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

Summary of FY2022 2nd Quarter Earnings Results

2022/10/31

Electric Power Development Co., Ltd.

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.

Start of operation of large overseas projects and New development projects

- In 2022, J-POWER has completed three large overseas projects as follows, which we had been working on for a long-mid term.
Triton Knoll Offshore Wind (UK), Jackson Generation Power Plant (USA), Batang Power Plant (Indonesia)
- J-POWER has also started new projects as follows.
 - ✓ Signed a joint development agreement for the new hydroelectric power plant in Alaska
 - ✓ Signed MoU for joint examination of biomass business development in Vietnam
 - ✓ Participated in a replacement project for the gas cogeneration power plant in Thailand
 - ✓ Decided to sell a portion of interest in the Jackson Generation Power Plant in U.S
- J-POWER continues to develop new projects such as renewable energy, while at the same time we also expand stable revenue base.

See Appendix P.29 for details.

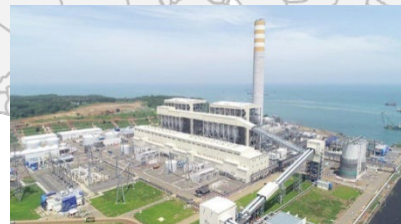


Triton Knoll Offshore Wind

(UK)

- Hydroelectric
- Wind (Onshore/Offshore)
- Solar
- Thermal
- Storage

- Start commercial operation
- Start construction
- Start EIA development



Batang Power Plant

(Indonesia)

Photo: PT Bhimasena Power Indonesia

Joint development agreement for the Sweetheart Lake Development Project

(U.S)

Joint Examination with Vinafor* of Biomass Business Development

(Vietnam)

*Vietnam Forestry Corporation Joint Stock Company

EGCO Cogeneration SPP Replacement Project

(Thailand)



Jackson Generation Power Plant

(U.S)

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Summary of FY2022 2nd 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 the elimination of unplanned outages at thermal power plants in the previous fiscal year
 - Start of operation of the Jackson Generation Power Plant in North America in May
 - Increase in sales of renewable energy
- Main reasons for increase in consolidated ordinary profit

In addition to the above factors

 - Improvement from valuation loss on derivatives in the previous period to valuation gain in the current period
 - Decrease in foreign exchange losses

(Unit: billion yen)

Consolidated	FY2021	FY2022	Year-on-year change	
	2nd Quarter (Apr.-Sep.)	2nd Quarter (Apr.-Sep.)		
Operating Revenue	431.8	839.7	407.9	94.5 %
Operating Profit	34.8	86.3	51.4	147.8 %
Ordinary Profit	26.6	86.1	59.5	223.5 %
Profit attributable to owners of parent	18.1	58.4	40.2	221.2 %

Non-consolidated	FY2021	FY2022	Year-on-year change	
	2nd Quarter (Apr.-Sep.)	2nd Quarter (Apr.-Sep.)		
Operating Revenue	285.7	630.9	345.2	120.8 %
Operating Profit	5.1	19.4	14.3	279.8 %
Ordinary Profit	33.0	49.1	16.1	48.9 %
Profit	32.9	43.6	10.6	32.4 %

Key Data (Electric Power Sales)

	FY2021 2nd Quarter (Apr.-Sep.)	FY2022 2nd Quarter (Apr.-Sep.)	Year-on-year change	
Electric Power Sales (TWh)				
Electric Power Business	35.2	33.5	(1.6)	(4.8)%
Hydroelectric Power	5.9	5.3	(0.6)	(10.5)%
Thermal Power	20.5	21.5	0.9	4.7 %
Wind Power	0.4	0.4	(0.0)	(12.3)%
Other* ¹	8.2	6.2	(1.9)	(24.2)%
Overseas Business* ²	7.3	5.7	(1.6)	(22.0)%
Water supply rate				
Water supply rate	105%	96%	(9) points	
Load factor*³				
Load factor* ³	57%	61%	+4 points	

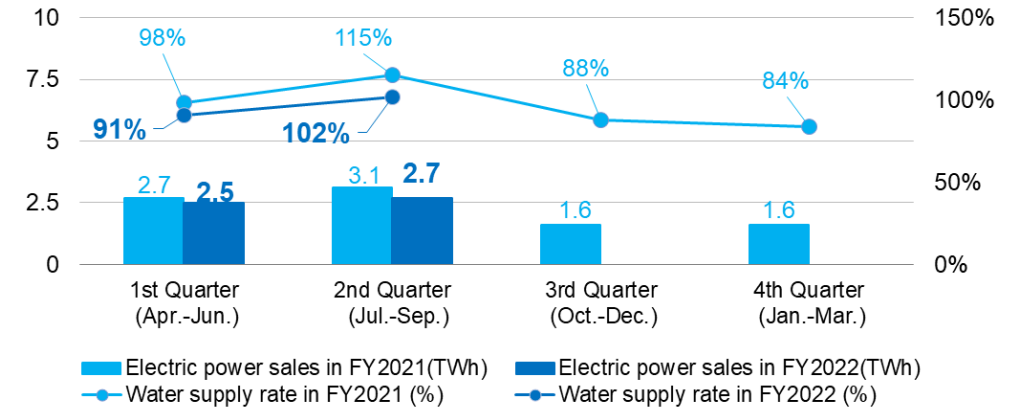
*1 Electric power sales volume of electricity procured from wholesale electricity market, etc.

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

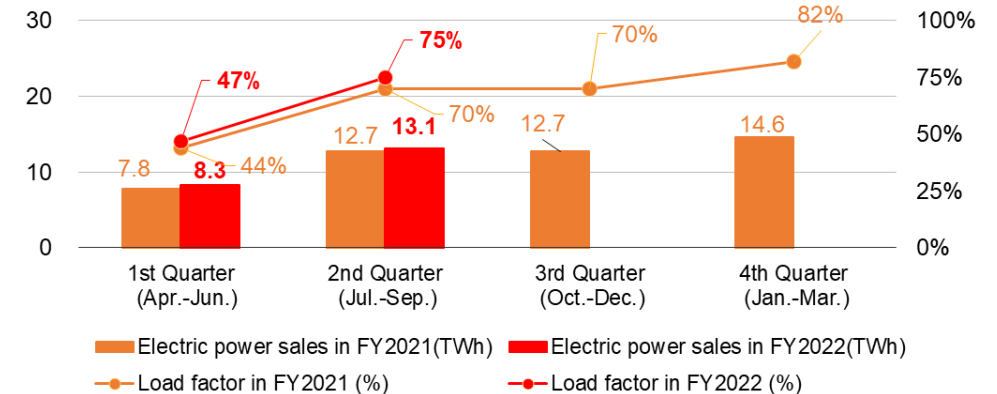
*3 Load factor of thermal power shows the results for non-consolidated only

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 rising coal prices at a subsidiary in Australia that owns coal mining interests

	FY2021 2nd Quarter (Apr.-Sep.)	FY2022 2nd Quarter (Apr.-Sep.)	Year-on-year change	
Operating Revenue (Billion yen)	431.8	839.7	407.9	94.5 %
Electric Power Business	333.9	650.9	317.0	94.9 %
Electric Power Sales	308.5	624.3	315.7	102.3 %
Renewables* ¹	65.8	76.0	10.1	15.5 %
Transmission / Transformation	24.1	24.5	0.4	1.9 %
Overseas Business* ²	75.2	120.6	45.3	60.3 %
Other Business* ³	22.6	68.1	45.5	201.6 %

	FY2021 2nd Quarter (Apr.-Sep.)	FY2022 2nd Quarter (Apr.-Sep.)
Foreign exchange rate		
(Yen/US\$) at the end of June	110.58	136.68
(Yen/THB) at the end of June	3.44	3.85
(THB/US\$) at the end of June	32.05	35.30
Average foreign exchange rate		
(Yen/US\$)	109.81	134.03

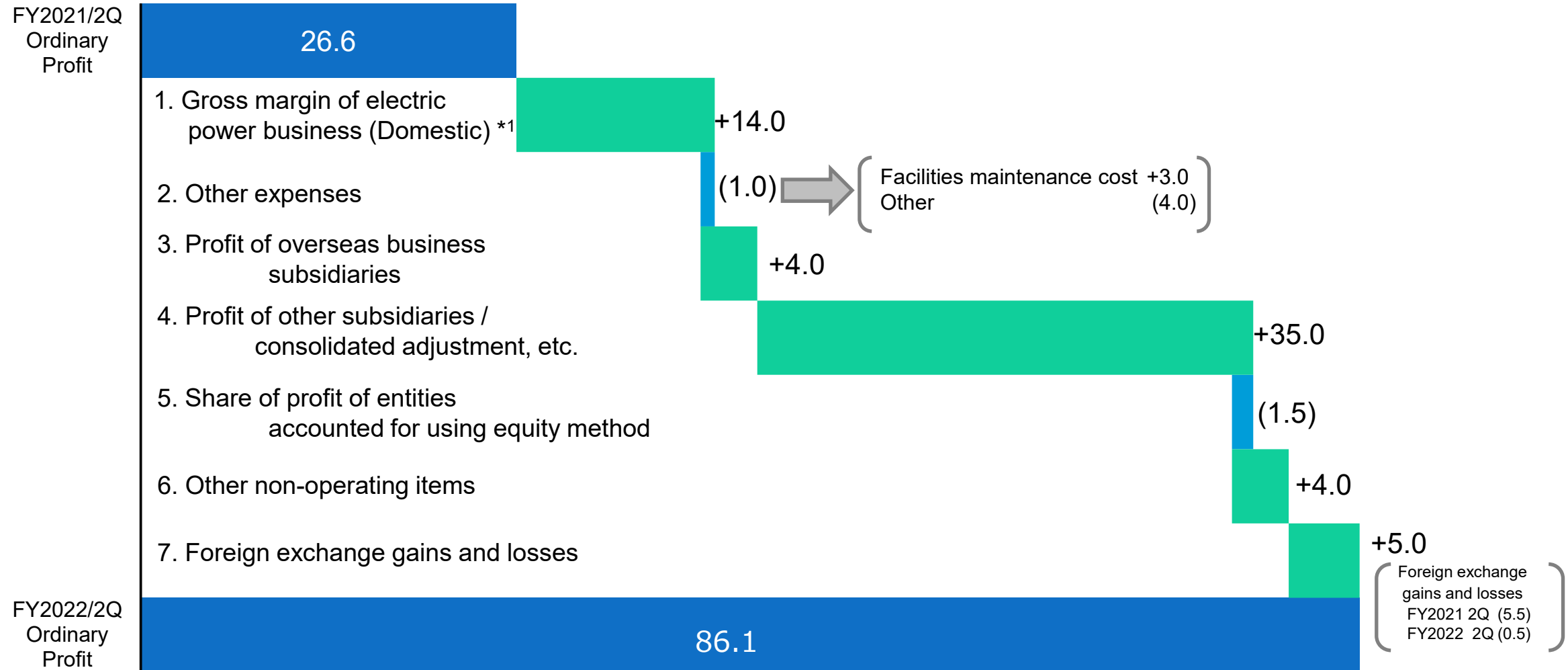
*1 Hydroelectric and wind power

*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.36 for details.

