

FY2022 3rd Quarter (April 1-December 31) Financial Statements

JERA Co., Inc.

- **Consolidated Statement of Income**
- **Consolidated Balance Sheet**

Consolidated Statement of Income
(From April 1, 2022 to December 31, 2022)

(Unit: Millions of yen)

Item	Amount
Net sales	6,078,914
Cost of sales	6,039,460
Gross profit (loss)	39,454
Selling, general and administrative expenses	85,398
Operating profit (loss)	(45,943)
Non-operating income	
Interest income	8,522
Share of profit of entities accounted for using equity method	10,974
Gain on valuation of derivatives	8,501
Other	6,269
Total non-operating income	34,267
Non-operating expenses	
Interest expenses	22,052
Foreign exchange losses	53,372
Other	10,127
Total non-operating expenses	85,552
Ordinary profit (loss)	(97,229)
Profit (loss) before income taxes	(97,229)
Income taxes-current	(51,900)
Profit (loss)	(45,328)
Profit (loss) attributable to non-controlling interests	54,941
Profit (loss) attributable to owners of parent	(100,269)

Consolidated Balance Sheet
(As of December 31, 2022)

(Unit: Millions of yen)

Assets		Liabilities and Net assets	
Item	Amount	Item	Amount
Assets		Liabilities	
Current assets		Current liabilities	
Cash and deposits	602,898	Notes and accounts payable-trade	1,163,856
Notes and accounts receivable - trade, contract assets	1,378,842	Short-term borrowings	635,756
Inventories	609,367	Derivatives liabilities	1,895,962
Derivatives	2,154,348	Other	516,548
Other	667,768	Total current liabilities	4,212,123
Total current assets	5,413,225	Non-current liabilities	
Non-current assets		Bond payable	439,413
Property, plant and equipment		Long-term borrowings	2,476,243
Buildings and structures	406,068	Retirement benefit liability	45,603
Machinery, equipment and vehicles	970,993	Other	935,722
Land	337,844	Total non-current liabilities	3,896,983
Construction in progress	620,822	Total liabilities	8,109,106
Other	66,476	Net assets	
Total property, plant and equipment	2,402,204	Shareholders' equity	
Intangible assets		Share capital	100,000
Other	65,933	Capital surplus	1,179,558
Total intangible assets	65,933	Retained earnings	225,236
Investments and other assets		Total shareholders' equity	1,504,794
Investment securities	1,273,384	Accumulated other comprehensive income	
Deferred tax assets	153,778	Valuation difference on available-for-sale-securities	(3,554)
Other	909,983	Deferred gains or losses on hedges	96,622
Total investments other assets	2,337,145	Foreign currency translation adjustment	315,466
Total non-current assets	4,805,284	Remeasurements of defined benefit plans	(111)
		Total accumulated other comprehensive income	408,422
		Non-controlling interests	196,185
		Total net assets	2,109,403
Total assets	10,218,509	Total liabilities and net assets	10,218,509



エネルギーを新しい時代へ

FY2022 Third Quarter Consolidated Financial Results

(Note) The company's fiscal year (FY) is from April 1 to March 31 of the following year in this material.
"3Q" refers to the period from April 1 to December 31.

JERA Co., Inc.

January 30, 2023

Outline of Financial Results

Consolidated Statement of Income

(Unit: Billion Yen)

	2022/3Q(A)	2021/3Q(B)	Change(A-B)	Rate of Change(%)
Operating revenue (Net sales)	6,078.9	2,853.7	3,225.1	113.0
Operating income / loss	-45.9	79.3	-125.3	—
Ordinary income / loss	-97.2	55.7	-152.9	—
Quarterly net income / loss attributable to owners of parent	-100.2	18.4	-118.7	—
<Reference>Net income excluding time lag	298.4	228.3	70.1	30.7

Consolidated Balance Sheet

(Unit: Billion Yen)

	As of Dec 31,2022(A)	As of Mar 31,2022(B)	Change(A-B)	Rate of Change(%)
Assets	10,218.5	8,722.1	1,496.3	17.2
Liabilities	8,109.1	6,747.8	1,361.2	20.2
Net assets	2,109.4	1,974.3	135.0	6.8
Interest-bearing debt	3,722.4	2,646.5	1,075.8	40.7
Net DER (%)	1.63	1.18	0.45	

Key Points of Financial Results

【Operating Revenue】

- Operating revenue **increased by 3,225.1 billion yen (up 113.0%) to 6,078.9 billion yen** mainly due to an increase in electrical energy sold and an increase in sales of JERA Global Markets Pte. Ltd. (JERAGM) .

