

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 FY2022 3rd Quarter Earnings Results

Forward Looking Statements

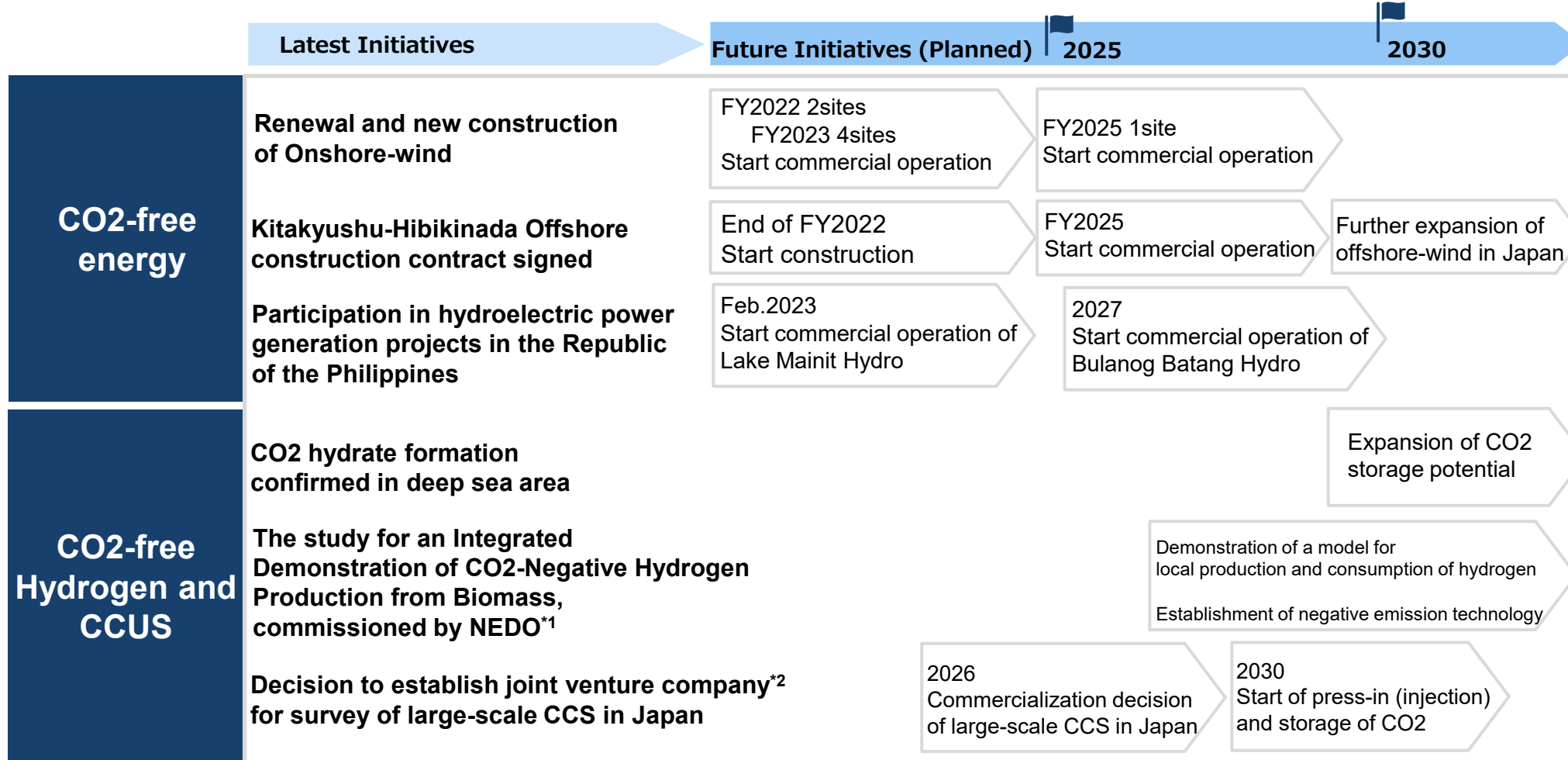
The following contains statements that constitute forward-looking statements, plans for the future, management targets, etc. relating to the Company and/or the J-POWER group. These are based on current assumptions of future events, and there exist possibilities that such assumptions are objectively incorrect 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.

Progress of Major Initiatives Toward Carbon Neutrality (Oct.2022~Jan.2023)



New Shimamaki wind-farm (trial operation)



Lake Mainit Hydro (under construction)



CO2 hydrate formation in deep sea area

[Click here to view the video.](#)

(Provided by JAMSTEC)

Financing Initiatives to Support Carbon Neutral Realization

The 3rd J-POWER Green Bond Issue

Designed J-POWER Group's Green/Transition·Finance·Framework

*1 Conducted jointly with JX Nippon Oil & Gas Exploration Corporation, and Mizuho Research & Technologies, Ltd.

*2 Conducted jointly with ENEOS Corporation, JX Nippon Oil & Gas Exploration Corporation

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Summary of FY2022 3rd Quarter Earnings Results

Increased revenue and profit

- Main reasons for increase in consolidated operating revenue
 - Rising electricity sales prices domestically and overseas
 - Increase in sales of a subsidiary in Australia that owns coal mining interests due to soaring coal prices
 - Main reasons for increase in consolidated operating profit
 - Increase in profit of a subsidiary in Australia that owns coal mining interests due to soaring coal prices
 - Increase in profit due to decrease in unplanned outages at thermal power plants
 - Start of operation of the Jackson Generation Power Plant in North America in May
 - Increase in profit due to increase in renewable energy sales
 - Main reasons for increase in consolidated ordinary profit
 - Increase in equity in earnings of affiliates
 - Gain on sales of fixed assets
- In addition to the above factors

(Unit: billion yen)

Consolidated	FY2021	FY2022	Year-on-year change	
	3rd Quarter (Apr.-Dec.)	3rd Quarter (Apr.-Dec.)		
Operating Revenue	709.5	1,401.5	692.0	97.5 %
Operating Profit	63.9	161.5	97.5	152.6 %
Ordinary Profit	54.8	158.2	103.3	188.4 %
Profit attributable to owners of parent	40.3	111.0	70.6	174.9 %

Non-consolidated	FY2021	FY2022	Year-on-year change	
	3rd Quarter (Apr.-Dec.)	3rd Quarter (Apr.-Dec.)		
Operating Revenue	498.1	1,052.2	554.1	111.2 %
Operating Profit	17.2	46.8	29.6	171.4 %
Ordinary Profit	57.1	81.7	24.5	42.9 %
Profit	55.0	72.1	17.0	30.9 %

Key Data (Electric Power Sales)

	FY2021	FY2022	Year-on-year change	
	3rd Quarter (Apr.-Dec.)	3rd Quarter (Apr.-Dec.)		
Electric Power Sales (TWh)				
Electric Power Business	53.8	51.7	(2.0)	(3.8)%
Hydroelectric Power	7.6	6.8	(0.7)	(9.4)%
Thermal Power	33.2	34.5	1.2	3.9 %
Wind Power	0.8	0.7	(0.0)	(10.8)%
Other ^{*1}	12.0	9.5	(2.5)	(21.1)%
Overseas Business ^{*2}	9.0	10.1	1.0	11.3 %
Water supply rate	101%	92%	(9) points	
Load factor^{*3}	62%	65%	+3 points	

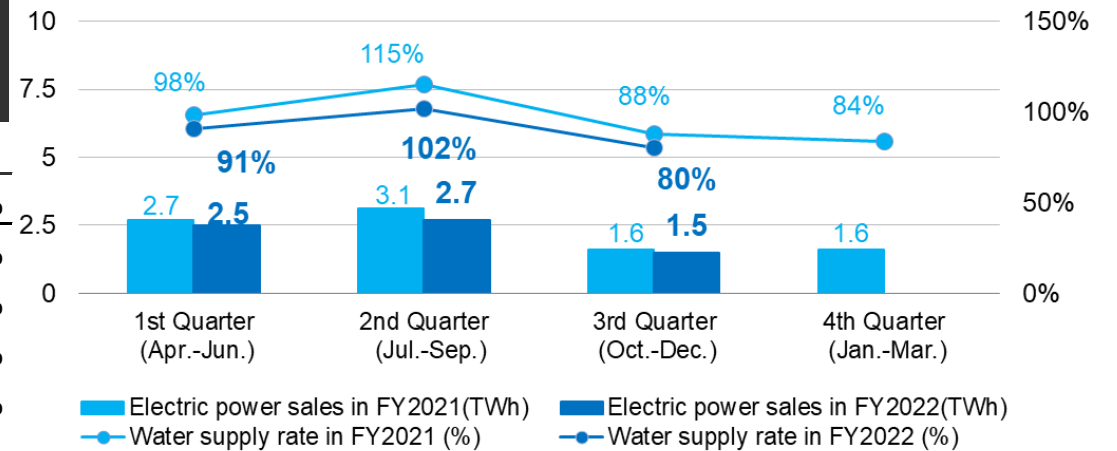
*1 Electric power sales volume of electricity procured from wholesale electricity market, etc.

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

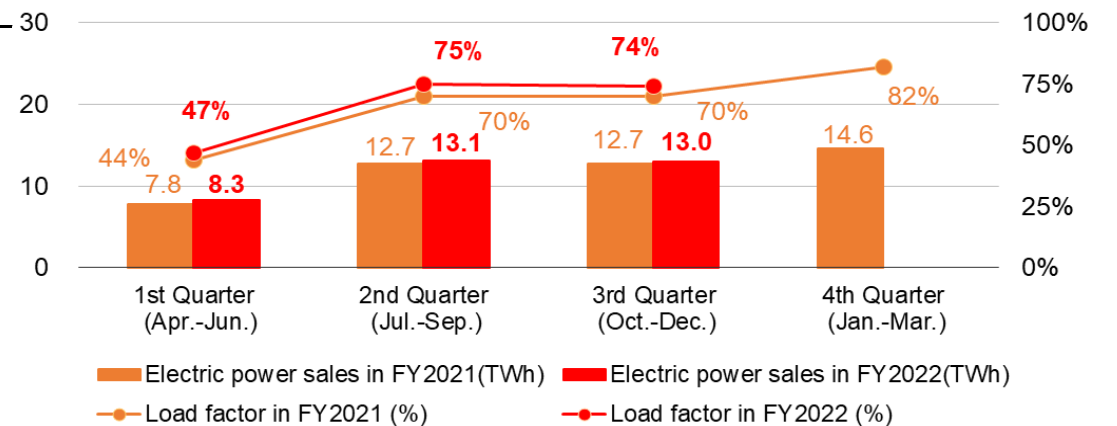
*3 Load factor of thermal power shows the results for non-consolidated only

Electric Power Sales for each Quarter

[Domestic Hydroelectric Power]



[Domestic Thermal Power]



Key Data (Operating Revenue)

■ Electric Power Business

- Total electricity sales volume of the electric power business slightly decreased due to the decline in the water supply rate of hydroelectric power plants and the decrease in sales volume to retailers, while the sales volume from thermal power plants increased.
- The revenue increased due to the increase in sales prices with the rise in resource prices.

■ Overseas Business

- The revenue increased due to the rise in sales prices in the Thailand projects and the start of operation of the Jackson Generation Power Plant in North America.