FY2022 2nd 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><u>1. Gross margin of electric power business (Domestic) +14.0</u></p> <ul style="list-style-type: none"> Decrease in unplanned outages Increased sales of renewable energy 	<p><u>5. Share of profit of entities accounted for using equity method (1.5)</u></p> <ul style="list-style-type: none"> Overseas... (1.0) Domestic ... (0.5) 									
<p><u>2. Other expenses (1.0)</u></p> <ul style="list-style-type: none"> Increase in facilities maintenance cost...+3.0 Increase in cost in various items... (4.0) 	<p><u>6. Other non-operating items +4.0</u></p> <ul style="list-style-type: none"> Increase in gain on valuation of derivatives...+4.0 Q2 2021... (1.0) → Q2 2022 ... 3.0 									
<p><u>3. Profit of overseas business subsidiaries +4.0</u></p> <ul style="list-style-type: none"> Power generation projects in Thailand Scheduled decrease in fixed income Foreign exchange effect (JPY depreciation) Jackson Generation Power Plant in US Started commercial operation in May 	<p><u>7. Foreign exchange gains and losses +5.0</u> <u>Q2 2021 (5.5) → Q2 2022 (0.5)</u></p> <ul style="list-style-type: none"> US dollar-denominated debt in power generation projects in Thailand...+0.5 <p>Foreign exchange rate(THB/USD)</p> <table border="1" style="width: 100%; border-collapse: collapse; text-align: center;"> <thead> <tr> <th></th> <th>At the end of December of the previous year</th> <th>At the end of June*</th> </tr> </thead> <tbody> <tr> <td>FY2021</td> <td>30.04</td> <td>32.05</td> </tr> <tr> <td>FY2022</td> <td>33.42</td> <td>35.30</td> </tr> </tbody> </table>		At the end of December of the previous year	At the end of June*	FY2021	30.04	32.05	FY2022	33.42	35.30
	At the end of December of the previous year	At the end of June*								
FY2021	30.04	32.05								
FY2022	33.42	35.30								
<p><u>4. Profit of other subsidiaries / consolidated adjustment, etc. +35.0</u></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...+4.5 <p>* The settlement period of overseas subsidiaries is from January to December</p>									

Consolidated: Revenue / Expenditure Comparison

(Unit: billion yen)

	FY2021 2nd Quarter (Apr.-Sep.)	FY2022 2nd Quarter (Apr.-Sep.)	Year-on-year change	Main factors for change
Operating Revenue	431.8	839.7	407.9	
Electric power business	333.9	650.9	317.0	
Overseas business	75.2	120.6	45.3	
Other business	22.6	68.1	45.5	
Operating Expenses	396.9	753.4	356.5	Electric power business+305.0, Overseas business+41.6, Other business+9.8
Operating Profit	34.8	86.3	51.4	
Non-operating Revenue	11.3	14.7	3.3	
Share of profit of entities accounted for using equity method	8.8	7.5	(1.2)	
Other	2.5	7.1	4.6	
Non-operating Expenses	19.5	14.8	(4.6)	
Interest expenses	11.2	12.6	1.4	
Foreign exchange losses	5.8	0.6	(5.1)	
Other	2.5	1.5	(0.9)	
Ordinary Profit	26.6	86.1	59.5	Electric power business+17.3, Overseas business+6.3, Other business+37.8
Total income taxes	6.1	25.6	19.5	
Profit attributable to owners of parent	18.1	58.4	40.2	

Consolidated: Balance Sheet

(Unit: billion yen)

	FY2021 End of FY	FY2022 End of 2Q	Change from prior year end	Main factors for change
Non-current Assets	2,594.8	2,716.0	121.2	
Electric utility plant and equipment	1,076.9	1,068.9	(8.0)	
Overseas business facilities	271.3	462.5	191.1	
Other non-current assets	92.2	99.4	7.1	
Construction in progress	676.5	548.5	(128.0)	
Nuclear fuel	75.8	75.8	0.0	
Investments and other assets	401.8	460.7	58.9	Long-term investments +52.3 (Includes impact of foreign exchange revaluation+36.2)
Current Assets	471.3	707.4	236.0	
Total Assets	3,066.1	3,423.4	357.2	
Interest-bearing debt	1,786.4	2,002.3	215.9	Non-consolidated +176.3, Subsidiaries and others +39.5
Other	315.6	309.1	(6.5)	
Total Liabilities	2,102.0	2,311.4	209.4	
Shareholders' equity	870.8	921.5	50.7	
Accumulated other comprehensive income	45.2	131.7	86.5	Foreign currency translation adjustment +60.9 Deferred gains or losses on hedges+29.9
Non-controlling interests	48.0	58.7	10.6	
Total Net Assets	964.1	1,111.9	147.8	
D/E ratio (x)	2.0	1.9		
Shareholders' equity ratio	29.9%	30.8%		



Summary of FY2022 Earnings Forecast

Summary of FY2022 Earnings Forecast

※Compared to initial forecast

- We revised the earnings forecast released on May 11, 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.
- Operating profit and ordinary profit is estimated to increase mainly due to the increase in profit from a subsidiary in Australia that owns coal mining interests due to soaring coal price, and in profit from Jackson Generation Power Plant in North America.

(Unit: billion yen)

Consolidated	FY2021 Result	FY2022 Forecast	Comparison with FY2021 Result		FY2022 Initial Forecast*1	Comparison with Initial Forecast	Cash dividends per share		
							Interim	Year end	Annual
Operating Revenue	1,084.6	1,794.0	709.3	65.4 %	1,431.0	363.0	FY2021 35 yen	40 yen	75 yen
Operating Profit	86.9	162.0	75.0	86.3 %	110.0	52.0	FY2022 40 yen	40 yen(forecast)	80 yen(forecast)
Ordinary Profit	72.8	155.0	82.1	112.8 %	100.0	55.0			
Profit attributable to owners of parent	69.6*2	108.0	38.3	55.0 %	67.0	41.0			
Non-consolidated	FY2021 Result	FY2022 Forecast	Comparison with FY2021 Result		FY2022 Initial Forecast*1	Comparison with Initial Forecast			
Operating Revenue	790.0	1,376.0	585.9	74.2 %	1,098.0	278.0			
Operating Profit	17.8	36.0	18.1	101.1 %	31.0	5.0			
Ordinary Profit	58.2	68.0	9.7	16.7 %	56.0	12.0			
Profit	73.6*2	58.0	(15.6)	(21.3)%	49.0	9.0			

※No change in dividend forecast

*1 Initial Forecast: Earnings forecast released on May 11, 2022

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

Key Data

※Compared to initial 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 rising coal prices at a subsidiary in Australia that owns coal mining interests

	FY2021 Result	FY2022 Current Forecast	Comparison with FY2021 Result		FY2022 Initial Forecast ^{*5}	Comparison with Initial Forecast
Electric Power Sales (TWh)						
Electric Power Business	74.7	68.4	(6.3)	(8.5)%	65.3	3.1
Hydroelectric Power	9.2	9.2	(0.0)	(1.0)%	9.4	(0.2)
Thermal Power	47.9	46.2	(1.7)	(3.7)%	43.8	2.4
Wind Power	1.1	1.0	(0.1)	(16.0)%	1.1	(0.1)
Other ^{*1}	16.3	12.0	(4.3)	(26.5)%	10.9	1.1
Overseas Business^{*2}	11.0	14.6	3.5	32.0%	17.4	(2.8)
Operating Revenue (Billion yen)	1,084.6	1,794.0	709.3	65.4%	1,431.0	363.0
Electric Power Business	876.4	1,426.0	549.5	62.7%	1,155.0	271.0
Electric Power Purchase	822.9	1,372.0	549.0	66.7%	1,078.0	294.0
Renewables	134.5	147.0	12.4	9.2%	141.0	6.0
Transmission/Transformation	48.7	50.0	1.2	2.5%	49.0	0.9
Overseas Business^{*3}	145.1	233.0	87.8	60.6%	196.0	37.0
Other Business^{*4}	63.0	135.0	71.9	114.0%	80.0	55.0

	FY2021 Result	FY2022 Current Forecast	FY2022 Initial Forecast ^{*5}
Water supply rate	99%	97%	100%
Load factor	67%	66%	63%
Foreign exchange rate at term end			
Yen/USD	115.02	140.00	125.00
Yen/THB	3.43	3.60	3.60
THB/USD	33.42	33.42	33.42

*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. See AppendixP36. for details.

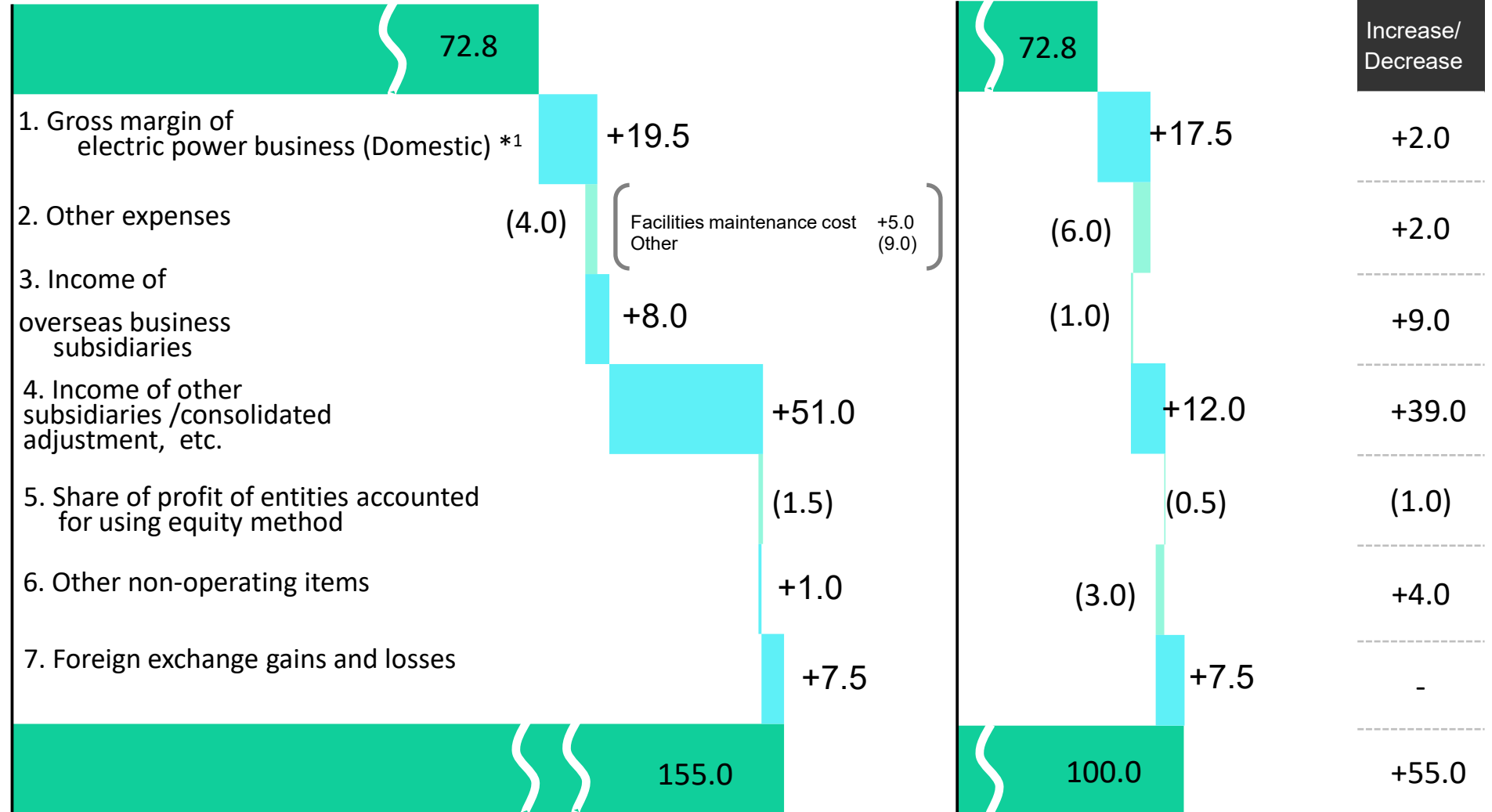
*5 Earnings forecast released on May 11, 2022