【Net income】

- Net income / loss **decreased by 118.7 billion yen from the same period last year 18.4 billion yen and fell into net loss of 100.2 billion yen.**
 - The losses from time lag significantly increased.
(-188.8 billion yen [-209.8 billion yen to -398.7 billion yen])
 - Net income excluding time lag increased.
(+70.1 billion yen [228.3 billion yen to 298.4 billion yen])
- Net income excluding time lag increased mainly due to utilization of optimization function of JERAGM, etc., despite the impact of high LNG spot prices (-114.5 billion yen).

Change Factors of Consolidated Net Income / Loss

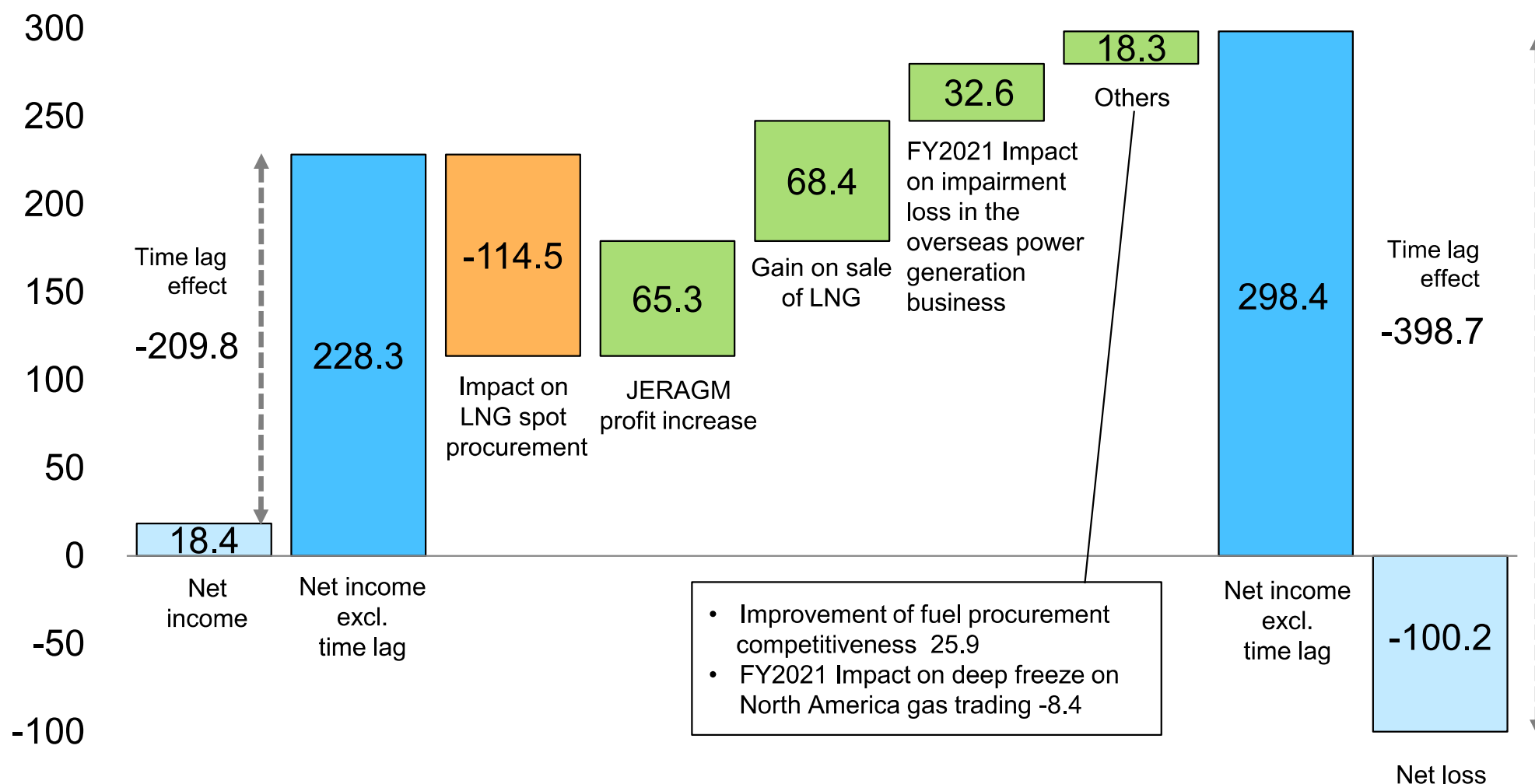
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(Unit :
Billion Yen)

