 2023 Results (cumulative)</li> <li>Water supply rate ⇒ 92%</li> <li>Electricity sales ⇒ 5.2 TWh</li> </ul>
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# Monthly Electricity Sales: Domestic Power Generation Business (Wind Power)

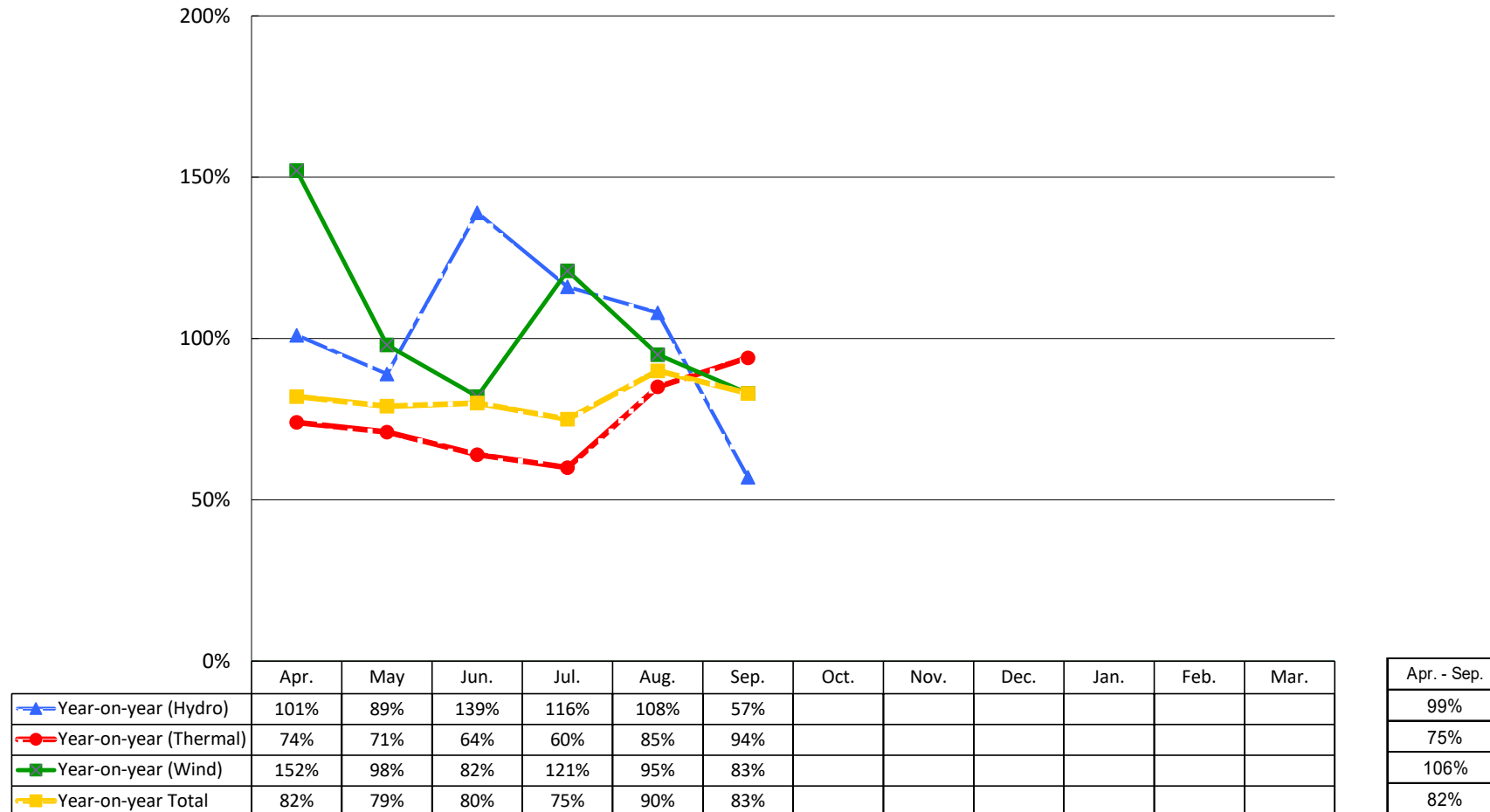
- ▶ Apr. 2022 - Sep. 2022 Results (cumulative) ⇒ 0.41 TWh
- ▶ Apr. 2023 - Sep. 2023 Results (cumulative) ⇒ 0.43 TWh



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

# Change in Monthly Electricity Sales: Domestic Power Generation Business

- ▶ Apr. 2022 - Sep. 2022 Total Results (cumulative) ⇒ 33.5 TWh
- ▶ Apr. 2023 - Sep. 2023 Total Results (cumulative) ⇒ 27.3 TWh



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





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