■ Other Business

- The sales increased due to soaring coal prices at a subsidiary in Australia that owns coal mining interests

	FY2021 3rd Quarter (Apr.-Dec.)	FY2022 3rd Quarter (Apr.-Dec.)	Year-on-year change	
Operating Revenue (Billion yen)	709.5	1,401.5	692.0	97.5 %
Electric Power Business	567.2	1,084.8	517.6	91.3 %
Electric Power Sales	528.4	1,044.9	516.4	97.7 %
Renewables ^{*1}	97.7	111.2	13.4	13.8 %
Transmission / Transformation	36.3	36.9	0.5	1.4 %
Overseas Business ^{*2}	102.4	205.1	102.6	100.2 %
Other Business ^{*3}	39.8	111.5	71.7	180.1 %

	FY2021 3rd Quarter (Apr.-Dec.)	FY2022 3rd Quarter (Apr.-Dec.)
Foreign exchange rate		
(Yen/USD) at the end of September	111.92	144.81
(Yen/THB) at the end of September	3.30	3.81
(Yen/AUD) at the end of September	80.46	94.17
(THB/USD) at the end of September	33.92	37.91
Average foreign exchange rate (Apr.-Dec.)		
(Yen/USD)	111.14	136.49

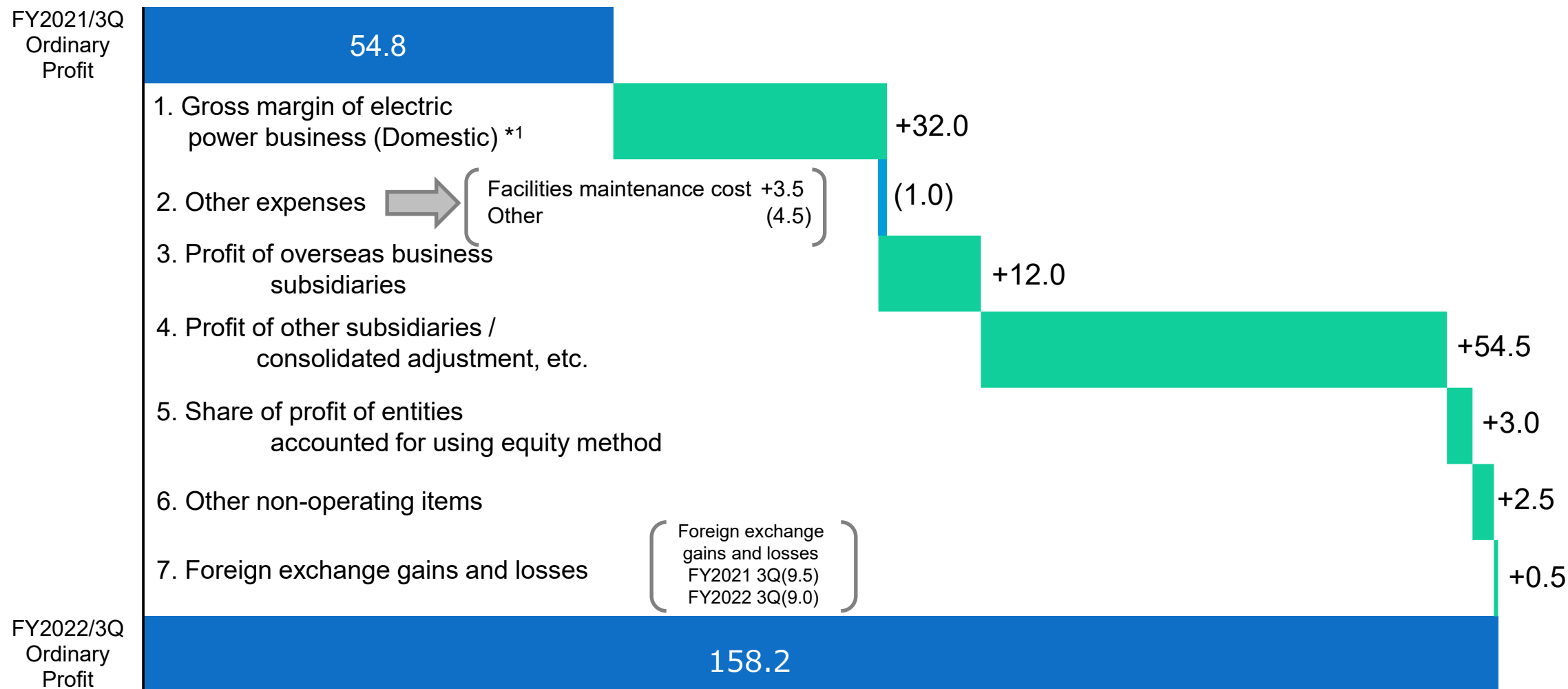
*1 Hydroelectric and wind power

*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.37](#) for details.

FY2022 3rd Quarter Earnings Results (Main Factors for Change)

(Unit: billion yen)



*1 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

(Unit: billion yen)

(Year on Year)

<p>1. Gross margin of electric power business (Domestic) +32.0</p> <ul style="list-style-type: none"> Decrease in unplanned outages Increased sales of renewable energy Improved profits from market, and fuel balance ,etc. 	<p>5. Share of profit of entities accounted for using equity method +3.0</p> <ul style="list-style-type: none"> Overseas... +3.0 Domestic ... ±0.0 									
<p>2. Other expenses (1.0)</p> <ul style="list-style-type: none"> Increase in facilities maintenance cost...+3.5 Increase in cost in various items... (4.5) 	<p>6. Other non-operating items +2.5</p> <ul style="list-style-type: none"> Gain on sales of fixed assets, Increase in financing costs 									
<p>3. Profit of overseas business subsidiaries +12.0</p> <ul style="list-style-type: none"> Jackson Generation Power Plant in North America Started commercial operation Power generation projects in Thailand Scheduled decrease in fixed income Foreign exchange effect (JPY depreciation),etc. 	<p>7. Foreign exchange gains and losses +0.5 Q3 2021 (9.5) → Q3 2022 (9.0)</p> <ul style="list-style-type: none"> US dollar-denominated debt in power generation projects in Thailand...(2.5) <p>Foreign exchange rate(THB/USD)</p> <table border="1"> <thead> <tr> <th></th> <th>At the end of December of the previous year</th> <th>At the end of Sep.*</th> </tr> </thead> <tbody> <tr> <td>FY2021</td> <td>30.04</td> <td>33.92</td> </tr> <tr> <td>FY2022</td> <td>33.42</td> <td>37.91</td> </tr> </tbody> </table> <p>* The settlement period of overseas subsidiaries is from January to December</p>		At the end of December of the previous year	At the end of Sep.*	FY2021	30.04	33.92	FY2022	33.42	37.91
	At the end of December of the previous year	At the end of Sep.*								
FY2021	30.04	33.92								
FY2022	33.42	37.91								
<p>4. Profit of other subsidiaries / consolidated adjustment, etc. +54.5</p> <ul style="list-style-type: none"> Increase in profit from a subsidiary in Australia that owns coal mining interests due to soaring coal prices 	<ul style="list-style-type: none"> US dollar-denominated loan in overseas businesses and others...+3.0 									

Consolidated: Revenue / Expenditure Comparison

(Unit: billion yen)

	FY2021 3rd Quarter (Apr.-Dec.)	FY2022 3rd Quarter (Apr.-Dec.)	Year-on-year change	Main factors for change
Operating Revenue	709.5	1,401.5	692.0	
Electric power business	567.2	1,084.8	517.6	
Overseas business	102.4	205.1	102.6	
Other business	39.8	111.5	71.7	
Operating Expenses	645.5	1,240.0	594.4	Electric power business+488.4, Overseas business+90.5, Other business+15.4
Operating Profit	63.9	161.5	97.5	
Non-operating Revenue	19.9	28.3	8.3	
Share of profit of entities accounted for using equity method	13.5	16.6	3.0	
Other	6.4	11.7	5.3	
Non-operating Expenses	29.0	31.6	2.5	
Interest expenses	16.5	20.1	3.6	
Foreign exchange losses	9.7	9.2	(0.4)	
Other	2.7	2.1	(0.5)	
Ordinary Profit	54.8	158.2	103.3	Electric power business+38.3, Overseas business+9.0, Other business+58.1
Total income taxes	12.0	47.2	35.2	
Profit attributable to owners of parent	40.3	111.0	70.6	

Consolidated: Balance Sheet

(Unit: billion yen)

	FY2021 End of FY	FY2022 End of 3Q	Change from prior year end	Main factors for change
Non-current Assets	2,594.8	2,749.5	154.7	
Electric utility plant and equipment	1,076.9	1,066.1	(10.7)	
Overseas business facilities	271.3	467.7	196.3	
Other non-current assets	92.2	96.5	4.2	
Construction in progress	676.5	551.7	(124.8)	
Nuclear fuel	75.8	75.8	0.0	
Investments and other assets	401.8	491.5	89.7	Long-term investments +77.0 (Includes impact of foreign exchange revaluation+39.3)
Current Assets	471.3	720.3	248.9	
Total Assets	3,066.1	3,469.8	403.7	
Interest-bearing debt	1,786.4	1,967.8	181.4	Non-consolidated +138.3, Subsidiaries and others +43.0
Other	315.6	330.8	15.2	
Total Liabilities	2,102.0	2,298.7	196.6	
Shareholders' equity	870.8	966.8	96.0	
Accumulated other comprehensive income	45.2	146.4	101.2	Foreign currency translation adjustment +71.9 Deferred gains or losses on hedges+32.3
Non-controlling interests	48.0	57.8	9.7	
Total Net Assets	964.1	1,171.1	207.0	
D/E ratio (x)	2.0	1.8		
Shareholders' equity ratio	29.9%	32.1%		



Summary of FY2022 Earnings Forecast

Summary of FY2022 Earnings Forecast

※Compared to Previous forecast

We revised the earnings forecast released on October 31, 2022.

- Operating revenue is estimated to increase mainly due to the rise in sales prices in domestic and overseas business and the increase in coal sales revenue at a consolidated subsidiary in Australia due to soaring coal price.
- Revised operating profit and ordinary profit in expectation of a further increase in earnings from a subsidiary in Australia that owns coal mining interests, while factoring the impact of unplanned outage due to cold weather in northeastern U.S.

(Unit: billion yen)

Consolidated	FY2021 Result	FY2022 Forecast	Comparison with FY2021 Result		FY2022 Previous Forecast ^{*1}	Comparison with Previous Forecast	Cash dividends per share		
							FY2021	Interim	Year end
Operating Revenue	1,084.6	1,869.0	784.3	72.3 %	1,794.0	75.0	FY2021 35 yen	40 yen	75 yen
Operating Profit	86.9	171.0	84.0	96.6 %	162.0	9.0	FY2022 40 yen	40 yen(forecast)	80 yen(forecast)
Ordinary Profit	72.8	164.0	91.1	125.1 %	155.0	9.0			
Profit attributable to owners of parent	69.6 ^{*2}	115.0	45.3	65.0 %	108.0	7.0			

Non-consolidated	FY2021 Result	FY2022 Forecast	Comparison with FY2021 Result		FY2022 Previous Forecast ^{*1}	Comparison with Previous Forecast
Operating Profit	17.8	38.0	20.1	112.3 %	36.0	2.0
Ordinary Profit	58.2	72.0	13.7	23.5 %	68.0	4.0
Profit	73.6 ^{*2}	64.0	(9.6)	(13.2)%	58.0	6.0

※No change in dividend forecast

*1 Previous Forecast: Earnings forecast released on Oct. 31, 2022

*2 Increased due to recording of deferred tax assets, etc.

Key Data

※Compared to Previous forecast

■ Electric Power Business

The revenue is expected to increase due to the increase in sales volume from thermal power plants and sales volume to retailers, and the rise in sales prices along with the rise in resource prices.

■ Overseas Business

Revenue is expected to increase due to the rise in sales prices in the Thailand projects and the Jackson Generation Power Plant in North America.

■ Other Business

Revenue is expected to increase due to soaring coal prices at a subsidiary in Australia that owns coal mining interests

	FY2021 Result	FY2022 Current Forecast	Comparison with FY2021 Result		FY2022 Previous Forecast ^{*5}	Comparison with Previous Forecast		FY2021 Result	FY2022 Current Forecast	FY2022 Previous Forecast ^{*5}
Electric Power Sales (TWh)							Water supply rate	99%	93%	97%
Electric Power Business	74.7	69.5	(5.2)	(7.0)%	68.4	1.1	Load factor	67%	67%	66%
Hydroelectric Power	9.2	8.9	(0.3)	(3.8)%	9.2	(0.2)	Foreign exchange rate at term end			
Thermal Power	47.9	46.8	(1.1)	(2.4)%	46.2	0.6	Yen/USD	115.02	132.70	140.00
Wind Power	1.1	1.0	(0.1)	(9.3)%	1.0	0.0	Yen/THB	3.43	3.80	3.60
Other ^{*1}	16.3	12.7	(3.5)	(21.9)%	12.0	0.7	Yen/AUD	83.42	89.57	92.00
Overseas Business^{*2}	11.0	14.4	3.3	30.4%	14.6	(0.1)	THB/USD	33.42	34.56	33.42
Operating Revenue (Billion yen)	1,084.6	1,869.0	784.3	72.3%	1,794.0	75.0				
Electric Power Business	876.4	1,450.0	573.5	65.4%	1,426.0	24.0				
Electric Power Purchase	822.9	1,384.6	561.6	68.2%	1,372.0	12.6				
Renewables	134.5	146.4	11.8	8.8%	147.0	(0.6)				
Transmission/Transformation	48.7	50.0	1.2	2.5%	50.0	0.0				
Overseas Business^{*3}	145.1	274.0	128.8	88.8%	233.0	41.0				
Other Business^{*4}	63.0	145.0	81.9	129.9%	135.0	10.0				

*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.)