FY2021/3Q

Net income excluding time lag +70.1
Time lag effect -188.8

FY2022/3Q



Note: Figures are after-tax amounts.

Consolidated Statement of Income

(Unit: Billion Yen)

	2022/3Q(A)	2021/3Q(B)	Change(A-B)	Main Factors of Changes
Operating revenue (Net sales)	6,078.9	2,853.7	3,225.1	• Increase of electrical energy sold • Increase in sales of JERAGM
Operating expenses	6,124.8	2,774.3	3,350.4	• Increase of fuel costs • Increase in costs of JERAGM
Operating income / loss	-45.9	79.3	-125.3	
Non-operating income	34.2	7.9	26.2	
Non-operating expenses	85.5	31.6	53.9	• Exchange loss +53.3 • Increase of interest paid +15.3
Ordinary income / loss	-97.2	55.7	-152.9	• Increase of time lag loss -262.3(-291.4 → -553.8) • Increase of income excluding time lag +109.3(347.1 → 456.5)
Extraordinary income	-	23.5	-23.5	
Extraordinary loss	-	22.8	-22.8	
Income taxes, etc.	-51.9	-8.7	-43.1	
Quarterly net income attributable to non-controlling Interests	54.9	46.7	8.2	
Quarterly net income / loss attributable to owners of parent	-100.2	18.4	-118.7	



Key Elements

	2022/3Q(A)	2021/3Q(B)	Change(A-B)
Electrical Energy Sold(TWh)	191.4	183.2	8.2
Crude Oil Prices(JCC) (dollar/barrel)	107.9	74.0	33.9
Foreign Exchange Rate (yen/dollar)	136.5	111.1	25.4

Note: Crude Oil Prices(JCC) for FY2022/3Q is tentative.

Consolidated Balance Sheet

(Unit: Billion Yen)

	As of Dec 31,2022(A)	As of Mar 31,2022(B)	Change(A-B)	Main Factors of Changes
Cash and deposits	602.8	514.3	88.5	
Property, plant and equipment	2,402.2	2,173.8	228.3	• Progress in replacing domestic thermal power plants, etc.
Investment securities	1,273.3	1,026.5	246.8	
Others	5,940.0	5,007.4	932.5	• Increase of accounts receivable-trade, etc.
Assets	10,218.5	8,722.1	1,496.3	
Interest-bearing debt	3,722.4	2,646.5	1,075.8	• Borrowings +912.5 (Subsidiaries +322.0) • Commercial Paper -126.0 • Corporate Bonds +289.4
Others	4,386.6	4,101.2	285.4	• Increase of accounts payable-trade, etc.
Liabilities	8,109.1	6,747.8	1,361.2	
Shareholders' equity	1,504.7	1,688.1	-183.3	• Dividends paid -83.1 • Quarterly net income / loss -100.2
Others	604.6	286.2	318.4	• Foreign currency translation adjustments +234.1
Net Assets	2,109.4	1,974.3	135.0	

Status of Management Targets (Financial Soundness)

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- Net DER had continued to deteriorate due to rising interest-bearing debt, but has recently improved slightly
- Continue to adhere to financial discipline in order to achieve the management target of 1.0x Net DER or less in FY2025