FY2022 Earnings Forecast (Main Factors for Change)

(Unit: billion yen)

[Current forecast]

[Initial forecast]
(released on May 11, 2022)



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

Breakdown of Increase / Decrease Factors of Consolidated Ordinary Income Forecast

(Unit: billion yen)

<p><u>1. Gross margin of electric power business (Domestic) +2.0</u></p> <ul style="list-style-type: none"> Increase in revenue of renewable energy 	<p><u>4. Income of other subsidiaries / consolidated adjustment, etc. +39.0</u></p> <ul style="list-style-type: none"> Increase in profit due to the rise of coal price in Australian coal mines, which one of our subsidiaries owns through proportional consolidation... +39.0
<p><u>2. Other expenses +2.0</u></p> <ul style="list-style-type: none"> Decrease in facilities maintenance cost...+6.5 Increase in cost in various items... (4.5) 	<p><u>5. Share of profit of entities accounted for using equity method (1.0)</u></p> <ul style="list-style-type: none"> Overseas...±0.0 Domestic...(1.0)
<p><u>3. Income of overseas business subsidiaries +9.0</u></p> <ul style="list-style-type: none"> Jackson Generation Power Plant in US Increase in profit due to rise of sales price 	<p><u>6. Other non-operating items +4.0</u></p> <ul style="list-style-type: none"> Decrease in loss on retirement, etc.
	<p><u>7. Foreign exchange gains and losses -</u></p> <ul style="list-style-type: none"> No change from the initial forecast (Initial forecast: Decrease in foreign exchange losses...+7.5)

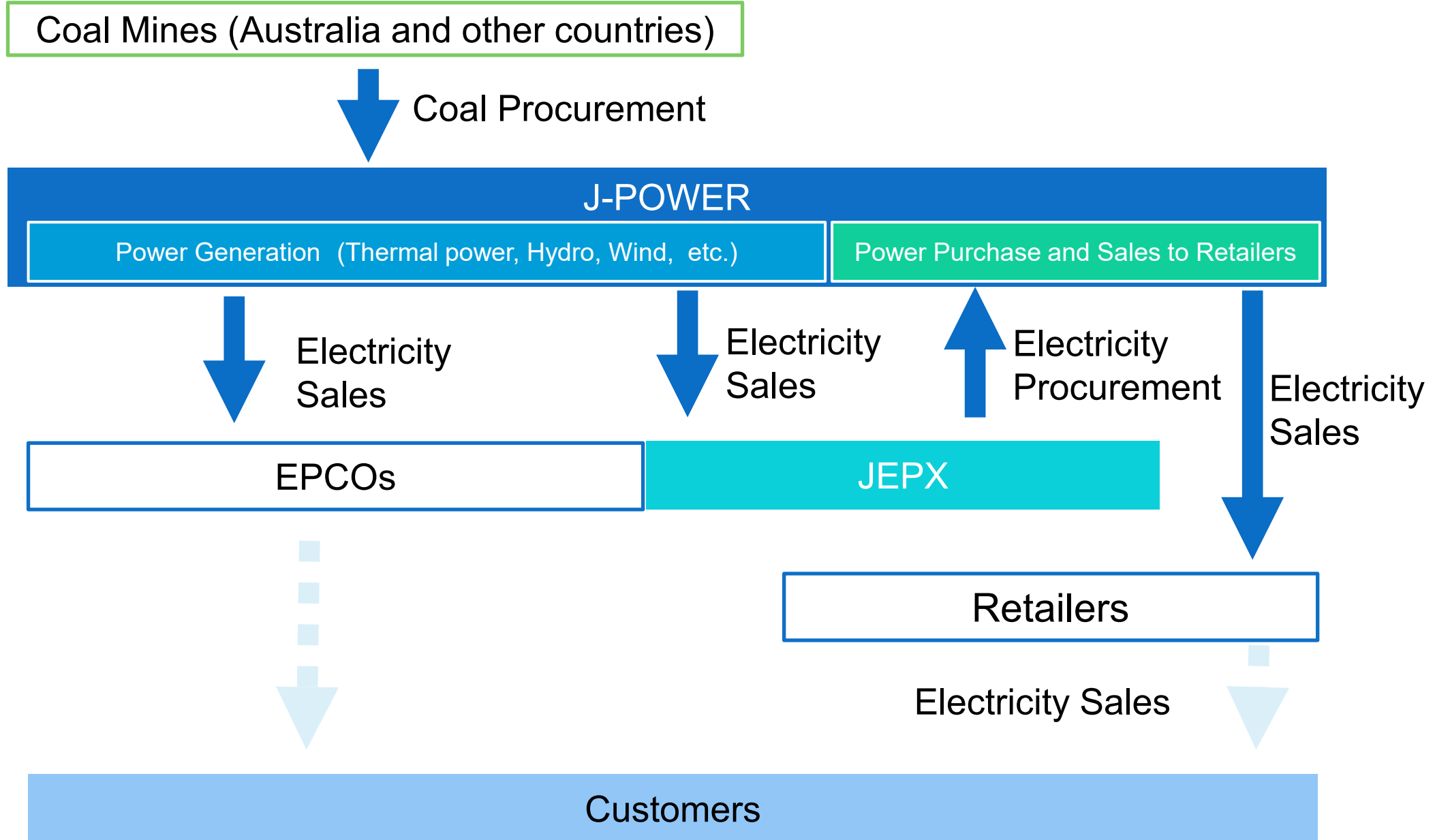
A photograph of several offshore wind turbines in the ocean under a clear blue sky. The turbines are white with yellow bases. The image is partially obscured by a white diagonal shape on the right side of the slide.

Appendix

(2) Business Data Contents

1. Main Flow of Domestic Electricity Business	...	18	9. Beginning the Study for an Integrated Demonstration of CO ₂ -Negative Hydrogen Production from Biomass	...	27
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(2) -1. Main Flow of Domestic Electricity Business

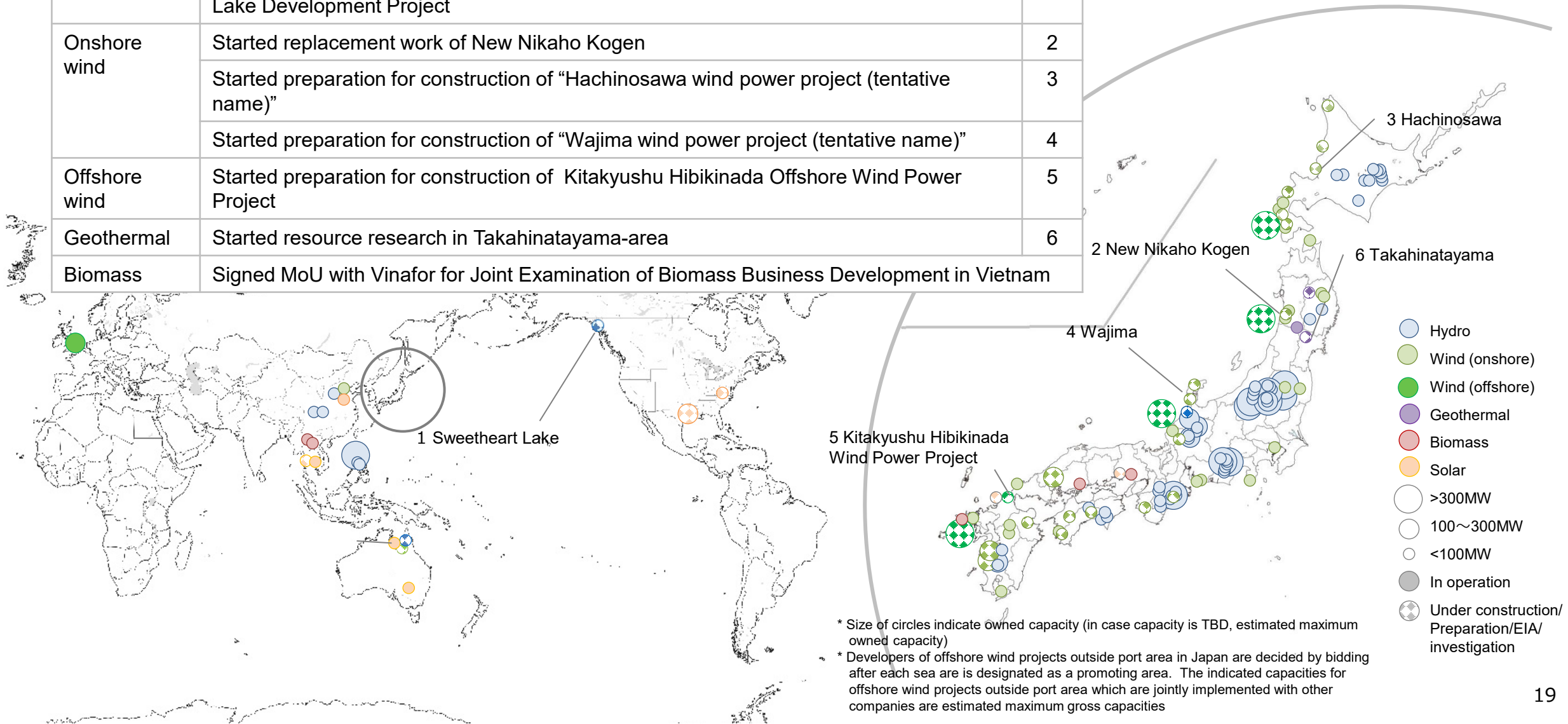


(2) -2. Expansion of Renewable Energy

Progress in FY2022 2Q

Hydroelectric	Sinining a joint development agreement with Juneau Hydropower Inc. for the Sweetheart Lake Development Project	1
Onshore wind	Started replacement work of New Nikaho Kogen	2
	Started preparation for construction of “Hachinosawa wind power project (tentative name)”	3
	Started preparation for construction of “Wajima wind power project (tentative name)”	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 September 30,2022)