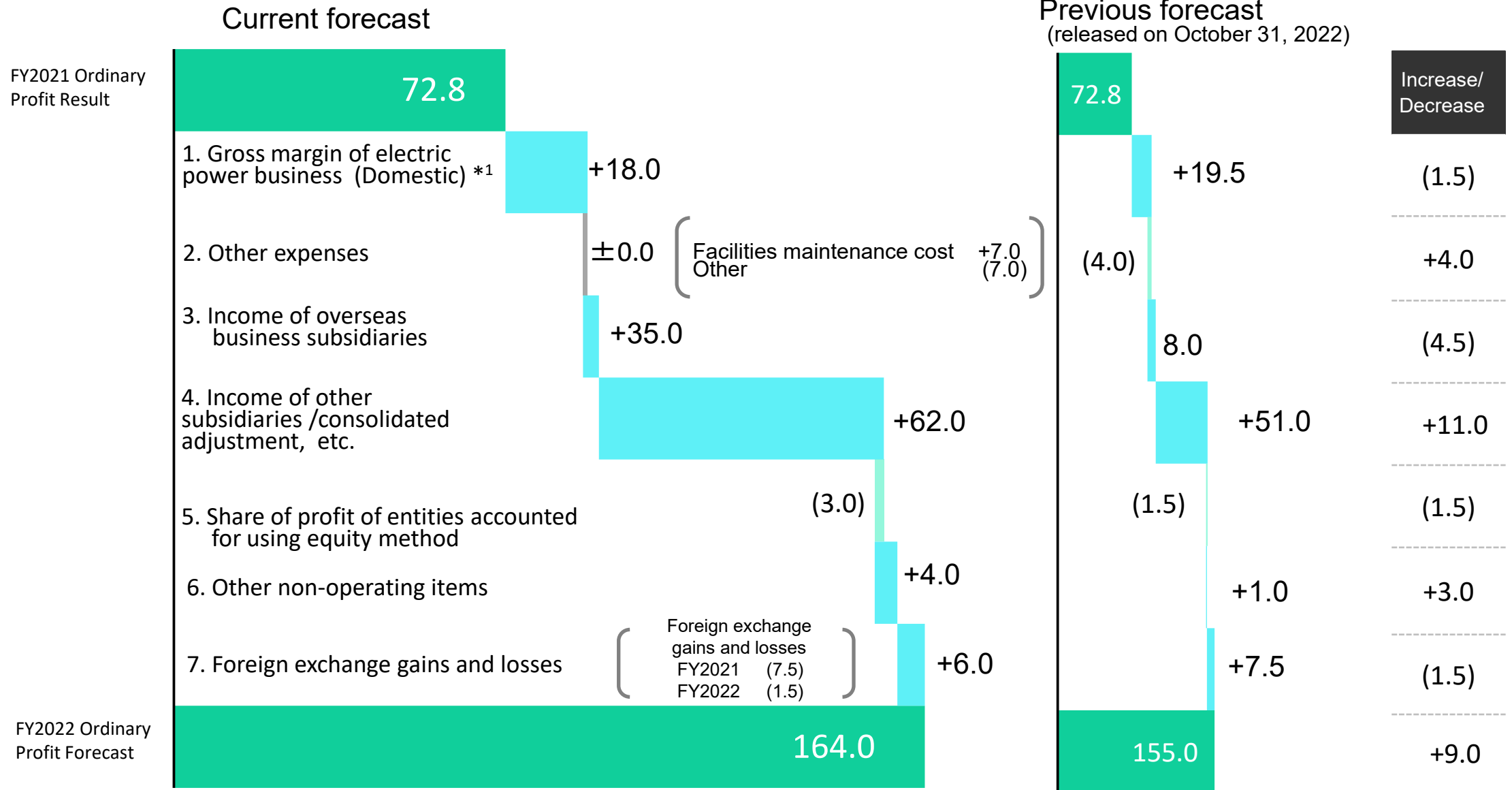
*3 Sales for the overseas business segment (Sales from overseas consolidated subsidiaries and overseas consulting business, etc.)

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

*5 Earnings forecast released on October 31, 2022

FY2022 Earnings Forecast (Main Factors for Change)

(Unit: billion yen)



*1 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)

1. Gross margin of electric power business (Domestic) (1.5)

- decrease in revenue of renewable energy

2. Other expenses +4.0

- Decrease in facilities maintenance cost...+2.0
- Other...+2.0

3. Income of overseas business subsidiaries (4.5)

- Jackson Generation Power Plant in US...(4.5)
Penalty in capacity market due to cold weather (See p.16.)

4. Income of other subsidiaries / consolidated adjustment, etc. +11.0

- Increase in profit due to the rise of coal price in Australian coal mines, which one of our subsidiaries owns through proportional consolidation

5. Share of profit of entities accounted for using equity method (1.5)

- Overseas...(1.5)
 - U.S.
Elwood: Penalty in capacity market due to cold weather (See p.16.)
 - Others
- Domestic...±0.0

6. Other non-operating items +3.0

- Gain on sales of fixed assets, etc.

7. Foreign exchange gains and losses (1.5)

- Power generation projects in Thailand
Previous forecast ±0.0 → Foreign exchange losses (3.5) fixed value
Foreign exchange rate(THB/USD)

	At the end of December of the previous year	At the end of Dec.*
FY2021	30.04	33.42
FY2022	33.42	34.56

- * The settlement period of overseas subsidiaries is from January to December
- US dollar-denominated loan in overseas businesses and others
Previous forecast ±0.0 → Foreign exchange gains+2.0 forecasted value

Unplanned outage of Jackson, Elwood power plant due to cold weather in Northeastern U.S.

Fact

- Due to the cold wave that hit northeastern U.S., unplanned outage due to freezing of facilities occurred at Jackson generation power plant (100% ownership: consolidated subsidiary) and Elwood power plant (50% ownership: equity method affiliate) from December 23 to 29, 2022 (all times local). At present, the facilities have already been restored.
- The PJM market, where both power plants are located, declared a state of emergency on December 23~24.
- During the emergency declaration period, all power sources awarded in the capacity market must fulfill their generation obligations. Failure to do so will result in a penalty. Jackson and Elwood power plants that were outage during this period are expected to pay the penalty.

Impact on financial result

- This revised earning forecast reflects the financial impact of the outage penalty as estimated by the Company.

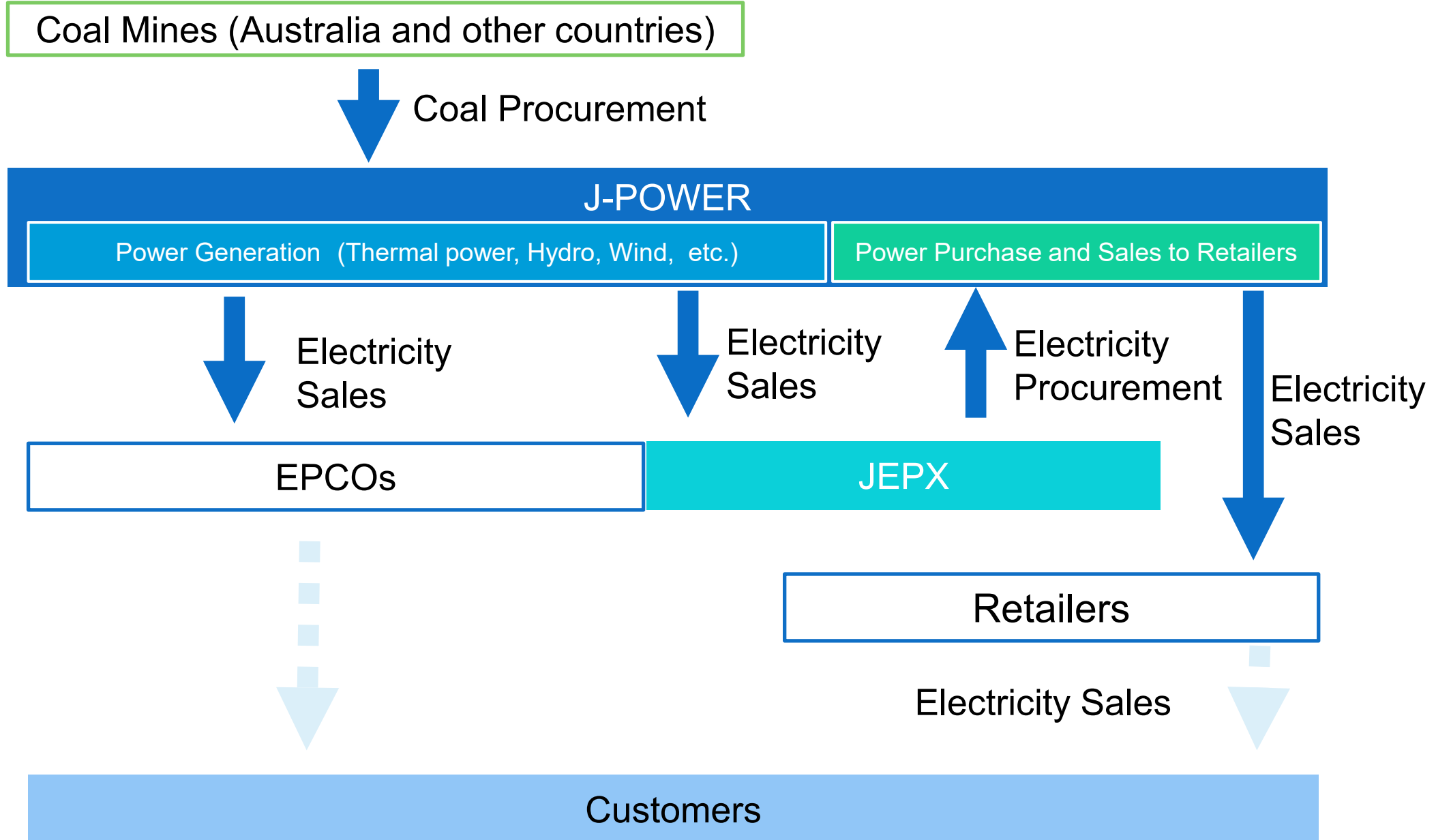
A photograph of several offshore wind turbines in the ocean under a clear blue sky. The turbines are white with yellow bases. The image is partially obscured by a white diagonal shape on the right side of the slide.

Appendix

(2) Business Data Contents

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

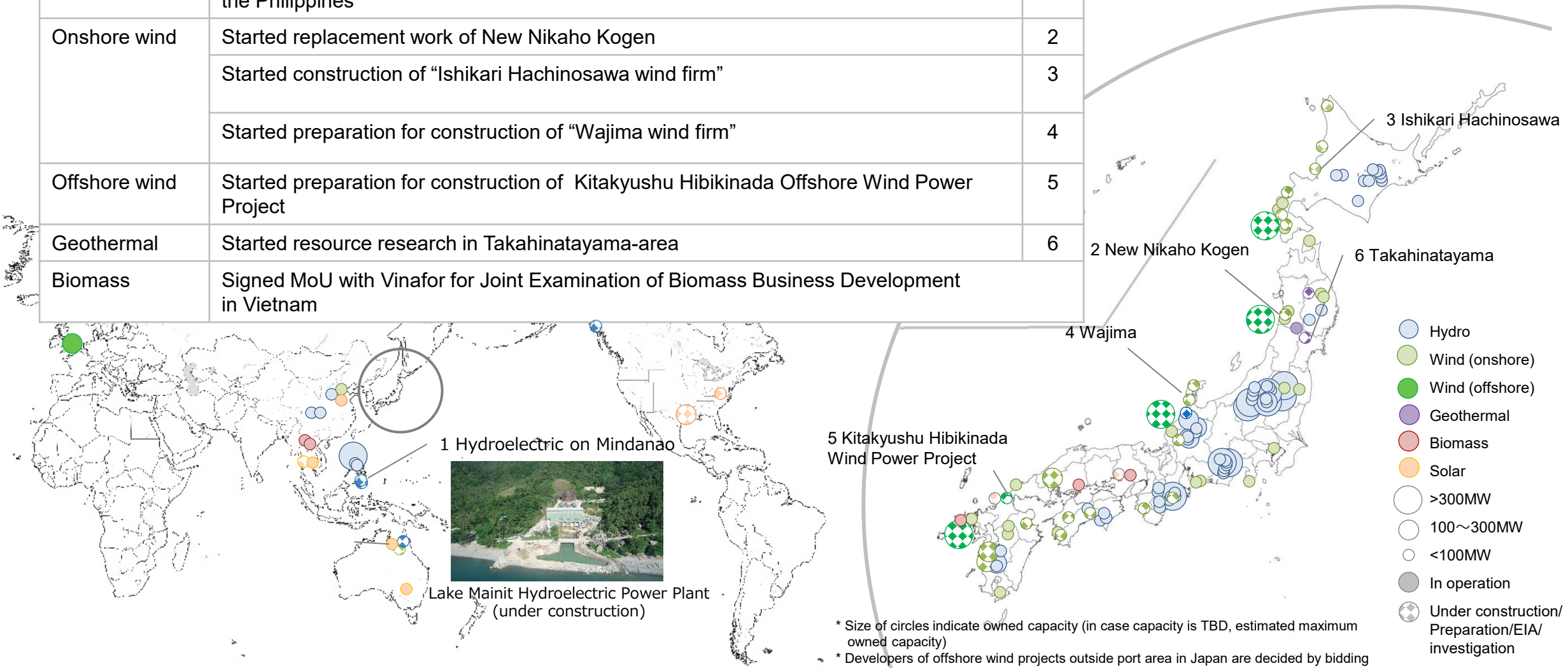


(2) -2. Expansion of Renewable Energy

Progress in FY2022 3Q Planned investment in renewable energy: 300 billion yen through FY2025