	2021/4Q	2022/2Q	2022/3Q
Net DER	1.18 Increase in debt mainly due to the expansion of time lag losses	1.66 Decrease in net debt due to the increase of cash	1.63 1.34 Excluding temporary factor (increase in debt from time lag losses this FY)
Equity Ratio	20.7% Increase of JERAGM derivative assets due to the rising resource price	15.0% Decrease of JERAGM derivative assets	18.7% 25% Assume JERAGM derivative assets at the level before the hike of resource price (March 2021)

Segment Information

(Unit: Billion Yen)

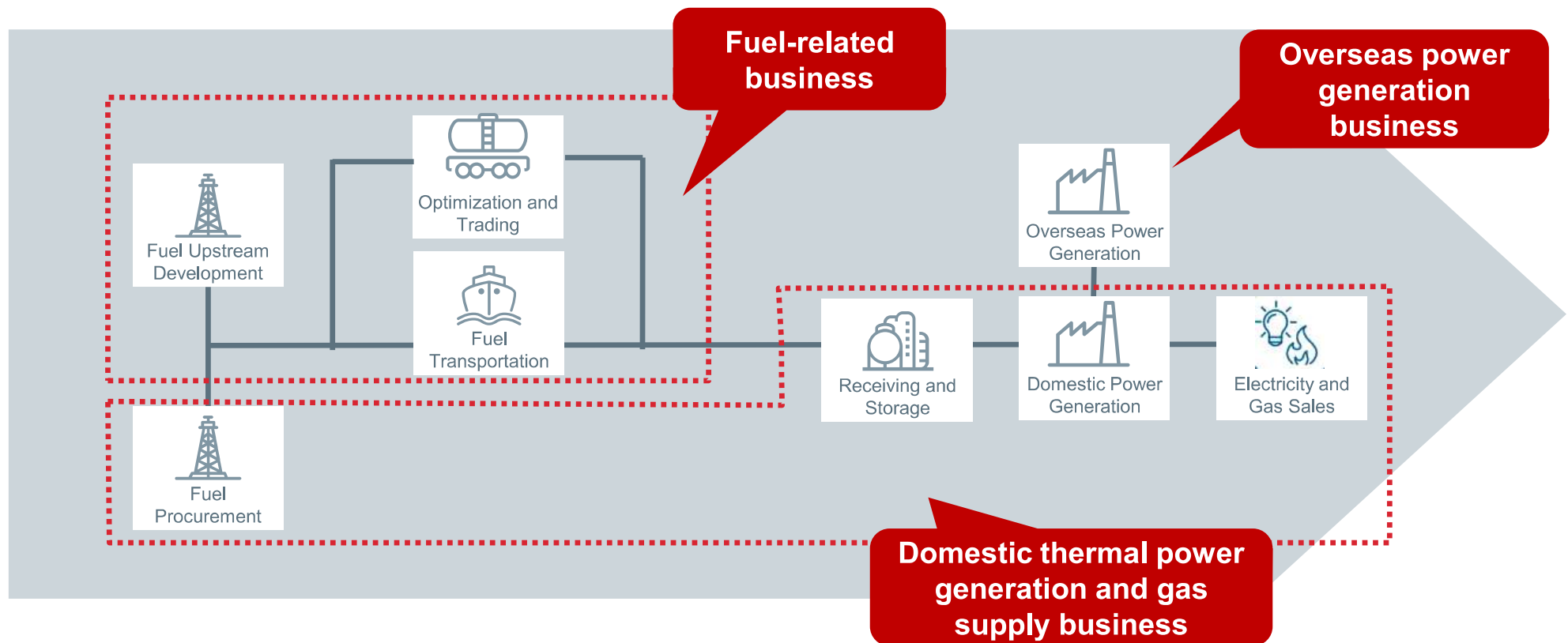
	2022/3Q (A)		2021/3Q (B)		Change (A-B)		Main Factors of Changes in Net Income
	Operating Revenue	Net Income / Loss	Operating Revenue	Net Income / Loss	Operating Revenue	Net Income / Loss	
Fuel Related *1	4,461.4	161.7	1,980.2	117.6	2,481.1	44.0	•JERAGM profit increase +65.3 •(2021) Deep freeze on North America gas trading -8.4
Overseas Power Generation	3.3	-5.6	2.4	-10.9	0.9	5.3	•(2021) Impairment loss in Formosa 2 +32.6 •Loss of gain on divestiture of the overseas projects -14.0 •Overseas IPP projects profit decrease -6.8
Domestic Thermal Power Generation and Gas Supply	4,419.3	-161.1 237.5*2	2,031.8	-59.9 149.9*2	2,387.5	-101.2 87.6*2	•Impact on LNG spot procurement -114.5 •Gain on sales of LNG +68.4 •Improvement of fuel procurement competitiveness +25.9 •Impact of fuel inventory unit prices +14.4 •(2021) Impairment loss +16.4
Adjustments	-2,805.1	-95.1	-1,160.7	-28.2	-1,644.4	-66.8	
Consolidated	6,078.9	-100.2 298.4*2	2,853.7	18.4 228.3*2	3,225.1	-118.7 70.1*2	