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

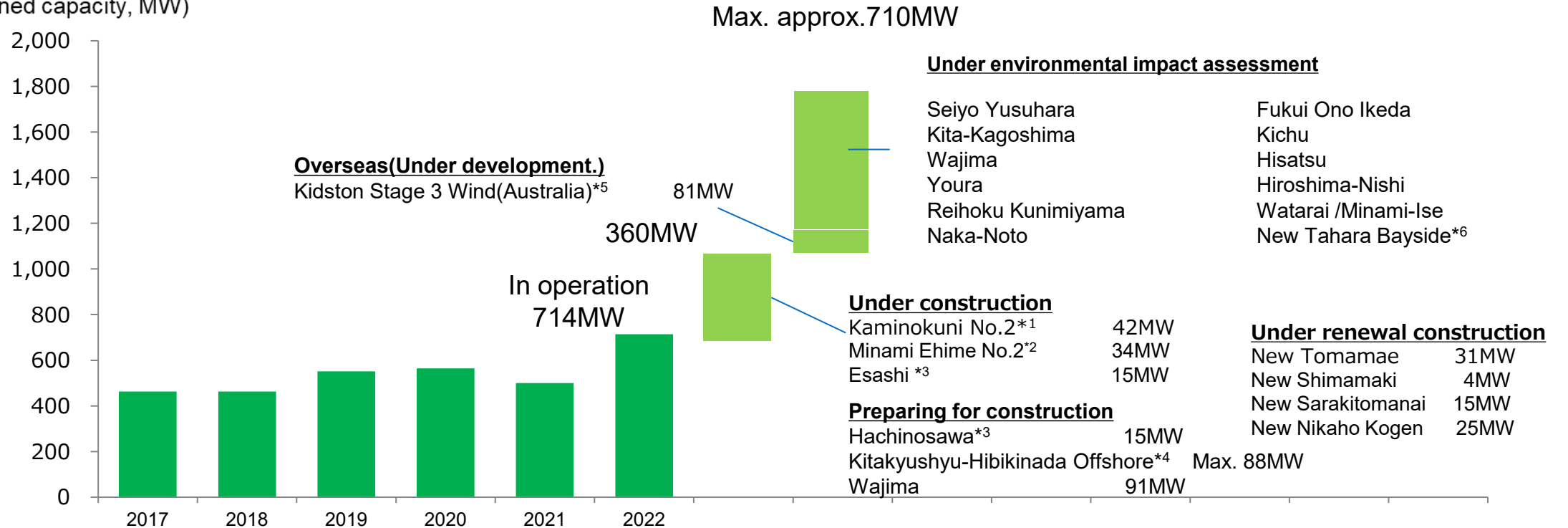
* Developers of offshore wind projects outside port area in Japan are decided by bidding after each sea area is designated as a promoting area. The indicated capacities for offshore wind projects outside port area which are jointly implemented with other companies are estimated maximum gross capacities

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

(As of September 30, 2022)

Onshore and offshore (port area)

(Owned capacity, MW)



Offshore (outside port area)

Under research for development	Saikai Offshore*7 Hiyama-area Offshore Awara Offshore*8 Yuza Offshore*9	Max. approx. 1,850MW in total
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*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 SymEnergy Inc. Owned capacity considering future share of SymEnergy Inc.
 *4 Conducted jointly with Kyuden Mirai Energy Company, Incorporated, Hokutaku Co., LTD, Saibu Gas Co. Ltd. and Kyudenko Corp.
 *5 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.
 *6 Estimated capacity increase with replacement
 *7 Conducted jointly with SUMITOMO CORPORATION
 *8 Conducted jointly with Mitsui Fudosan Co., Ltd.
 *9 Joint environment assessment as a consortium.

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

(As of September 30,2022)

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)
	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 : FY2024 (planned)
	K2 Hydro (Australia, Pumped hydro)	250MW	7.7%	19.3MW	Start of operation : 2024 (planned)

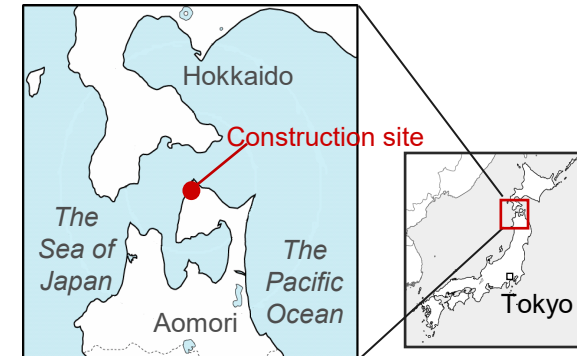
Geo-thermal	Project	Capacity	Ownership	Owned capacity	Note
	Onikobe Replacement	14.9MW	100%	14.9MW	Start of operation: April 2023 (planned)
	Appi	14.9MW	15%	2.2MW	Start of operation: April 2024 (planned)
	Takahinatayama-area	-	-	-	Under research for development

Solar	Project	Capacity	Ownership	Owned capacity	Note
	Kitakyushushi Hibikinada (JPN)	30.0MW	100%	30.0MW	Start of operation: FY2024 (planned)
	Himejishi Oshio (JPN)	2.0MW	100%	2.0MW	Start of operation: FY2023 (planned)
	Refugio (USA)	400.0MW	25%	100.0MW	Start of operation: After 2023 (planned)
	Rooftop solar (Thailand, 4 projects)	total 5.5MW	60%	3.3MW	Start of operation : After 2022 (planned)

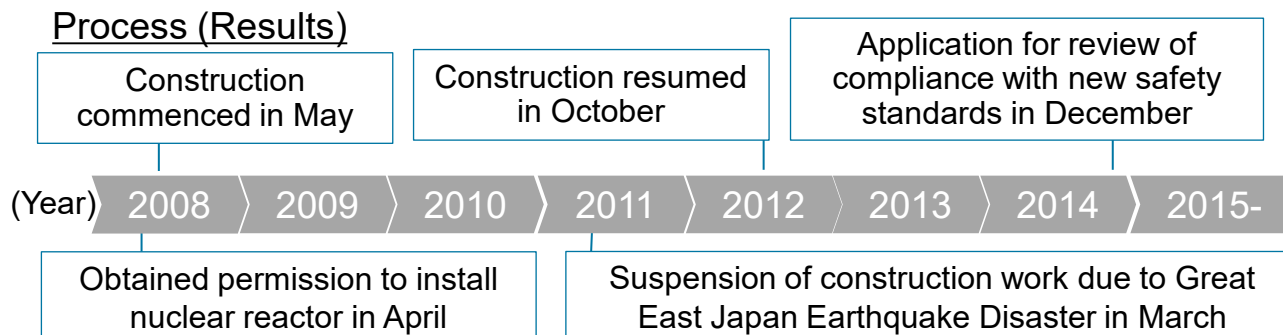
(2) -5. Ohma Nuclear Power Project

- 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 by NRA * Nuclear Regulation Authority
- 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 results 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

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

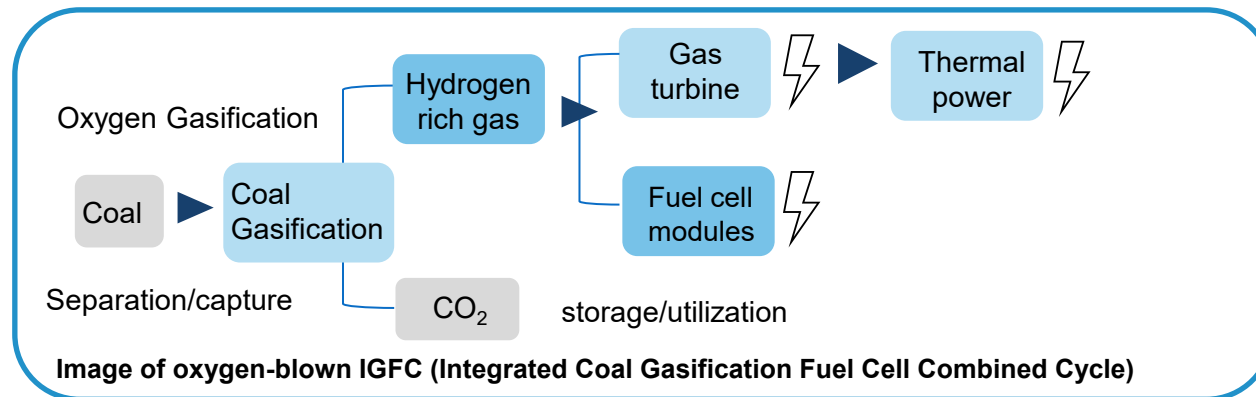


Status of construction (as of September 30, 2022)



(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.



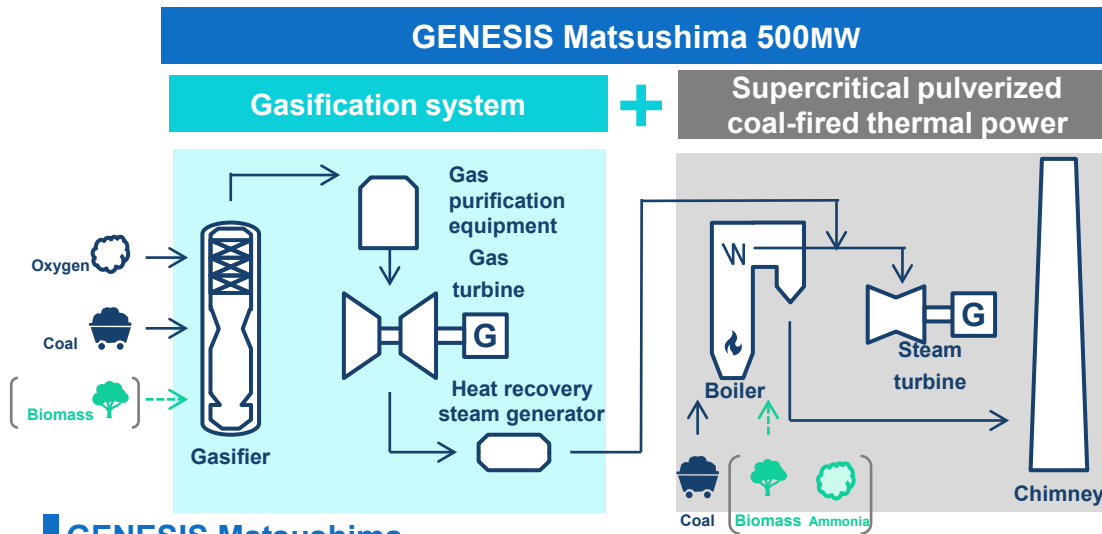
Fuel cell modules
Solid Oxide Fuel Cell (SOFC)
Capacity : 1.2MW class
(0.6MW class SOFC X2)