Hydroelectric	Participation in hydroelectric power generation projects on Mindanao, the Republic of the Philippines	1
Onshore wind	Started replacement work of New Nikaho Kogen	2
	Started construction of "Ishikari Hachinosawa wind firm"	3
	Started preparation for construction of "Wajima wind firm"	4
Offshore wind	Started preparation for construction of Kitakyushu Hibikinada Offshore Wind Power Project	5
Geothermal	Started resource research in Takahinatayama-area	6
Biomass	Signed MoU with Vinafor for Joint Examination of Biomass Business Development in Vietnam	

(As of December 31, 2022)



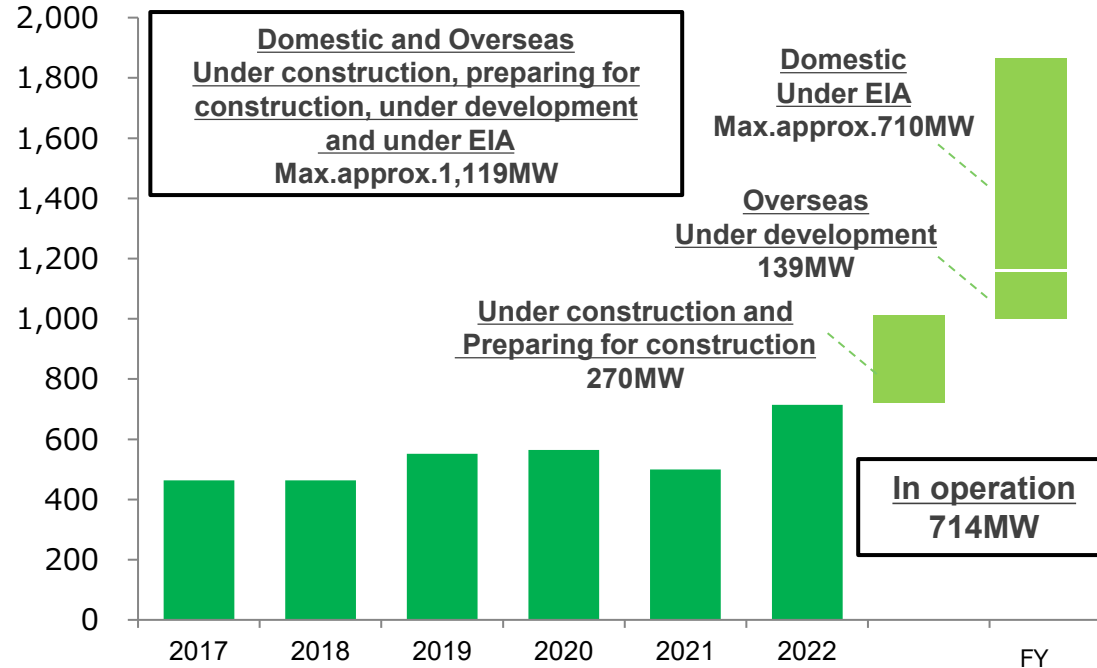
* Size of circles indicate owned capacity (in case capacity is TBD, estimated maximum owned capacity)
 * Developers of offshore wind projects outside port area in Japan are decided by bidding after each sea area is designated as a promoting area. The indicated capacities for offshore wind projects outside port area which are jointly implemented with other companies are estimated maximum gross capacities

(2) -3. Renewable Energy Development Projects (Wind)

(As of December 31,2022)

Projects

(Owned capacity, MW)



*Excluding domestic outside port and port area offshore wind power

Under construction
Kaminokuni No.2*1
Minami Ehime No.2*2 etc.

Preparing for construction
Wajima etc.

Under renewal construction
New Tomamae
New Nikaho Kogen etc.

Under development
Kidston Stage 3 Wind(Australia)*3

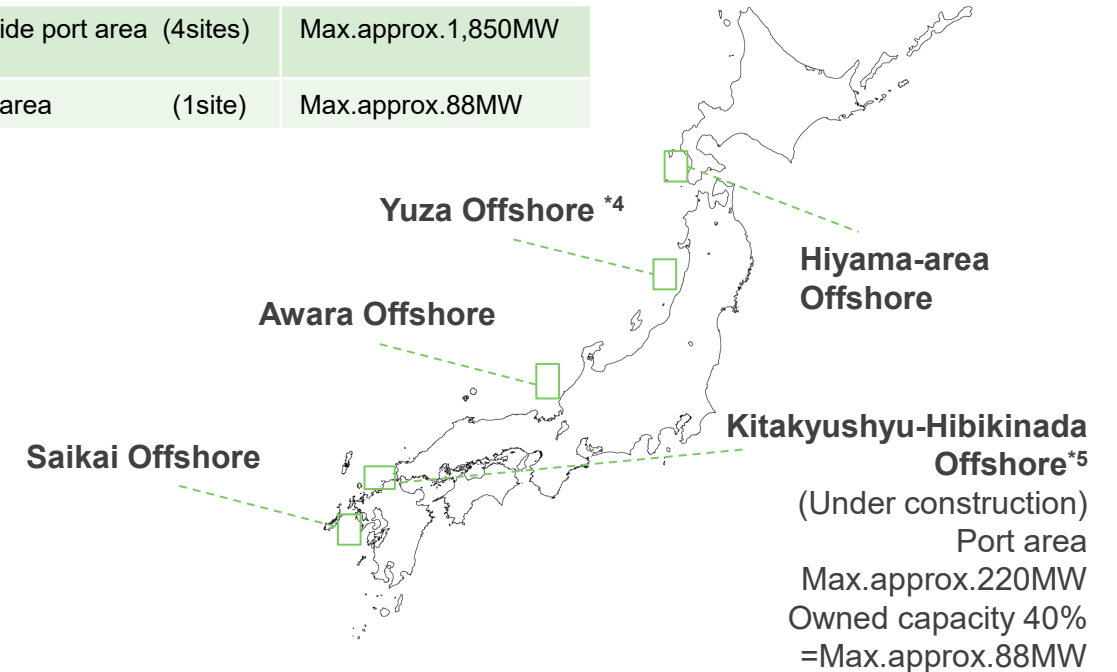
Under environmental impact assessment
Seiyo Yusuhara
Kita-Kagoshima

*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 Joint environment assessment as a consortium.
 *5 Conducted jointly with Kyuden Mirai Energy Company, Incorporated, Hokutaku Co., LTD, Saibu Gas Co. Ltd. and Kyudenko Corp.

Domestic Offshore

Under EIA and Under construction	Owned capacity
Outside port area (4sites)	Max.approx.1,850MW
Port area (1site)	Max.approx.88MW



Overseas Offshore

Under Operation	Capacity
Triton Knoll(U.K.)	857MW Ownership 25% Owned Capacity 214MW

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

(As of December 31, 2022)

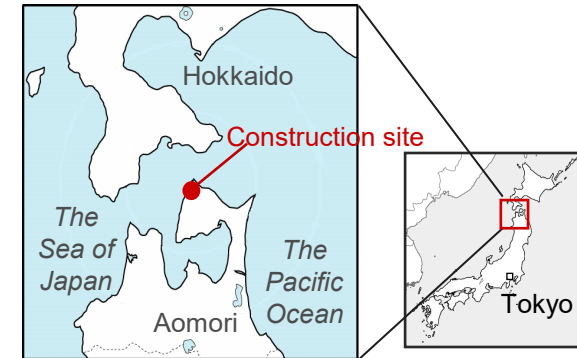
Hydro	Project	Capacity	Ownership	Owned capacity	Note
	Ashoro Repowering	40.0MW→42.3MW	100%	40.0MW→42.3MW	Completion of construction : FY2022 (planned)
	Ogamigo Repowering	20.0MW→21.3MW	100%	20.0MW→21.3MW	Start of operation : FY2024 (planned)
	Suezawa Repowering	1.5MW→2.2MW	100%	1.5MW→2.2MW	Start of operation : FY2024 (planned)
	Nagayama Repowering	37.0MW→39.5MW	100%	37.0MW→39.5MW	Start of operation : FY2025 (planned)
	Onabara	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)
	Lake Mainit Hydro (Philippines)	25MW	40%	10MW	Start of operation : February 2023 (planned)
	Bulanog Batang Hydro (Philippines)	33.5MW	40%	13.4MW	Start of operation : 2027 (planned)
Geo-thermal	Project	Capacity	Ownership	Owned capacity	Note
	Onikobe Replacement	14.9MW	100%	14.9MW	Start of operation: April 2023 (planned)
	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)

(2) -5. Ohma Nuclear Power Project

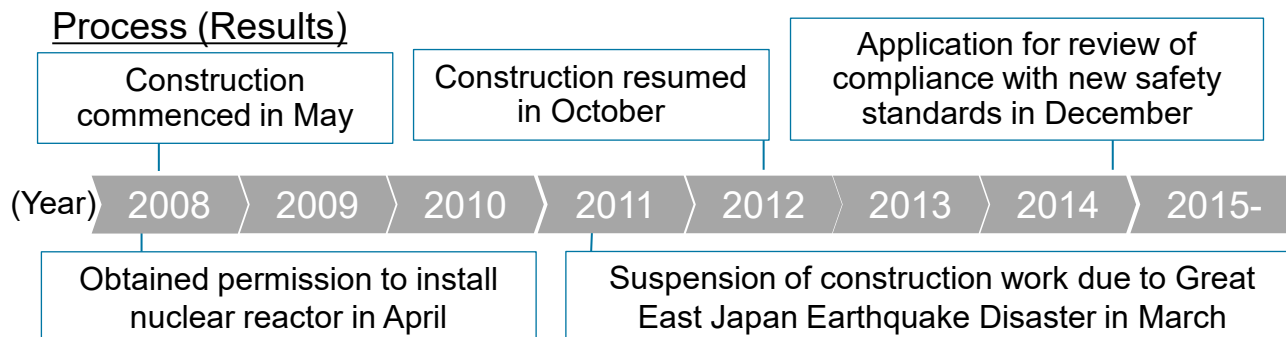
- In December 2014, J-POWER submitted to NRA* an application for permission for alteration of reactor installment license and an application for construction plan approval in order to undertake review of compliance with the new safety standards
- At present, seismic motion evaluation is under review to determine standard seismic motion and standard tsunami 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

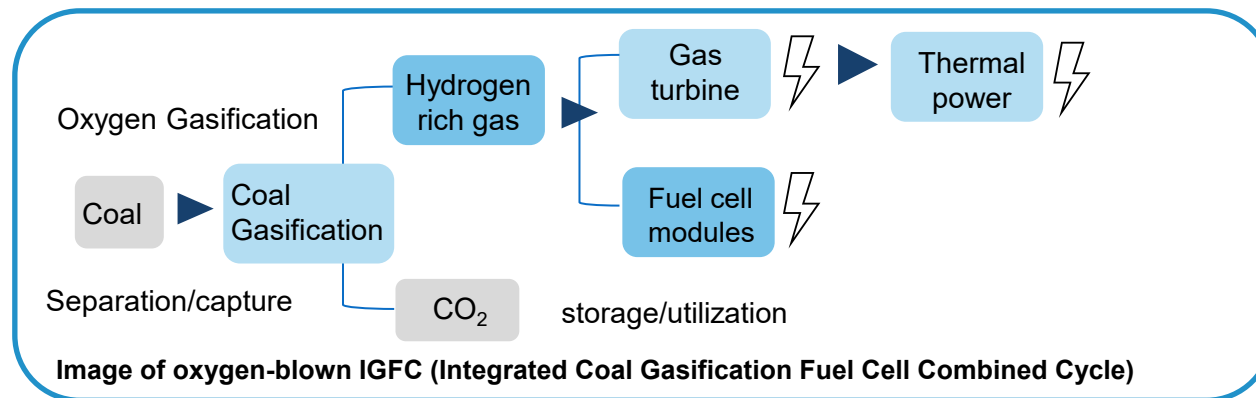


Status of construction (as of December,31 2022)



(2) -6. Osaki CoolGen Project

- 3 step demonstration test that manufactures coal gasification gas containing hydrogen and uses it to generate electricity is underway.
- In the 1st step, test of gas containing hydrogen (28%) turbine combined cycle was confirmed world's highest level net generating efficiency (LHV) and high adjustment capability.
- In the 2nd step, hydrogen rich gas (85%※) produced by CO₂ separation and capture from coal gasification gas (CO₂ recovery rate of 90% or more, CO₂ recovery purity of 99% or more) was confirmed.
- In the 3rd step from April 2022, We try to further efficiency power generating by combining with 2nd step equipment and fuel cell modules(SOFC).
- Try to obtain a prospect of achieving a net thermal efficiency (LHV) of approximately 66% while capturing 90% of CO₂ in a 500 MW-class commercial unit.



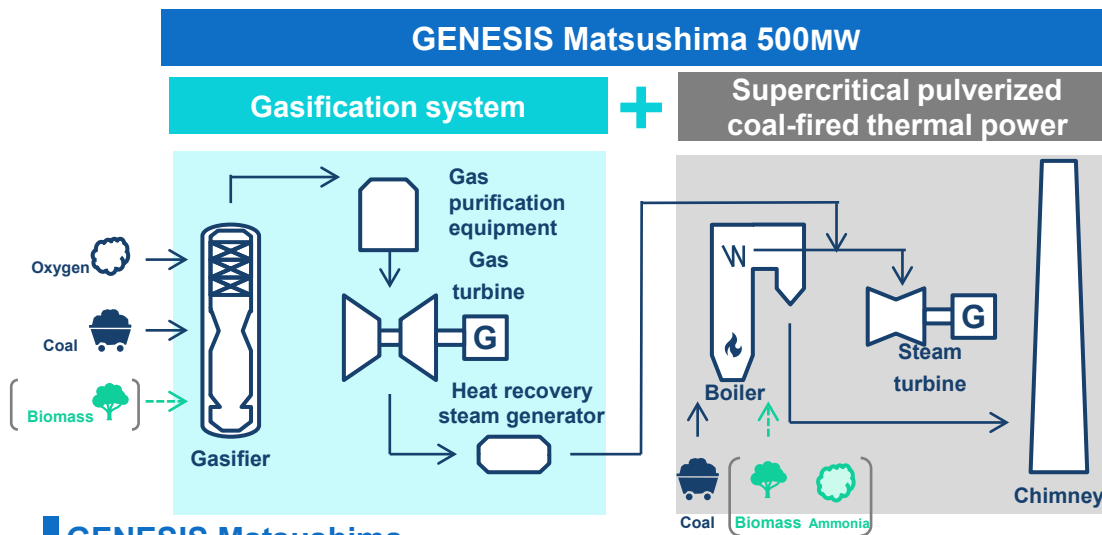
Fuel cell modules
Solid Oxide Fuel Cell (SOFC)
Capacity : 1.2MW class
(0.6MW class SOFC X2)

Company	Osaki CoolGen Corporation (Ownership: J-POWER 50%, Chugoku Electric Power Company 50%)
Generation type	166MW Oxygen-blown IGCC (Gas turbine: 1,300°C class)

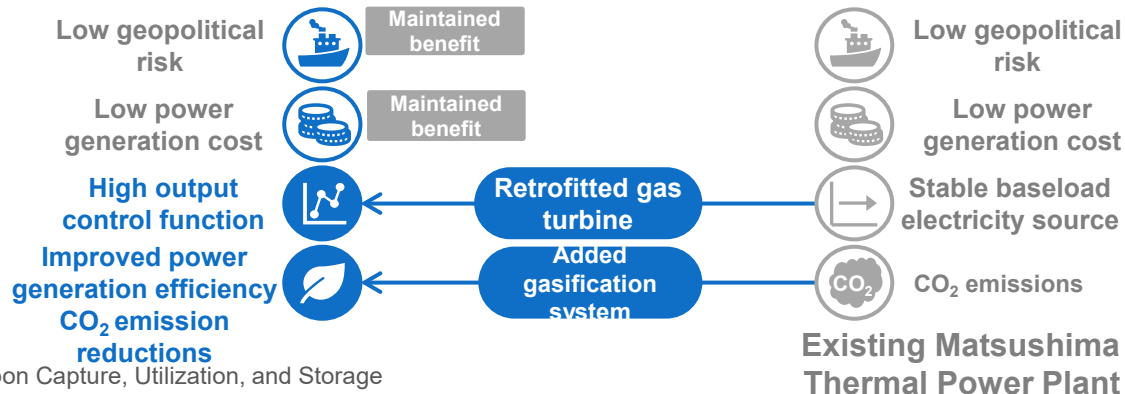
* This concentration rate is after CO₂ separation and capture. Because of limitation of the turbine unit ability, at the time of power generation, concentration rate would be lower.

(2) -7. Upcycling Existing Thermal Power Plants –GENESIS Matsushima

- J-POWER will first step toward CO2-free hydrogen power generation by commercializing the technology demonstrated in Osaki CoolGen Project.
- J-POWER will realize reducing environmental loads as early as possible by applying new technologies to the existing assets in an economically viable way while maintaining a stable power supply.
- On August 30, 2022, J-POWER submitted an EIA Scoping Document of GENESIS Matsushima.
- On September 14, We held an Explanatory Meeting in Saikai-city.



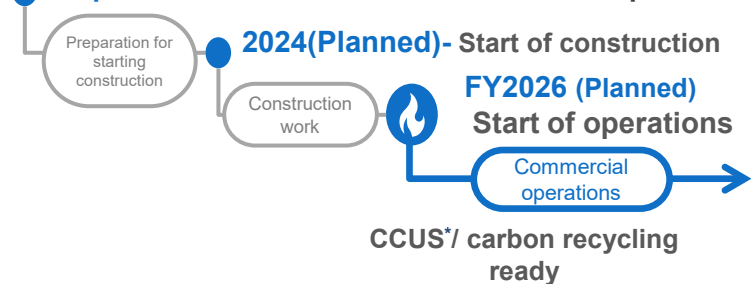
GENESIS Matsushima



* CCUS : Carbon Capture, Utilization, and Storage



September 2021- Started Environmental impact assessment



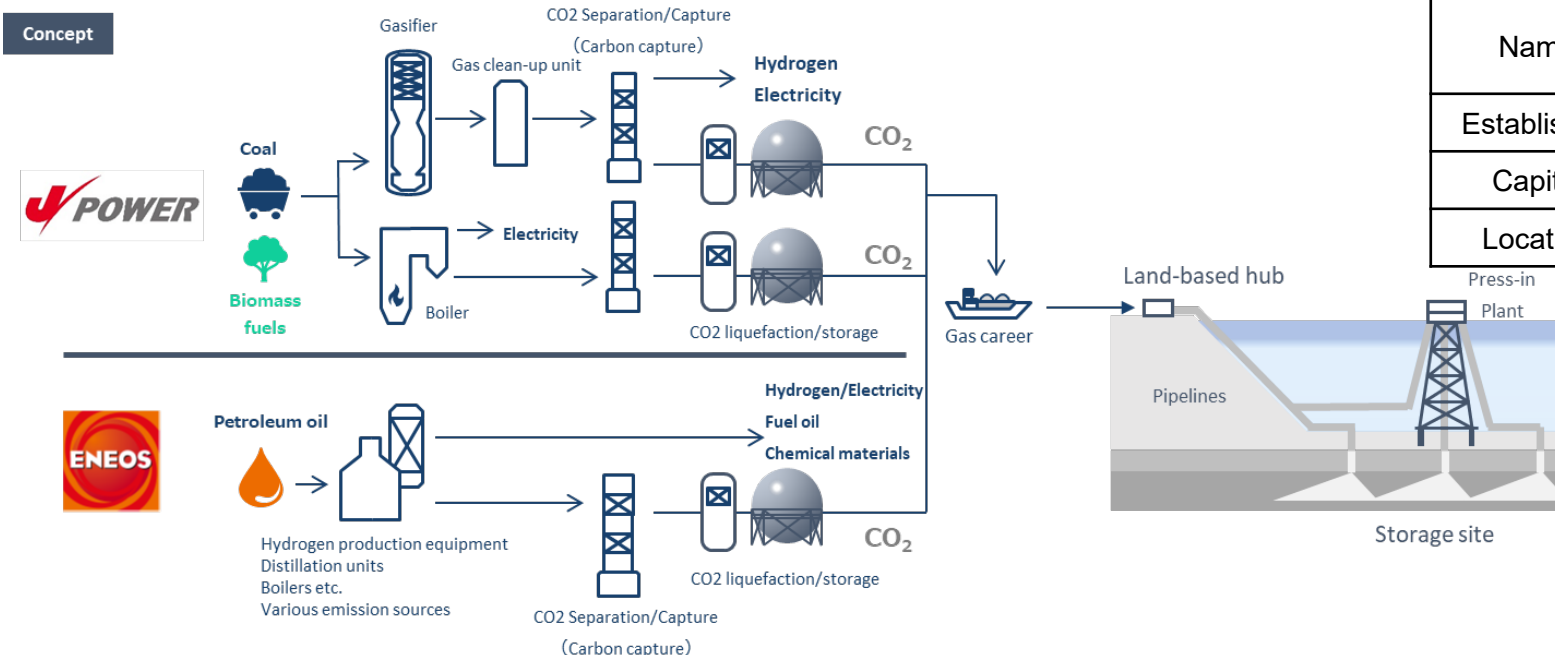
(2) -8. Establishment of joint venture for CCS in Japan

~Toward the realization of Japan's first full-scale CCS~

- J-POWER, ENEOS Corporation, and JX Nippon Oil & Gas Exploration Corporation jointly decided to establish a joint venture company West Japan Carbon dioxide Storage Survey Co., Ltd.
 - The company will accelerate preparations for the first full-scale commercialization of CCS in Japan toward 2030
 - Aiming to be the first full-scale CCS supply chain implementation in Japan, in collaboration with various businesses that are actively involved in CCS
 - With the understanding and cooperation of local residents, local governments, the national government, and related organizations, the company promotes preparations for commercialization, including exploration and evaluation for selecting candidate sites for CO₂ storage in western Japan, where emission sources of J-POWER and ENEOS are located, and CO₂ storage potential is expected
- ✓ J-POWER and ENEOS Holdings are implementing the following initiatives

Overview

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



(2) -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 CO₂ reduction in Japan from 2030.
- 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.

Plan

Initial business study

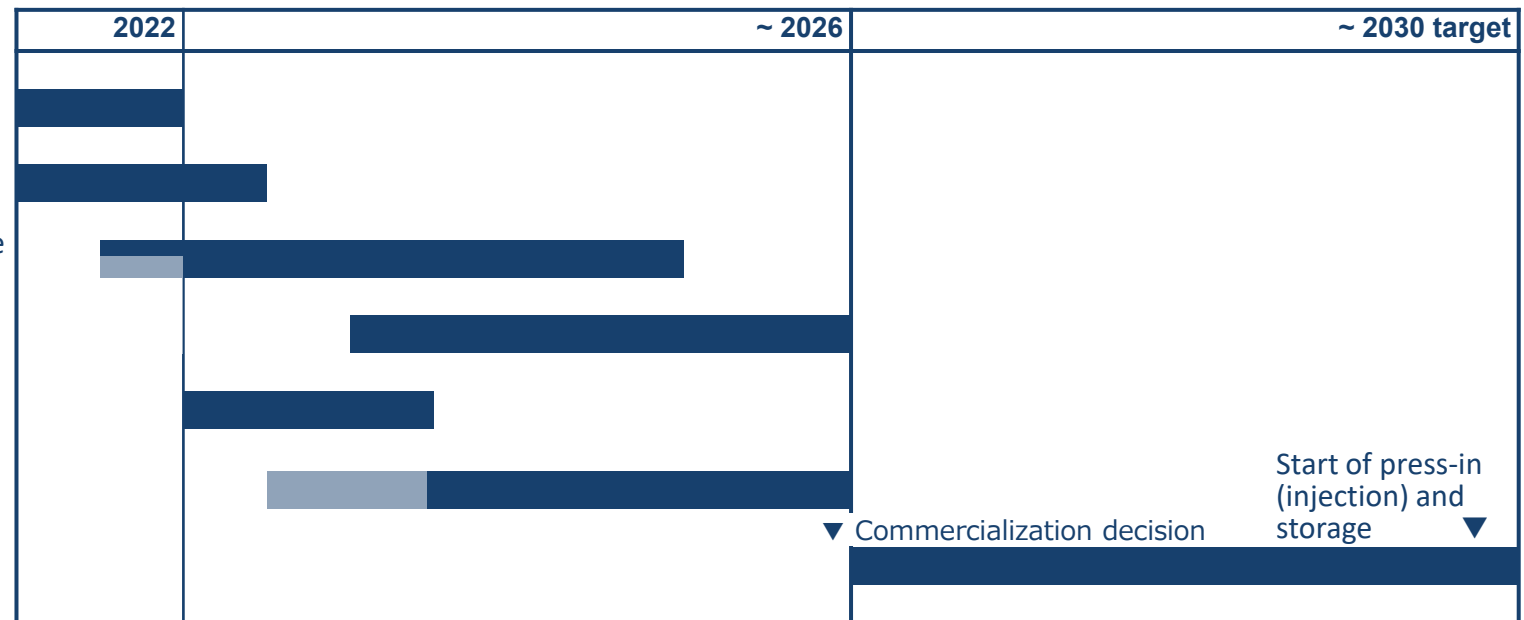
Candidate site surveys

- Study of potential storage sites
- Detailed investigation of subsurface structure
- Selection of potential storage sites