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)

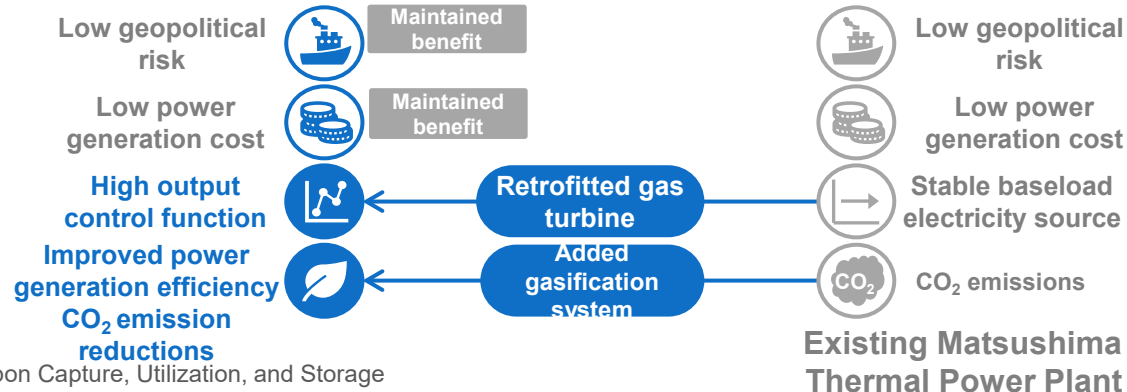
* This concentration rate is after CO₂ separation and capture. Because of limitation of the turbine unit ability, at the time of power generation, concentration rate would be lower.

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

- J-POWER will take the first step in CO2-free hydrogen power generation at the Matsushima Plant that paved the way for using imported coal after the oil crisis.
- 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.



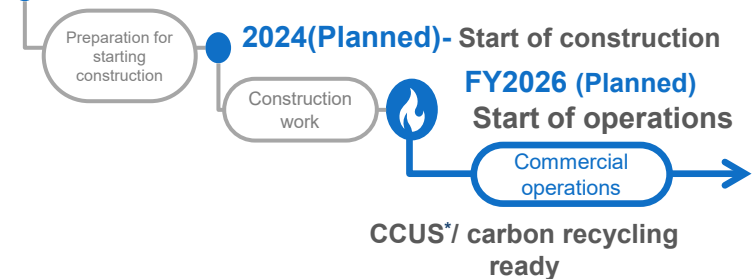
GENESIS Matsushima



* CCUS : Carbon Capture, Utilization, and Storage



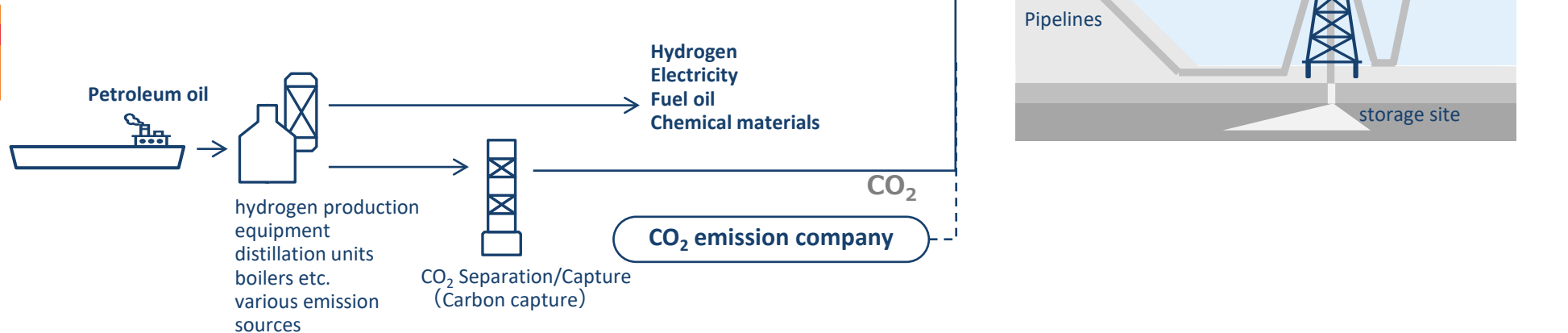
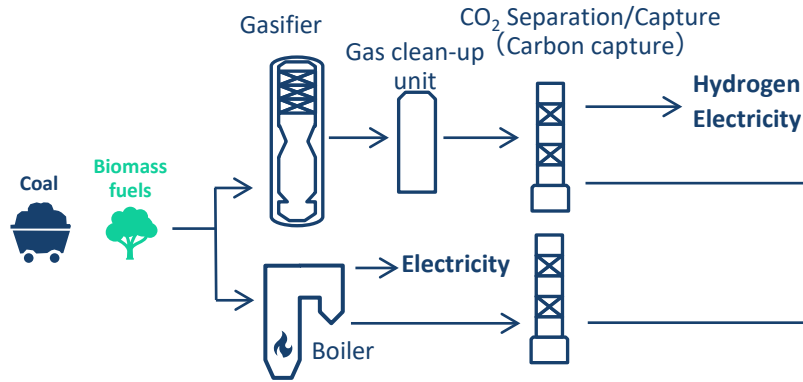
September 2021- Started Environmental impact assessment



(2) -8. Beginning Feasibility Study for Large-scale CCS in Japan

- J-POWER and ENEOS Holdings, Inc. are jointly engaged in a large-scale domestic CCS feasibility study.
- Aiming to achieve social implementation of large-scale CCS by 2030 by collaborating and coordinating with construction, equipment, and transportation companies.

Concept



(2) -8. Beginning Feasibility Study for Large-scale CCS in Japan

- A feasibility study will be done in Western Japan, where both companies are producing emissions and where there is considered to be CO₂ storage potential.
- It will take nearly 10 years—from the investigation of candidate storage 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

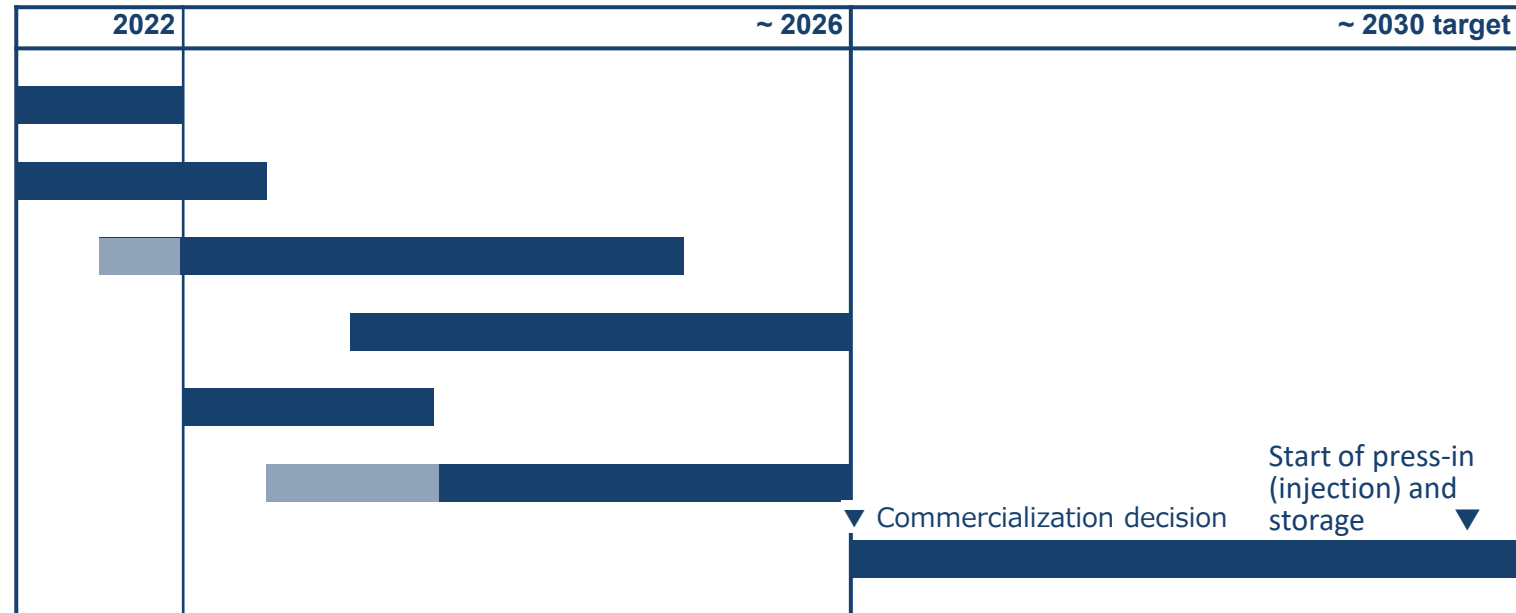
Candidate storage site surveys

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

Equipment design

Basic design
 Detailed design

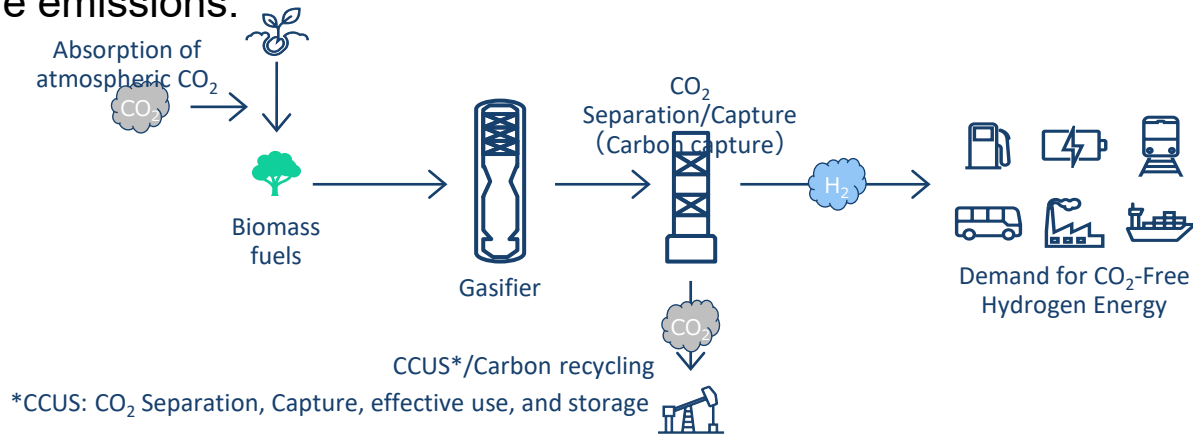
Construction



(2) -9. Beginning the Study for an Integrated Demonstration of CO₂-Negative Hydrogen Production from Biomass

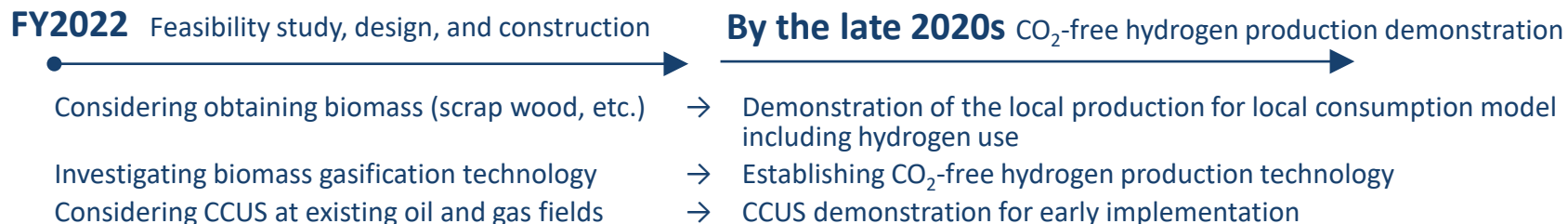
- J-POWER and ENEOS Holdings, Inc. are jointly engaged in implementing CCUS and demonstrating CO₂-free hydrogen production by the late 2020s
- CO₂-free hydrogen will be produced by splitting biomass into hydrogen and CO₂ using gasification technology and then separating out and capturing the CO₂.
- Separated and captured CO₂ will be pressed-in (injected) and stored underground using existing oil and gas fields to achieve negative emissions.

Concept



Plan

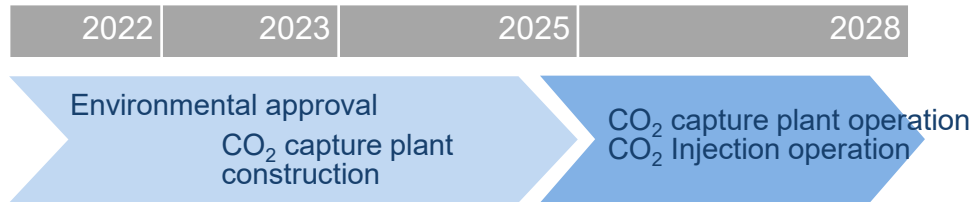
- We will begin a feasibility study this fiscal year to develop biomass gasification technology using scrap wood and other biomass produced locally for local consumption.
- In the late 2020s, we intend to start a demonstration project combining CCUS with the production of hydrogen from biomass using gasification technology.



(2) -10. Participation in CO₂ Capture, Transportation, and Storage Project in Queensland, Australia

- Participated in Glencore’s CTSCo* Carbon Capture and Storage (CCS) Project in Queensland, Australia, focusing on capturing CO₂ from coal-fired power station, transporting and storing.
- Australia's first CCS project for coal-fired power emissions, a demonstration project aimed at technical verification from CO₂ capture to storage. Aim to start storing up to 110,000 t CO₂ per year from 2025.
- 500 million tons of CO₂ storage potential is available in the area. This project will contribute to economic development and job creation by creating new industries for blue hydrogen production in Australia.

Project Status



Rendered image of the proposed CO₂ capture plant and Millmerran Power Station in Queensland, Australia

Project partners



CO₂ injection site near Moonie in Queensland, Australia

* Carbon Transport and Storage Company (CTSCo) is a Glencore wholly owned company. J-POWER and Marubeni each fund A\$10 million in this project.

(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 developer acquire wide knowledge and earn profits through development of Green-Field projects, steady progress of construction projects, and safety 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 continue development of new projects mainly renewable power project. Through these new projects, J-POWER continue global business expansion and contribution to achieve carbon neutrality.



New Projects under construction, development, investigation	
USA ☀️💧	<ul style="list-style-type: none"> • Development of Solar power plants (Refugio) • Development of hydroelectric power plant (Sweetheart Lake)
Asia ☀️🔥🌿	<ul style="list-style-type: none"> • Development and construction of rooftop solar in Thailand • Gas combined power plant replacement project (EGCO Cogen) • Examination of biomass business development in Vietnam
Australia 🌪️💧	<p>J-POWER participates renewable power project with Genex*</p> <ul style="list-style-type: none"> • Development of Onshore Wind (Kidston Stage-3 Wind) • Construction of pumped storage power plant (K2-Hydro) <p>* Genex Power Limited: Renewable power company in Australia</p>

(2) -12. Indonesia: Batang Power Plant started commercial operation

(As of September 30,2022)

Project	Overview
	<p>Java, Indonesia</p> <p>Capacity: 2,000MW (1,000MW x 2) Type: Coal-fired (USC) Ownership: 34% Commercial operation : Unit1 2022/08/15 : Unit2 2022/08/31 PPA : 25years (BOOT*)</p>

(Photo: PT Bhimasena Power Indonesia)

*Build-Own-Operate-Transfer

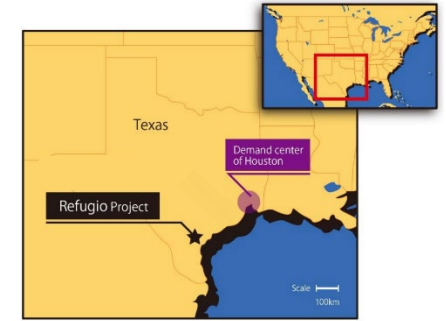
(2) -13. Overview of Overseas Projects under Development (As of September 30, 2022)

Project	Overview
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Refugio (USA)

Capacity: 400MW
 Type: Solar
 Ownership: 25%
 Status: Under development
 Start of operation: After 2023

- 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



Sweetheart Lake (USA)



(Photo: RE Johnson)

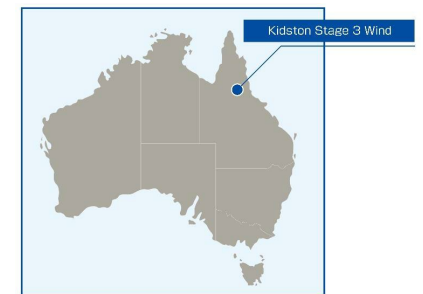
- J-POWER has signed a joint development agreement with Juneau Hydropower Inc., an electric power production and supply developer in the US for the Sweetheart Lake Hydroelectric Development Project near Juneau, the capital of the State of Alaska
- The purpose of the agreement is for the two companies to cooperate on the development of the project, including the construction of a hydroelectric power plant, transmission lines, and a district heating system in Alaska's state capital



Kidston Stage-3 Wind (Australia)



Capacity: 150MW
 Type: Onshore wind
 Ownership: 50%*
 Status: Under development
 Start of operation: 2025

- 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) -13. Overview of Overseas Projects under Development (As of September 30, 2022)

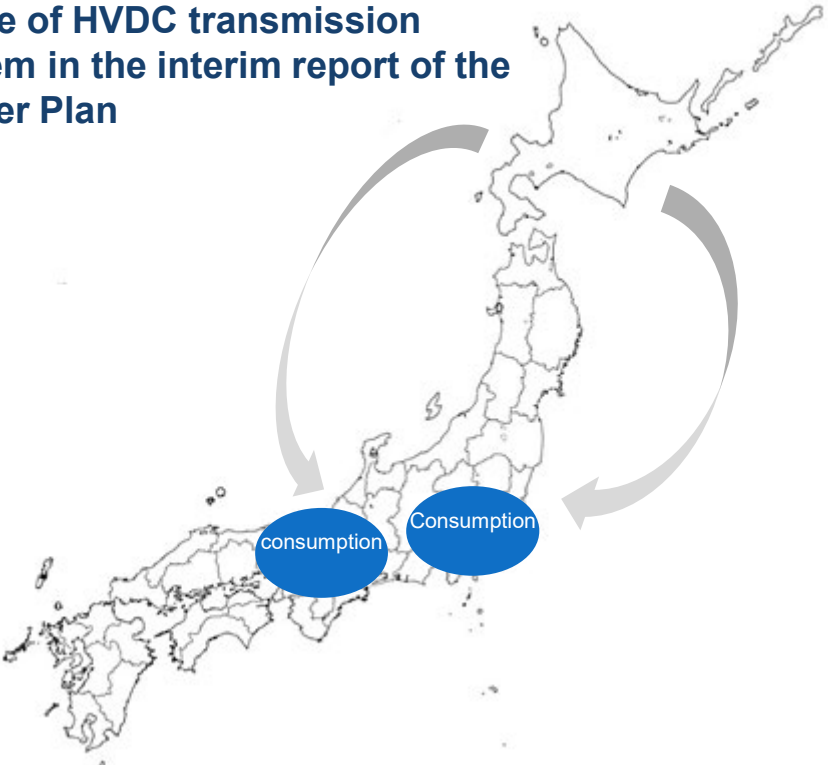
Project	Overview	
<p>EGCO Cogen power plant replacement project (Thailand)</p> <p>Type : Gas combined cycle Output : Electricity 74 MW Ownership: 20% Schedule : Under construction Commercial operation (planned); January 2024</p>	<ul style="list-style-type: none"> • J-POWER participated in a replacement 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 (4 projects, Thailand)</p> <p>Capacity: total 5.5MW Type: Solar Ownership: 60% Status: Under development Start of operation: Each project will commence commercial operation after 2022</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>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) -14. 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.
- Utilization of offshore wind 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.
- J-POWER Transmission Network Co., Ltd. (J-POWER Transmission), a wholly owned subsidiary of J-POWER, is appointed together with Research Institute for Ocean Economics and Eukote Energy LLC to carry out “the study on the establishment and operation of HVDC transmission system from the offshore wind power” by the New Energy and Industrial Technology Development Organization.

Study Period	From July 2021 to March 2022
Study Content	<ol style="list-style-type: none"> 1. Study on detailed roots for the HVDC transmission system 2. Study on the facility required for HVDC transmission system 3. Study on the cost and schedule for HVDC transmission system 4. Study on the status of overseas HVDC transmission system

Image of HVDC transmission system in the interim report of the 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).
- J-POWER Transmission succeeded in constructing Japan's first ultra-high voltage DC power transmission facility and developing a DC CV cable.