Equipment design

- Basic design
- Detailed design

Construction



(2) -10. The study for an Integrated Demonstration of CO₂-Negative Hydrogen Production from Domestic Biomass

- J-POWER, JX Nippon Oil & Gas Exploration Corporation, and Mizuho Research & Technologies, Ltd. jointly applied for NEDO's public solicitation and were adopted.
- Conduct a demonstration test of CO₂ negative hydrogen production in the near around of Nakajo oil refinery owned by JX Nippon Oil & Gas Exploration Corporation in Tainai City, Niigata Prefecture, by combining gasification technology and CCS using woody biomass procured in the vicinity as feedstock.
- Conduct a total system study and verification, including business feasibility and issue recognition, to realize a BECCS integrated process for transportation and utilization in addition to manufacturing.

What is BECCS ?

- ✓ Abbreviated word: BioEnergy with Carbon Capture and Storage

Major survey contents

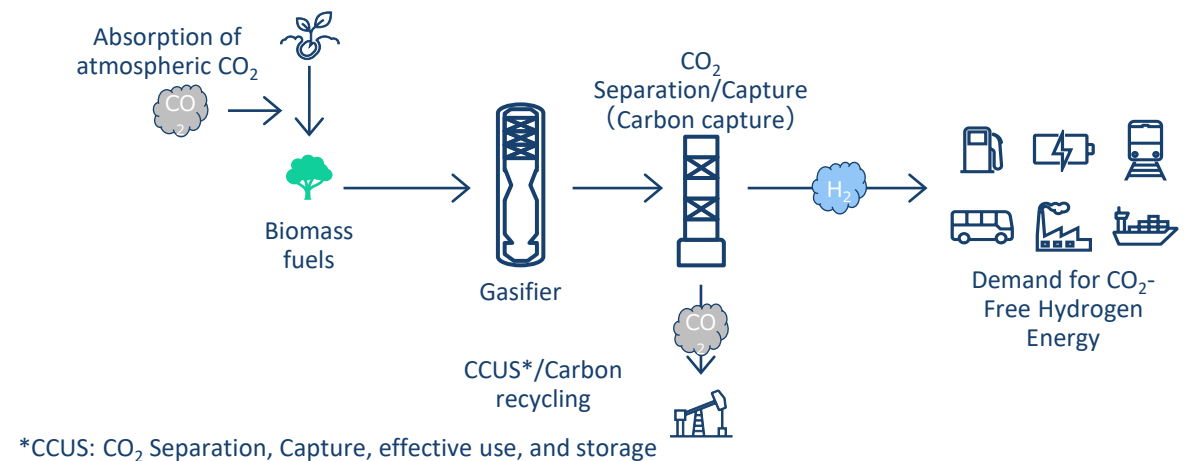
Feasibility study of procuring biomass as hydrogen feedstock

Assessment of hydrogen production potential including trends in biomass gasifier technology

Organize constraints on the use of produced hydrogen (technical issues, legal regulations, etc.)

Building a concrete hydrogen supply chain, including collaboration with local stakeholders

Concept



(2) -11. Global Business Expansion by Leveraging Our 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.

Project development

- Accumulation of experience of Green-Field projects
- Ensuring first-mover advantage

Portfolio management

- Risk management and rebalancing
- Improve profitability and make the next investment

Project Promotion

- Steady execution from construction to operation

Sustainable business expansion

Leveraging these strengths to expand our business with a focus on renewable power projects.

New Projects under construction, development, investigation

USA

- Development of solar power plants (Refugio)
- Development of hydroelectric power plant (Sweetheart Lake)

Asia

- Development and construction of rooftop solar in Thailand
- Gas combined power plant replacement project (EGCO Cogen)
- Examination of biomass business development in Vietnam
- Development and construction of hydroelectric power generation projects in Philippines (Lake Mainit, Bulanog Batang)

Australia

J-POWER participates in renewable power project with Genex*

- Development of onshore wind (Kidston Stage-3 Wind)
- Construction of pumped storage power plant (K2-Hydro)




* Genex Power Limited: Renewable power company in Australia

(2) -12. Overview of Overseas Projects under Development (As of December 31, 2022)

Project	Overview	
<p>Refugio (USA)</p> <p>Capacity: 400MW Type: Solar Ownership: 25% Status: Under development Start of operation: After 2023</p>	<ul style="list-style-type: none"> The joint project with AP Solar (local developer for solar power generation in Texas) Refugio is located close to Houston, a high power demand area Development issues such as procedures for land acquisition, permits have been largely resolved 	
<p>Sweetheart Lake (USA)</p> <p>(Photo: RE Johnson)</p>	<ul style="list-style-type: none"> J-POWER has signed a joint development agreement with Juneau Hydropower Inc., an electric power production and supply developer in the US for the Sweetheart Lake Hydroelectric Development Project near Juneau, the capital of the State of Alaska The purpose of the agreement is for the two companies to cooperate on the development of the project, including the construction of a hydroelectric power plant, transmission lines, and a district heating system in Juneau 	
<p>Kidston Stage-3 Wind (Australia)</p> <p>Capacity: 258MW Type: Onshore wind Ownership: 50%* Status: Under development Start of operation: 2025</p>	<ul style="list-style-type: none"> First renewable project in Australia for J-POWER J-POWER executes Joint Development Agreement with Genex Power Limited for New Wind Project in May 2022 Leveraging J-POWER's domestic and international wind energy expertise and Genex's renewable energy development capabilities in Australia 	

*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%

(2) -12. Overview of Overseas Projects under Development (As of December 31, 2022)

Project	Overview			
<p>EGCO Cogen power plant replacement project (Thailand)</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"> 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”) J-POWER’s first contribution to replacing a power plant in Thailand. Sells electricity and steam to Electricity Generating Authority of Thailand (EGAT) and neighboring industrial users By introducing the latest technology, energy utilization efficiency will improve. As well, greenhouse gas emissions will be reduced, helping to achieve low carbonization goals 			
<p>Rooftop solar (7 projects, Thailand)</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"> Utilizing the business foundation formed by large-scale gas-fired development Work for decentralized power sources to accommodate growing requirements of customers for decarbonization Aiming to supply CO₂-free energy by installing solar photovoltaic systems on customers’ factory roofs 			
<p>Hydroelectric power generation projects on Mindanao (Philippines)</p> <table border="0"> <tr> <td data-bbox="104 953 491 1175"> <p>Lake Mainit Hydro Capacity: 25MW Type: Hydro (run-of-river system) Ownership: 40% Status: Under construction Start of operation: 2023</p> </td> <td data-bbox="491 953 861 1175"> <p>Bulanog Batang Hydro Capacity: 33.5MW Type: Hydro (run-of-river system) Ownership: 40% Status: Under development Start of operation: 2027</p> </td> </tr> </table>	<p>Lake Mainit Hydro Capacity: 25MW Type: Hydro (run-of-river system) Ownership: 40% Status: Under construction Start of operation: 2023</p>	<p>Bulanog Batang Hydro Capacity: 33.5MW Type: Hydro (run-of-river system) Ownership: 40% Status: Under development Start of operation: 2027</p>	<ul style="list-style-type: none"> 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. 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. 	
<p>Lake Mainit Hydro Capacity: 25MW Type: Hydro (run-of-river system) Ownership: 40% Status: Under construction Start of operation: 2023</p>	<p>Bulanog Batang Hydro Capacity: 33.5MW Type: Hydro (run-of-river system) Ownership: 40% Status: Under development Start of operation: 2027</p>			
<p>Biomass Business Development (Vietnam)</p>	<ul style="list-style-type: none"> 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 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 			

(2) -13. Actions Taken towards HVDC Transmission System

- Japanese government is currently examining “Master Plan” (reinforcement of the national grids) considering the future power development in order to largely expand the renewable energy and secure the resilience.
- Three assumed scenarios for demand based on changes in load factors such as EVs, heat pumps, and location of renewable energy demand were published (Jan.2023).
- 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.

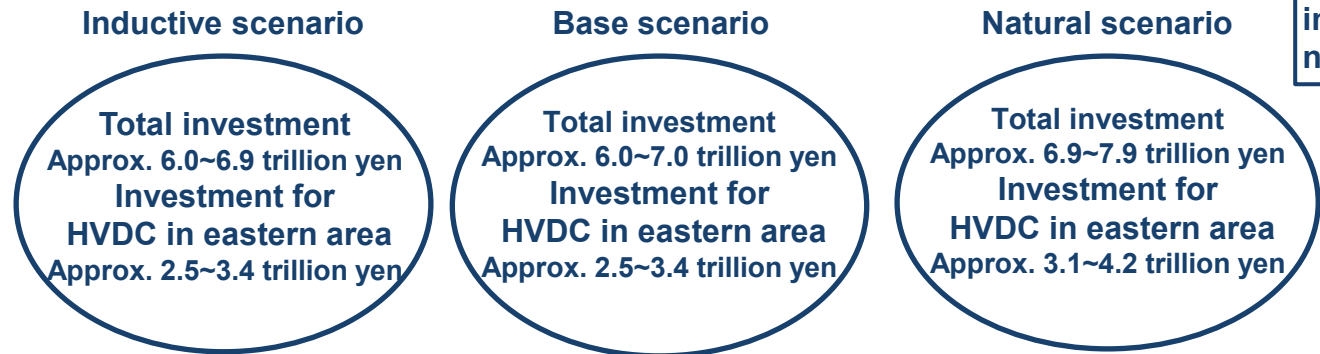
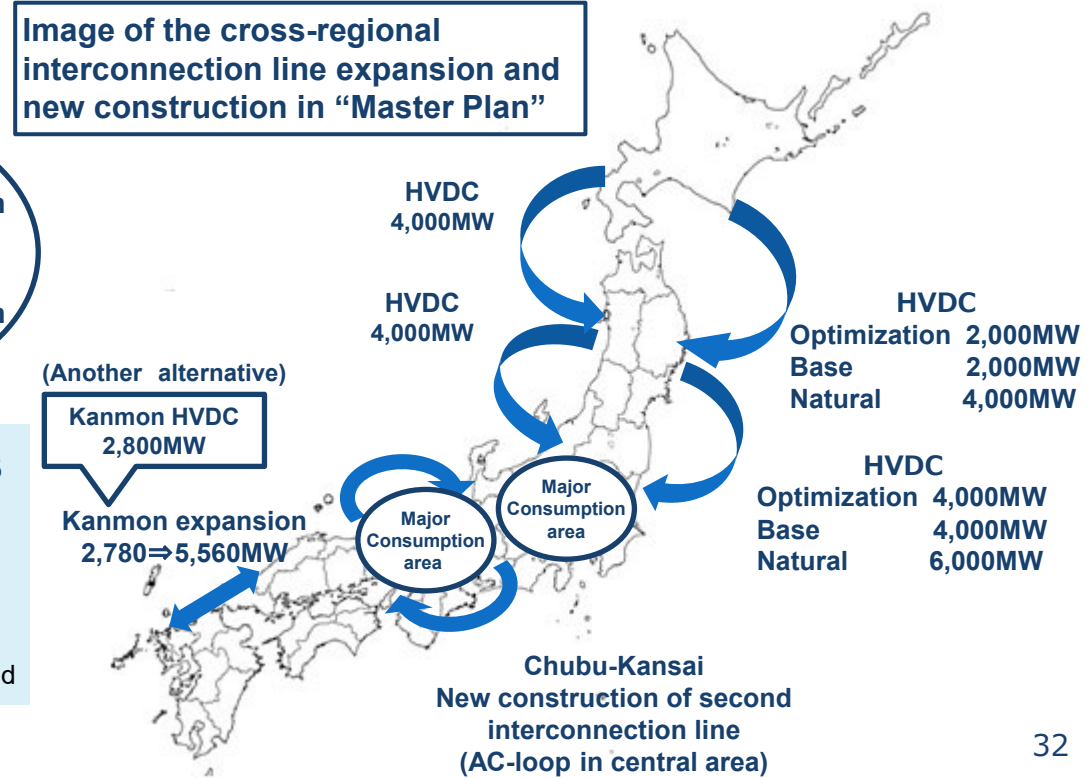


Image of the cross-regional interconnection line expansion and new construction in “Master Plan”



J-POWER Group’s HVDC transmission system facilities

- ✓ J-POWER Transmission owns and maintains Hokkaido-Honshu
- ✓ HVDC Link and Kii-Channel HVDC Link* (including submarine cables).
*Jointly owned with Kansai Transmission and Distribution, Inc. and Shikoku Electric Power Transmission & Distribution Company, Incorporated

Prepared by J-POWER based on the material of The 22nd Study Committee on Master Plan and Rules for Grid Utilization (January 25, 2023), Document 2-1, "Long-Term Policy for Wide-Area Grid (Regarding Master Plan for Wide-Area Interconnected Grid) (Draft))"

(2) -14. 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
CO2-free Hydrogen energy	Hydrogen power generation	Upcycling (adding gasifier to existing assets)
		Upcycling (CO2 separation and capture units)
		CO2-free hydrogen Power generation facilities*
	Fuel production (CO2-free hydrogen)	CO2-free hydrogen Power generation facilities*
CO2-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 combustion with biomass, ammonia, etc. 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.