*Jointly owned with Kansai Transmission and Distribution, Inc. and Shikoku Electric Power Transmission & Distribution Company, Incorporated

Consolidated: Revenues and Expenses

(Unit: 100 million yen)

	FY2018	FY2019	FY2020	FY2021	FY2021 2Q	FY2022 2Q
Operating revenue	8,973	9,137	9,091	10,846	4,318	8,397
Electric utility operating revenue	6,937	6,841	7,313	8,764	3,339	6,509
Overseas business operating revenue	1,410	1,790	1,380	1,451	752	1,206
Other business operating revenue	625	505	397	630	226	681
Operating expenses	8,185	8,301	8,313	9,976	3,969	7,534
Operating profit	788	836	777	869	348	863
Non-operating revenue	188	265	112	225	113	147
Share of profit of entities accounted for using equity method	96	113	27	142	88	75
Other	92	152	84	82	25	71
Non-operating expenses	292	320	280	366	195	148
Interest expenses	263	262	237	224	112	126
Other	28	57	43	141	83	22
Ordinary profit	685	780	609	728	266	861
Extraordinary income	-	-	94	-	-	-
Extraordinary losses	-	124	57	-	-	-
Profit attributable to owners of parent	462	422	223	696	181	584

Non-consolidated: Operating Revenues & Expenses

(Unit: 100 million yen)

	FY2018	FY2019	FY2020	FY2021	FY2021 2Q	FY2022 2Q
Operating revenue	6,469	5,712	5,899	7,900	2,857	6,309
Electric power business	6,336	5,638	5,838	7,810	2,818	6,203
Sold power to retailers	-	-	-	6	-	5
Sold power to other suppliers	5,806	5,104	5,660	7,672	2,763	6,132
Other*	529	533	177	132	55	65
Incidental business	133	74	61	89	38	106
Operating expenses	6,282	5,464	5,120	7,721	2,805	6,114
Electric power business	6,157	5,397	5,065	7,637	2,770	6,013
Personnel expense	324	358	318	201	97	97
Amortization of the actuarial difference in retirement benefits	(14)	24	28	(70)	(35)	(37)
Fuel cost	2,890	2,332	1,937	2,985	1,048	3,276
Repair and maintenance cost	697	666	441	515	260	241
Depreciation and amortization cost	510	527	552	559	279	293
Other	1,734	1,512	1,814	3,375	1,084	2,104
Incidental business	125	66	55	84	35	101
Operating profit	186	248	778	178	51	194

*1 "Other" shows transmission revenue and other electricity revenue. Due to the split of transmission business in April 2020, "Other" for FY2020 and FY2021 show only other electricity revenue

Consolidated: Segment Information

(Unit: 100 million yen)

		Electric power	Electric power -related	Overseas	Other	Subtotal	Elimination*	Consolidated
FY2022 2Q	Sales	6,521	1,334	1,206	154	9,216	(818)	8,397
	Sales to customers	6,509	539	1,206	141	8,397	-	8,397
	Ordinary income	271	414	179	7	872	(11)	861
FY2021 2Q	Sales	3,350	864	752	82	5,049	(731)	4,318
	Sales to customers	3,339	156	752	69	4,318	-	4,318
	Ordinary income	98	39	115	4	257	8	266
year-on-year change	Sales	3,170	470	453	72	4,167	(87)	4,079
	Sales to customers	3,170	382	453	72	4,079	-	4,079
	Ordinary income	173	374	63	3	615	(19)	595

“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 2Q	FY2022 2Q
Operating activities	1,484	1,592	1,679	1,283	(84)	(202)
Profit before income taxes	685	655	646	728	266	861
Depreciation	799	830	964	969	483	516
Share of (profit) loss of entities accounted for using equity method	(96)	(113)	(27)	(142)	(88)	(75)
Investing activities	(1,704)	(1,617)	(1,432)	(1,788)	(1,011)	(772)
Purchase of non-current assets	(1,060)	(1,495)	(1,592)	(1,352)	(548)	(769)
Investments and loan advances	(744)	(109)	(25)	(497)	(425)	(13)
Free cash flow	(220)	(24)	246	(504)	(1,096)	(975)

Consolidated: Key Ratios and Key Data

(Unit: 100 million yen)

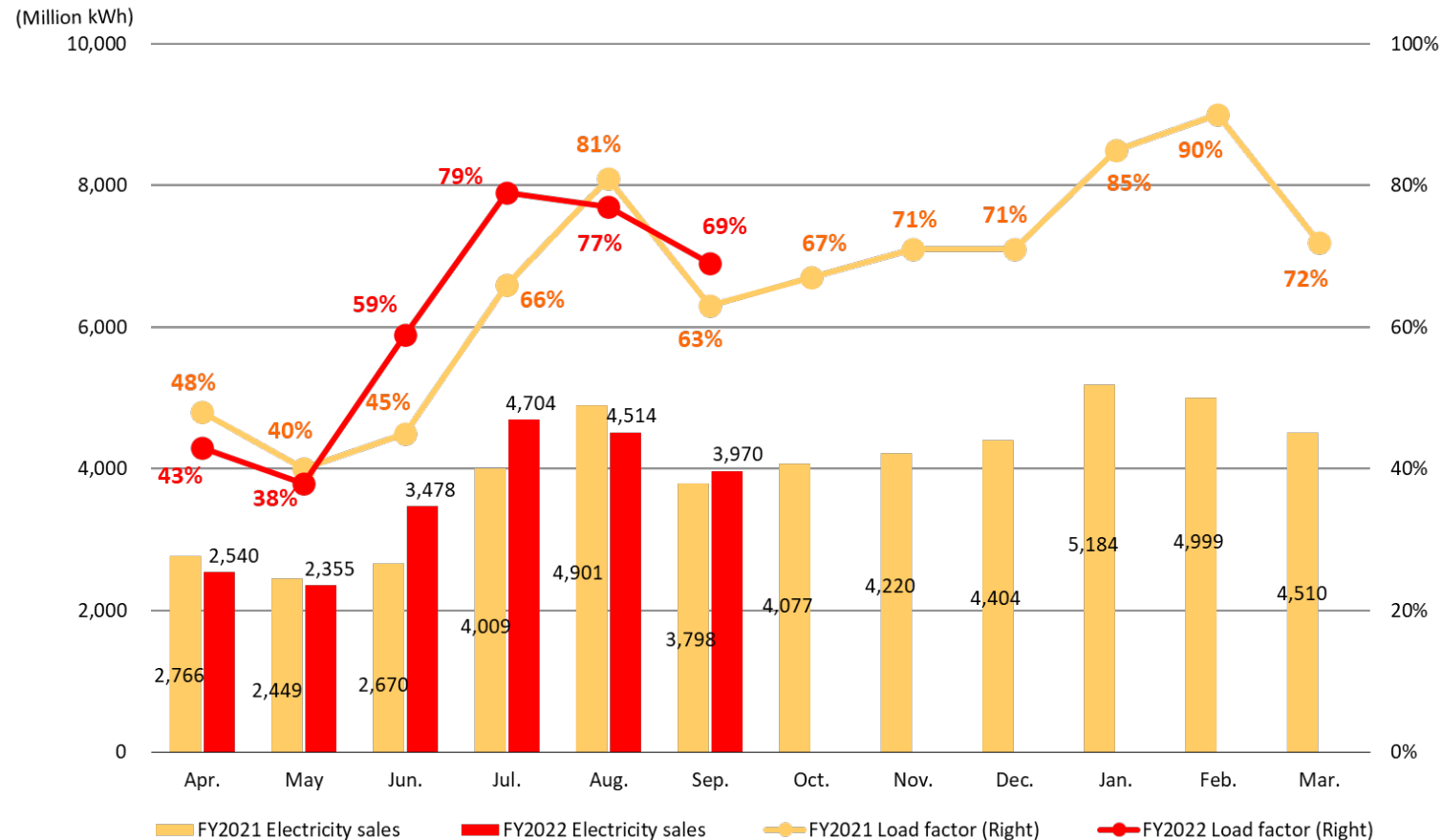
	FY2018	FY2019	FY2020	FY2021	FY2021 2Q	FY2022 2Q
(PL) Operating revenue	8,973	9,137	9,091	10,846	4,318	8,397
Operating profit	788	836	777	869	348	863
Ordinary profit	685	780	609	728	266	861
Profit attributable to owners of parent	462	422	223	696	181	584
(BS) Total assets	27,661	28,053	28,419	30,661	28,975	34,234
Construction in progress	5,820	6,471	5,882	6,765	6,275	5,485
Shareholders' equity	7,974	8,077	8,091	9,160	8,477	10,532
Net assets	8,455	8,573	8,536	9,641	8,940	11,119
Interest-bearing debt	16,428	16,484	16,646	17,864	17,189	20,023
(CF) Investing activities	(1,704)	(1,617)	(1,432)	(1,788)	(1,011)	(772)
Free cash flow	(220)	(24)	246	(504)	(1,096)	(975)
(Ref) CAPEX* ¹	(1,077)	(1,626)	(1,715)	(1,321)	(514)	(487)
(Ref) Depreciation	799	830	964	969	483	516
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	99.34	319.14
BPS (¥)	4,356.54	4,412.84	4,420.39	5,004.31	4,631.40	5,759.78
Shareholders' equity ratio (%)	28.8	28.8	28.5	29.9	29.3	30.8
D/E ratio (x)	2.1	2.0	2.1	2.0	2.0	1.9
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)

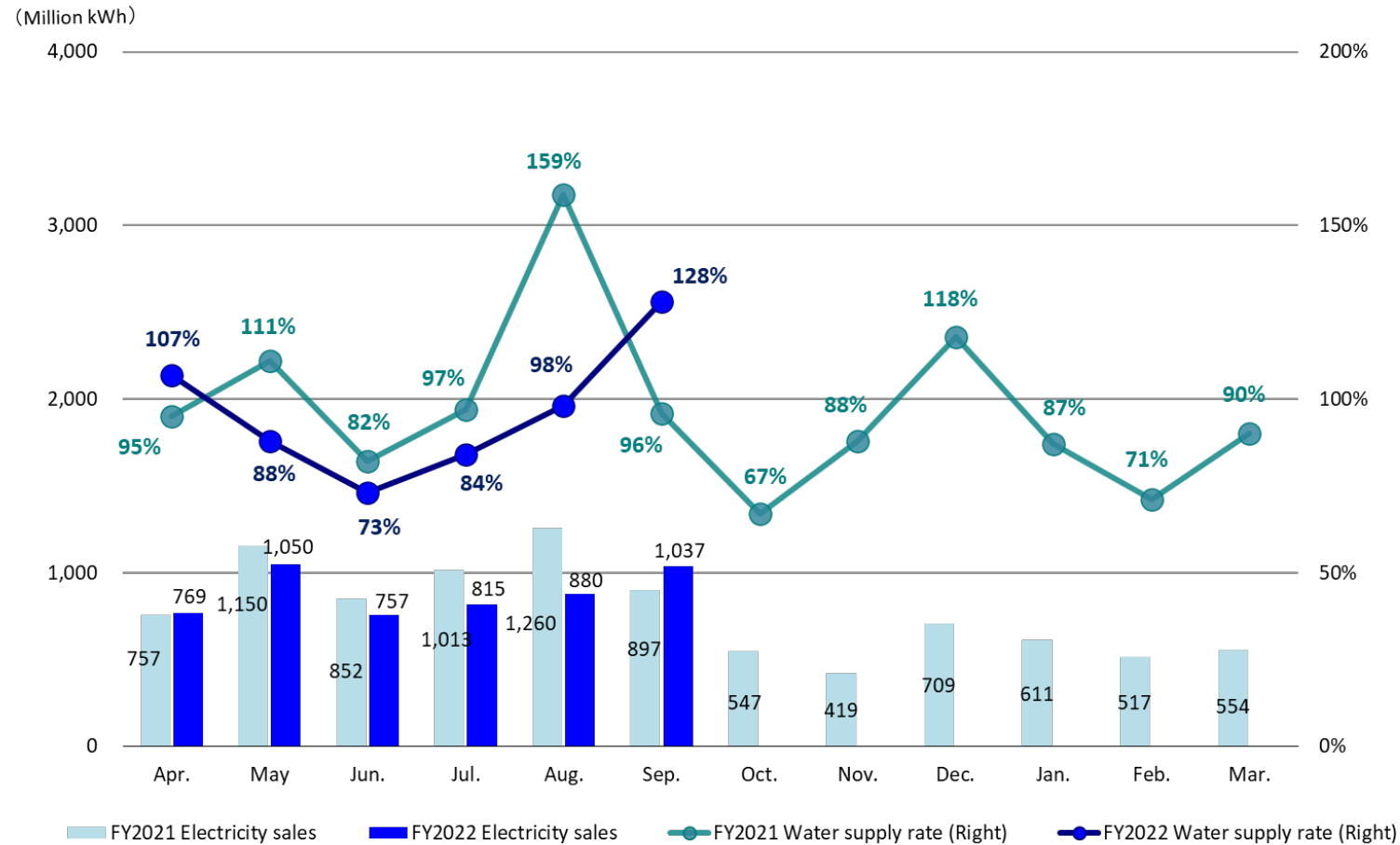
<ul style="list-style-type: none"> Apr. 2021 - Sep. 2021 Results (cumulative) Load factor ⇒ 57% Electricity sales ⇒ 20.5 TWh 	<ul style="list-style-type: none"> Apr. 2022 - Sep. 2022 Results (cumulative) Load factor ⇒ 61% Electricity sales ⇒ 21.5 TWh
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* Load factor of thermal power shows the results for non-consolidated only.
 * Proportion of equity holding is not taken into account.