(2) -14. 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
CO2 emissions reduction from J-POWER’s domestic power generation business	<ol style="list-style-type: none"> 1. FY2025: -7 million tons Compared to the 3-year average of actual emissions in FY2017-FY2019 2. FY2030: -40%/-19 million tons Compared to the 3-year average of actual emissions in FY2017-FY2019 (-44% compared to the actual emissions in FY2013)

※SPT (Either or both of 1. and 2.) and Various conditions, including changes in interest rate terms based on achievement of goals are determined on individual occasions

※Assessed for eligibility to various green finance, transition finance, and sustainability-linked finance standards by DNV BUSINESS ASSURANCE JAPAN K.K. as third-party evaluator

Consolidated: Revenues and Expenses

(Unit: 100 million yen)

	FY2018	FY2019	FY2020	FY2021	FY2021 3Q	FY2022 3Q
Operating revenue	8,973	9,137	9,091	10,846	7,095	14,015
Electric utility operating revenue	6,937	6,841	7,313	8,764	5,672	10,848
Overseas business operating revenue	1,410	1,790	1,380	1,451	1,024	2,051
Other business operating revenue	625	505	397	630	398	1,115
Operating expenses	8,185	8,301	8,313	9,976	6,455	12,400
Operating profit	788	836	777	869	639	1,615
Non-operating revenue	188	265	112	225	199	283
Share of profit of entities accounted for using equity method	96	113	27	142	135	166
Foreign exchange gains	7	74	6	-	-	-
Other	84	77	77	82	64	117
Non-operating expenses	292	320	280	366	290	316
Interest expenses	263	262	237	224	165	201
Foreign exchange losses	-	-	-	75	97	92
Other	28	57	43	66	27	21
Ordinary profit	685	780	609	728	548	1,582
Extraordinary income	-	-	94	-	-	-
Extraordinary losses	-	124	57	-	-	-
Profit attributable to owners of parent	462	422	223	696	403	1,110

Non-consolidated: Operating Revenues & Expenses

(Unit: 100 million yen)

	FY2018	FY2019	FY2020	FY2021	FY2021 3Q	FY2022 3Q
Operating revenue	6,469	5,712	5,899	7,900	4,981	10,522
Electric power business	6,336	5,638	5,838	7,810	4,917	10,377
Sold power to retailers	-	-	-	6	1	8
Sold power to other suppliers	5,806	5,104	5,660	7,672	4,825	10,271
Other*	529	533	177	132	90	97
Incidental business	133	74	61	89	63	145
Operating expenses	6,282	5,464	5,120	7,721	4,808	10,053
Electric power business	6,157	5,397	5,065	7,637	4,749	9,915
Personnel expense	324	358	318	201	148	151
Amortization of the actuarial difference in retirement benefits	(14)	24	28	(70)	(53)	(56)
Fuel cost	2,890	2,332	1,937	2,985	1,837	5,764
Repair and maintenance cost	697	666	441	515	336	300
Depreciation	510	527	552	559	418	440
Other	1,734	1,512	1,814	3,375	2,006	3,259
Incidental business	125	66	55	84	59	138
Operating profit	186	248	778	178	172	468

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

Consolidated: Segment Information

Sales	(Unit: 100 million yen)			Ordinary profit	(Unit: 100 million yen)		
	FY2021 3Q	FY2022 3Q	YoY		FY2021 3Q	FY2022 3Q	YoY
Electric power	5,689	10,866	5,176	Electric power	248	632	383
Electric power-related	1,335	2,084	749	Electric power-related	109	685	575
Overseas	1,024	2,051	1,026	Overseas	173	264	90
Other	136	223	87	Other	7	13	5
Subtotal	8,185	15,225	7,039	Subtotal	540	1,595	1,055
Elimination*	(1,090)	(1,209)	(119)	Elimination*	8	(13)	(21)
Consolidated	7,095	14,015	6,920	Consolidated	548	1,582	1,033

“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. This segment also consists of a subsidiary in Australia that owns coal mining interests.

“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 transactions

Consolidated: Cash Flow

(Unit: 100 million yen)

	FY2018	FY2019	FY2020	FY2021	FY2021 3Q	FY2022 3Q
Operating activities	1,484	1,592	1,679	1,283	394	872
Profit before income taxes	685	655	646	728	548	1,582
Depreciation	799	830	964	969	718	784
Share of (profit) loss of entities accounted for using equity method	(96)	(113)	(27)	(142)	(135)	(166)
Investing activities	(1,704)	(1,617)	(1,432)	(1,788)	(1,237)	(993)
Purchase of non-current assets	(1,060)	(1,495)	(1,592)	(1,352)	(820)	(1,023)
Investments and loan advances	(744)	(109)	(25)	(497)	(483)	(41)
Free cash flow	(220)	(24)	246	(504)	(842)	(121)

Consolidated: Key Ratios and Key Data

(Unit: 100 million yen)

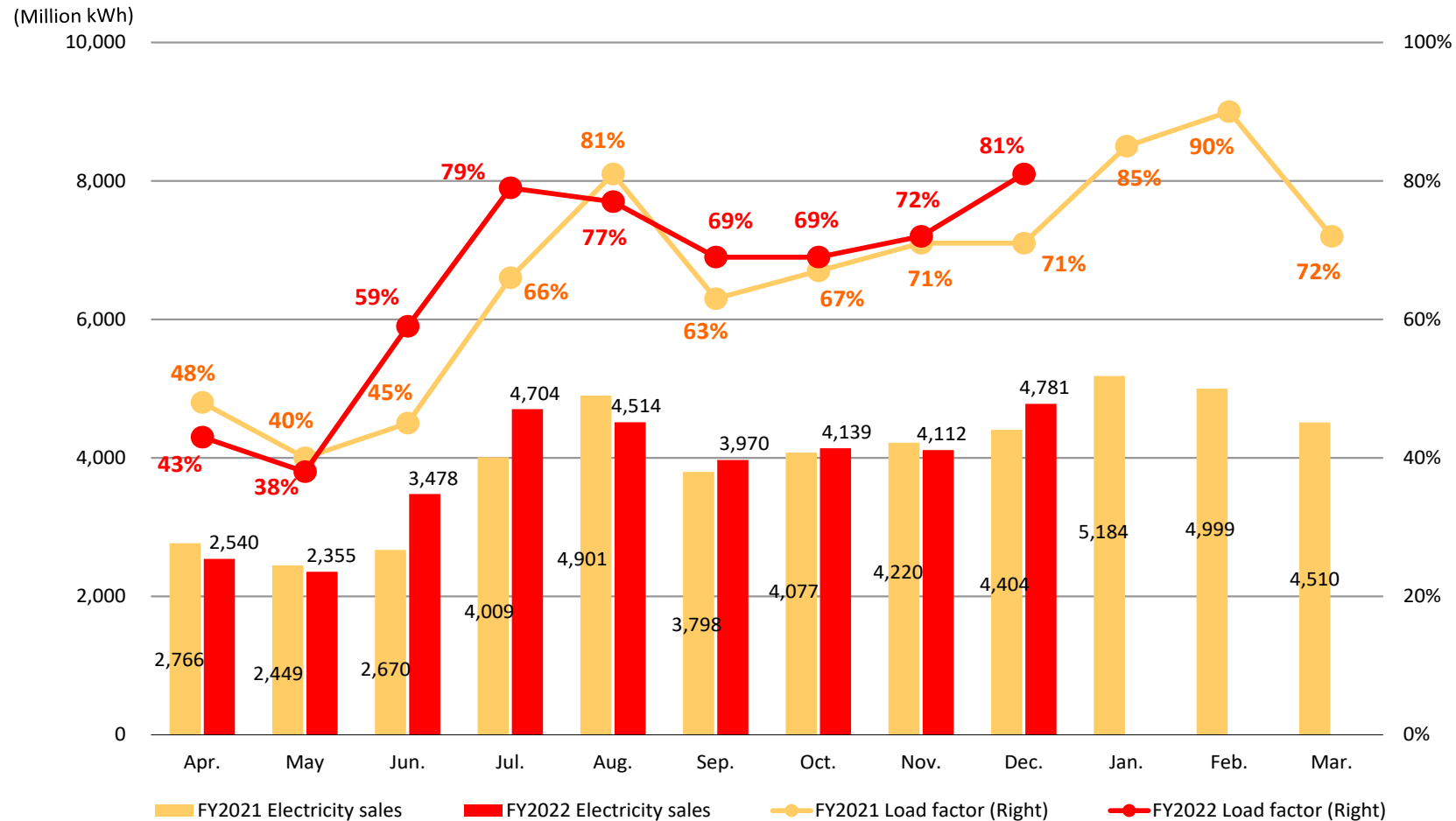
	FY2018	FY2019	FY2020	FY2021	FY2021 3Q	FY2022 3Q
(PL) Operating revenue	8,973	9,137	9,091	10,846	7,095	14,015
Operating profit	788	836	777	869	639	1,615
Ordinary profit	685	780	609	728	548	1,582
Profit attributable to owners of parent	462	422	223	696	403	1,110
(BS) Total assets	27,661	28,053	28,419	30,661	28,970	34,698
Construction in progress	5,820	6,471	5,882	6,765	6,417	5,517
Shareholders' equity	7,974	8,077	8,091	9,160	8,506	11,133
Net assets	8,455	8,573	8,536	9,641	8,945	11,711
Interest-bearing debt	16,428	16,484	16,646	17,864	17,017	19,678
(CF) Investing activities	(1,704)	(1,617)	(1,432)	(1,788)	(1,237)	(993)
Free cash flow	(220)	(24)	246	(504)	(842)	(121)
(Ref) CAPEX* ¹	(1,077)	(1,626)	(1,715)	(1,321)	(786)	(721)
(Ref) Depreciation	799	830	964	969	718	784
ROA (%)	2.5	2.8	2.2	2.5	-	-
ROA (ROA excl. Construction in progress) (%)	3.2	3.6	2.8	3.1	-	-
ROE (%)	5.8	5.3	2.8	8.1	-	-
EPS (¥)	252.68	230.96	121.85	380.70	220.67	607.04
BPS (¥)	4,356.54	4,412.84	4,420.39	5,004.31	4,647.12	6,088.50
Shareholders' equity ratio (%)	28.8	28.8	28.5	29.9	29.4	32.1
D/E ratio (x)	2.1	2.0	2.1	2.0	2.0	1.8
Number of shares issued* ² (thousand)	183,048	183,048	183,048	183,048	183,048	182,862

*¹ Capital expenditure: Increase in tangible and intangible non-current assets

*² Number of shares issued at the end of the fiscal year (excluding treasury stock)