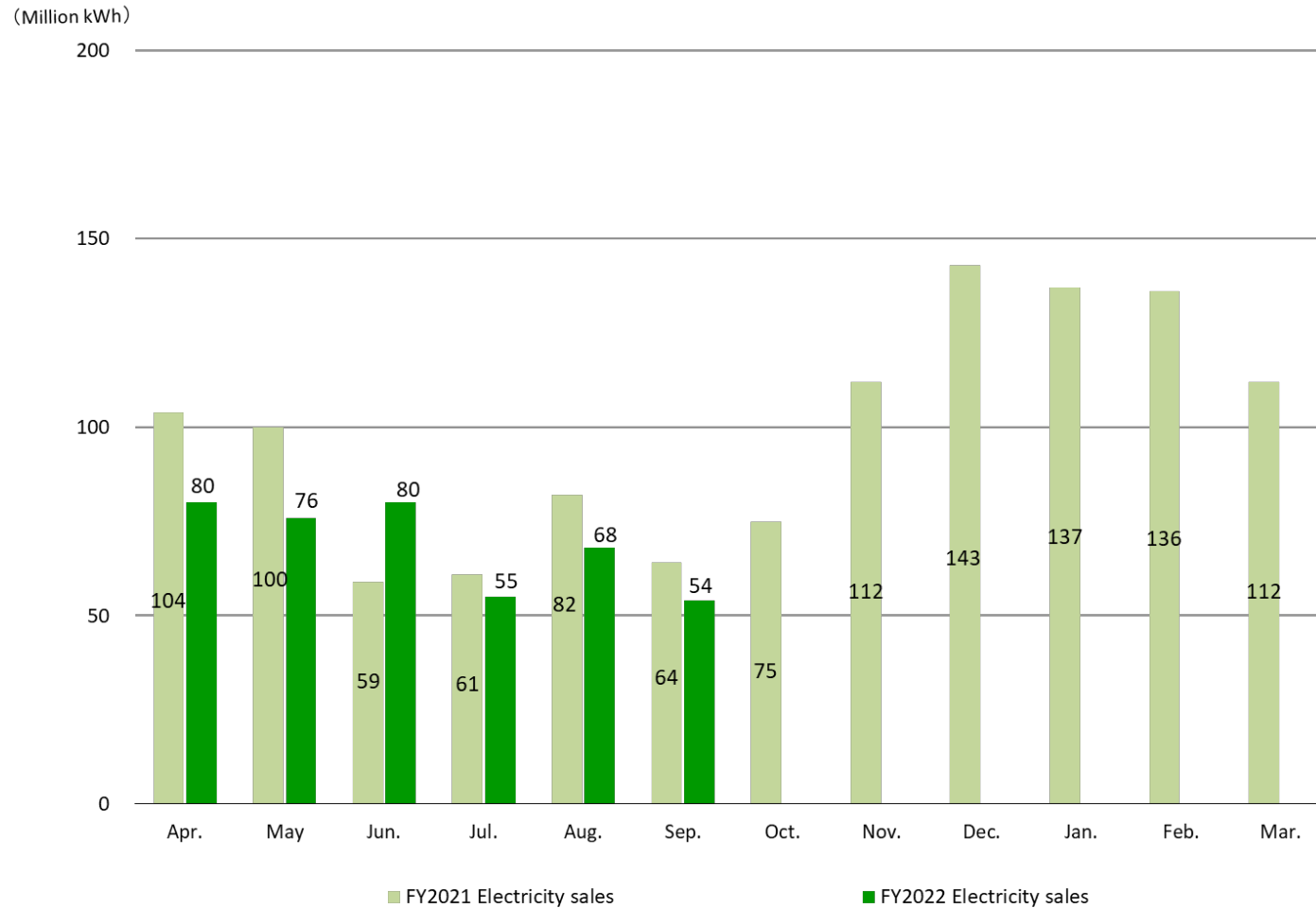
Monthly Electricity Sales: Domestic Power Generation Business (Hydroelectric Power)

<ul style="list-style-type: none"> Apr. 2021 - Sep. 2021 Results (cumulative) Water supply rate ⇒ 105% Electricity sales ⇒ 5.9 TWh 	<ul style="list-style-type: none"> Apr. 2022 – Sep. 2022 Results (cumulative) Water supply rate ⇒ 96% Electricity sales ⇒ 5.3 TWh
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Monthly Electricity Sales: Domestic Power Generation Business (Wind Power)

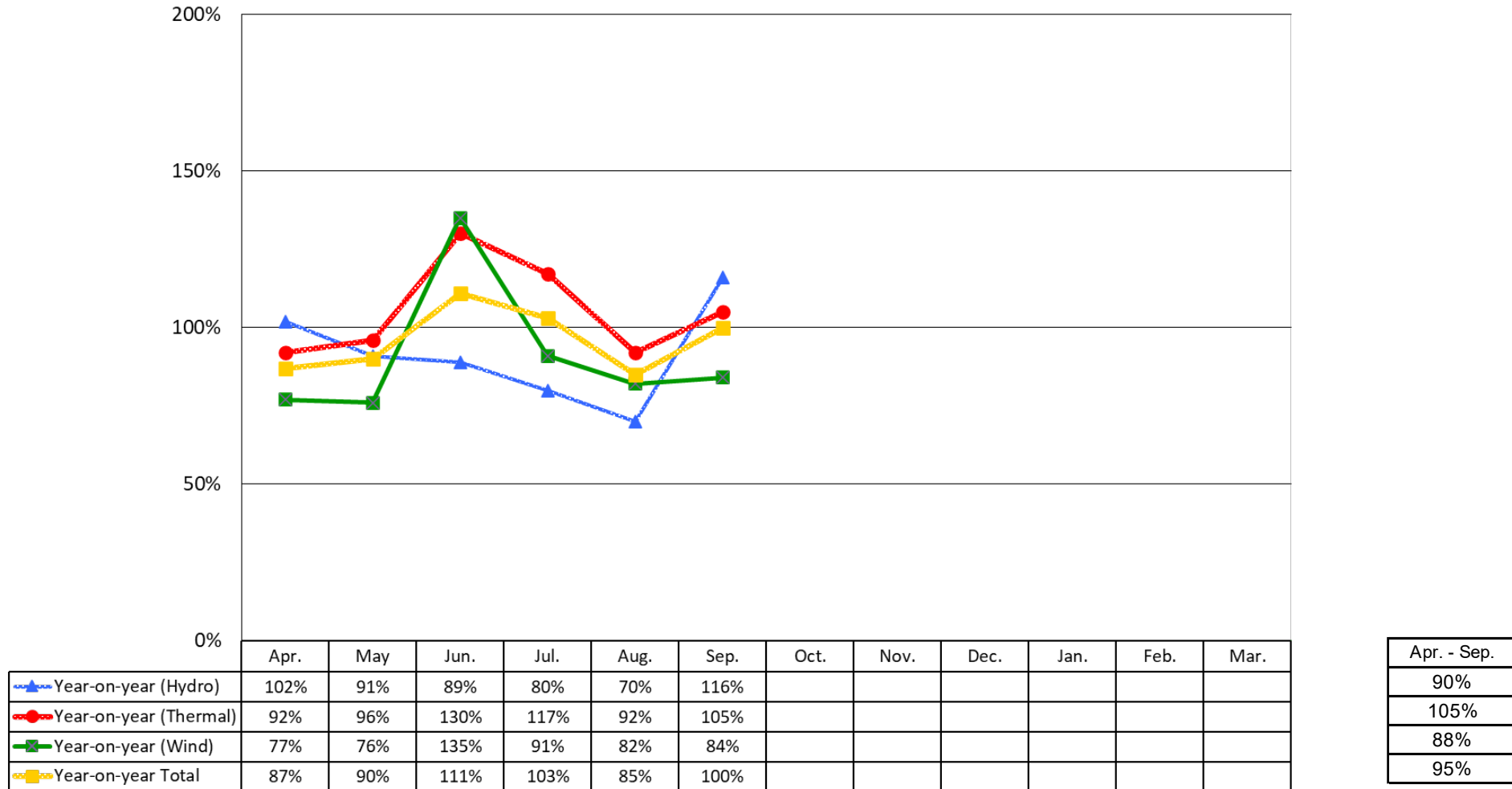
- ▶ Apr. 2021 - Sep. 2021 Results (cumulative) ⇒ 0.47 TWh
- ▶ Apr. 2022 - Sep. 2022 Results (cumulative) ⇒ 0.41 TWh



* Proportion of equity holding is not taken into account.

Change in Monthly Electricity Sales: Domestic Power Generation Business

- ▶ Apr. 2021 - Sep. 2021 Total Results (cumulative) ⇒ 35.2 TWh
- ▶ Apr. 2022 - Sep. 2022 Total Results (cumulative) ⇒ 33.5 TWh



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



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