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

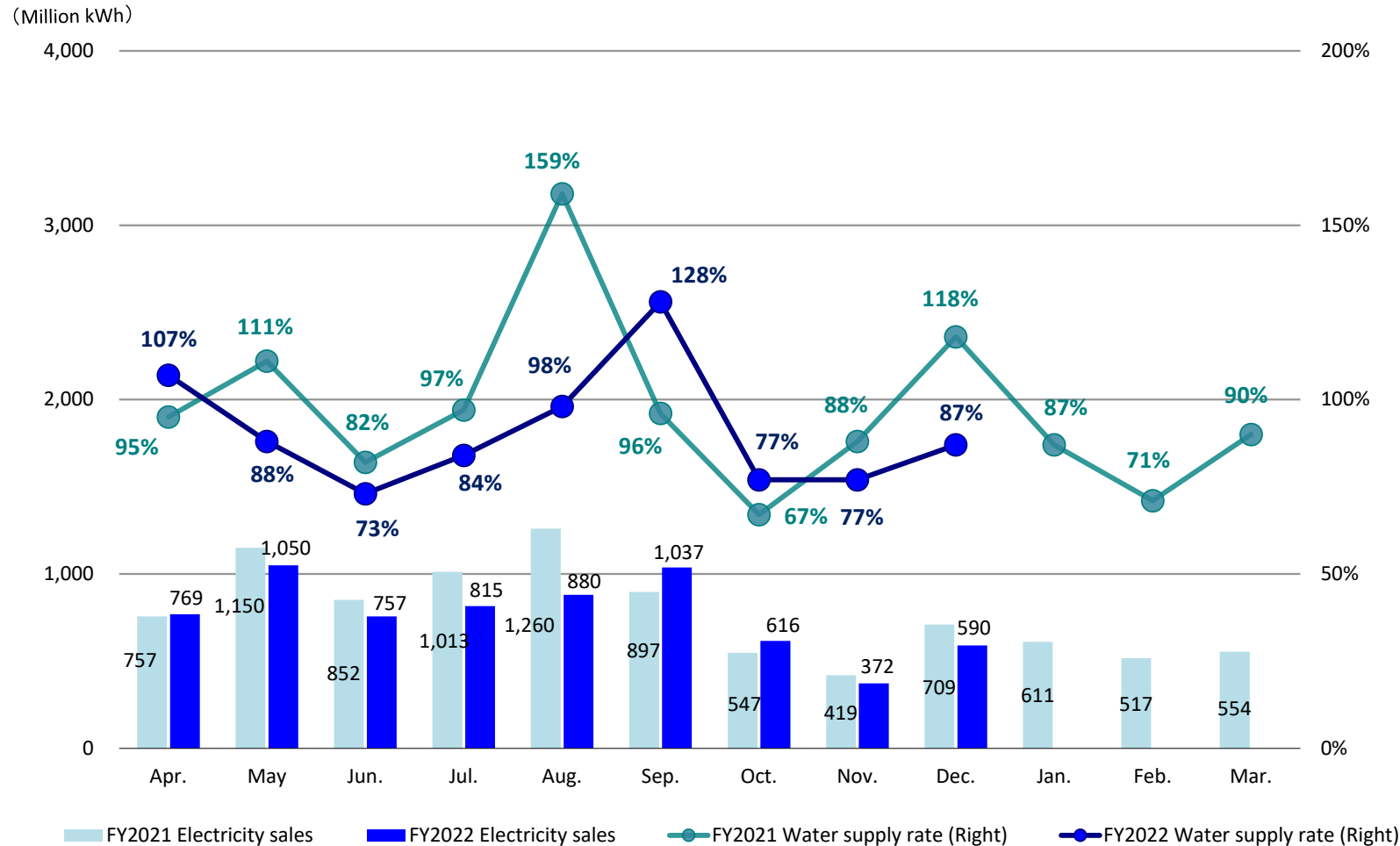
<ul style="list-style-type: none"> Apr. 2021 - Dec. 2021 Results (cumulative) Load factor ⇒ 62% Electricity sales ⇒ 33.2 TWh 	<ul style="list-style-type: none"> Apr. 2022 - Dec. 2022 Results (cumulative) Load factor ⇒ 65% Electricity sales ⇒ 34.5 TWh
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* Load factor of thermal power shows the results for non-consolidated only.
 * Proportion of equity holding is not taken into account.

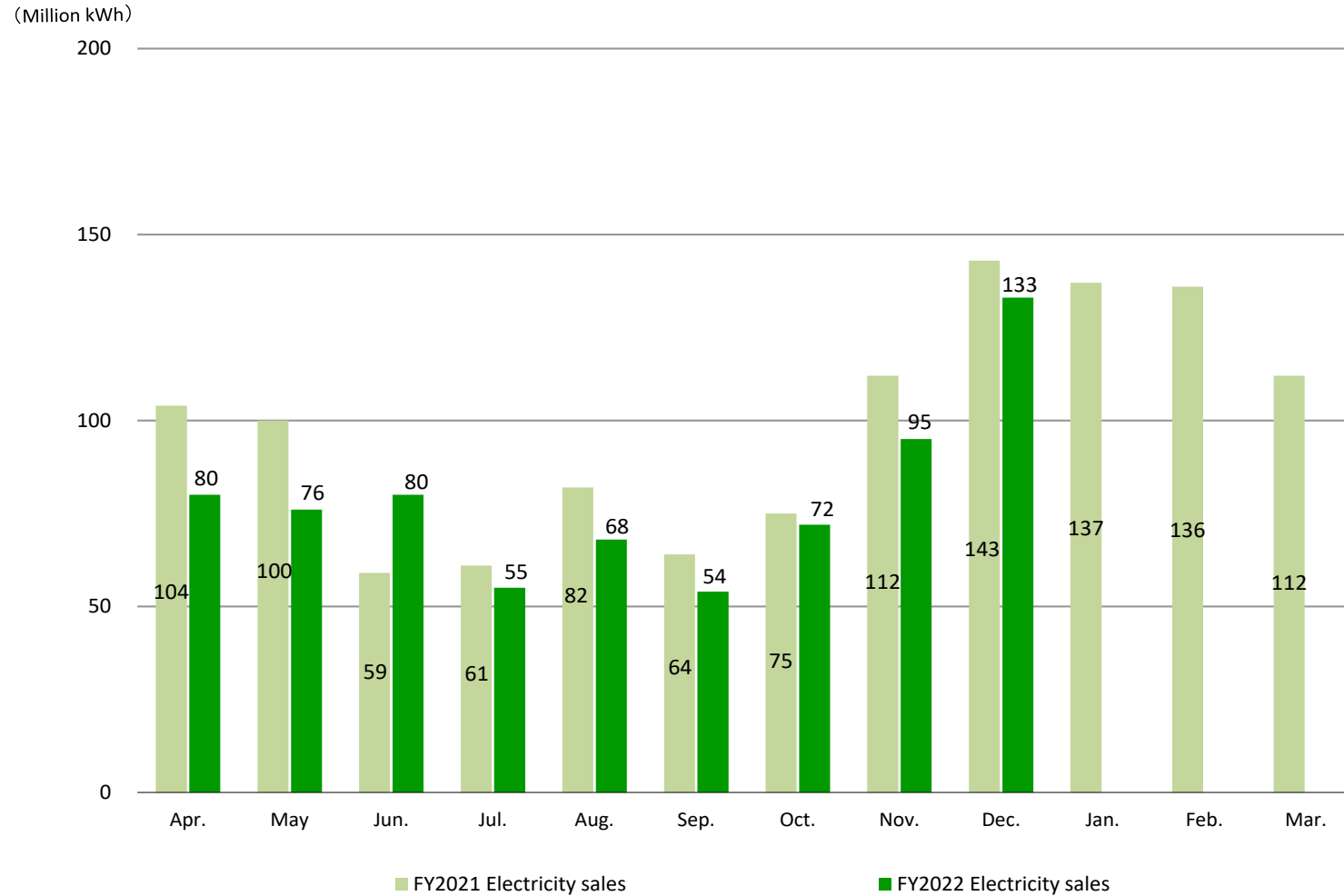
Monthly Electricity Sales: Domestic Power Generation Business (Hydroelectric Power)

<ul style="list-style-type: none"> Apr. 2021 - Dec. 2021 Results (cumulative) Water supply rate ⇒ 101% Electricity sales ⇒ 7.6 TWh 	<ul style="list-style-type: none"> Apr. 2022 – Dec. 2022 Results (cumulative) Water supply rate ⇒ 92% Electricity sales ⇒ 6.8 TWh
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Monthly Electricity Sales: Domestic Power Generation Business (Wind Power)

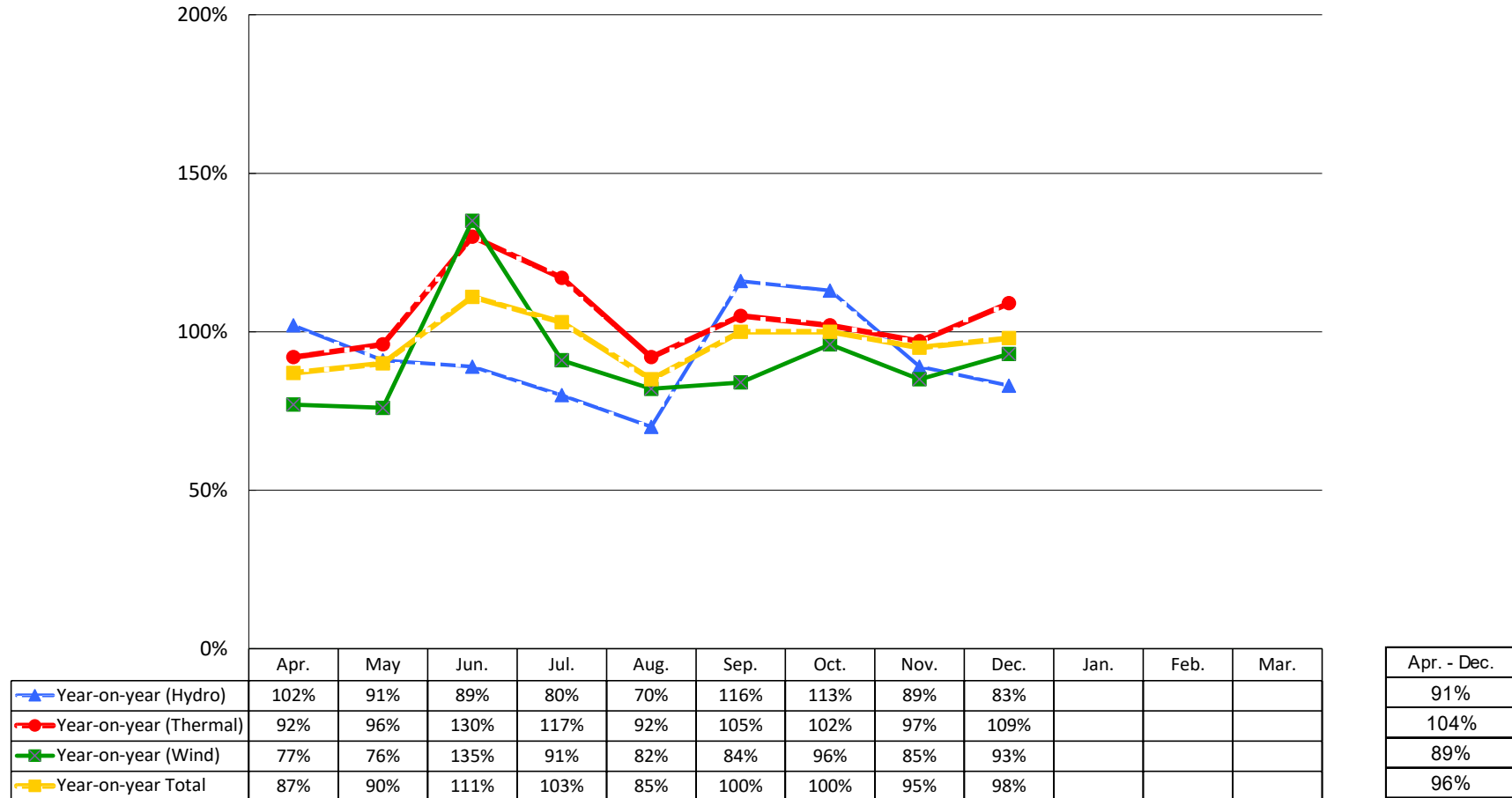
- ▶ Apr. 2021 - Dec. 2021 Results (cumulative) ⇒ 0.80 TWh
- ▶ Apr. 2022 - Dec. 2022 Results (cumulative) ⇒ 0.71 TWh



* Proportion of equity holding is not taken into account.

Change in Monthly Electricity Sales: Domestic Power Generation Business

- ▶ Apr. 2021 - Dec. 2021 Total Results (cumulative) ⇒ 53.8 TWh
- ▶ Apr. 2022 - Dec. 2022 Total Results (cumulative) ⇒ 51.7 TWh



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



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