*1 Fuel upstream, transportation and trading

*2 Excluding the effect of time lag

(Reference) : JERA's Value Chain and Segment

- JERA owns the entire supply chains for fuel and thermal power generation, from fuel upstream business (development of gas fields) to transportation and storage (fuel terminal operation) to power generation and wholesaling.
- We have three business segments; "Fuel-related business" for investment in fuel upstream, transportation and trading business, "Overseas power generation business" for investment in overseas power generation business, and "Domestic thermal power generation and gas supply business" for sales of electricity and gas in Japan.



Forecast for FY2022

- Net Income / loss is expected to be 100 billion yen, +300 billion yen and income excluding time lag to be 300 billion yen, +200 billion yen from previous announcement due to the improvement of the LNG procurement environment in terms of price and other factors compared to the previous announcement in Q2 2022, although resource prices stay at higher level than usual.

(Unit: Billion Yen)

	Current Forecast(A)	Previous Forecast(B)	Change(A-B)	Rate of Change(%)
Net Income / loss attributable to owners of parent	100.0	-200.0	Approx. 300.0	-
Time lag effect	-200.0	-300.0	Approx. 100.0	-
Income excluding time lag	300.0	100.0	Approx. 200.0	200.0

【Reference : Comparison with the previous year's result】

(Unit: Billion Yen)

	Current Forecast(A)	FY2021 Result(B)	Change(A-B)	Rate of Change(%)
Net Income / loss attributable to owners of parent	100.0	24.6	Approx. 75.4	306.5
Time lag effect	-200.0	-252.4	Approx. 52.4	-
Income excluding time lag	300.0	277.0	Approx. 23.0	8.3

*The forecast for FY2022 reflects the adoption of International Financial Reporting Standards (IFRS).

【Key data】

	Current Forecast	4th Quarter of FY2022	Previous Forecast	【Reference】 FY2021 Result
Crude Oil Prices(JCC) (dollar/barrel)	Approx. 102	Approx. 82	Approx. 101	77.1
Foreign Exchange Rate (yen/dollar)	Approx. 136	Approx. 135	Approx. 139	112.4

Voluntary Adoption of International Financial Reporting Standards (IFRS)

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- JERA plans to voluntarily adopt International Financial Reporting Standards ("IFRS") in place of the existing Japan GAAP from the consolidated financial statements for the annual reporting of FY2022, for the purpose of improving the international comparability of financial information in the capital markets and enhancing communication with investors and other stakeholders.
- Disclosure under IFRS is scheduled to start from FY2022 (fiscal year ending March 31, 2023) annual closing, and the disclosure schedule for the adoption of IFRS is as follows.

Disclosure schedule for IFRS adoption (planned)

Accounting Period		Disclosed Materials	Accounting Standard
FY2022	3rd Quarter	Quarterly report, Presentation for financial results	Japan GAAP
	Annual	Annual Securities Report, Consolidated financial statements, Presentation for financial results	IFRS
FY2023	1st-3rd Quarter	Quarterly report, Presentation for financial results	IFRS
	Annual	Annual Securities Report, Consolidated financial statements, Presentation for financial results	

Appendix

Trends in crude oil price and exchange rates

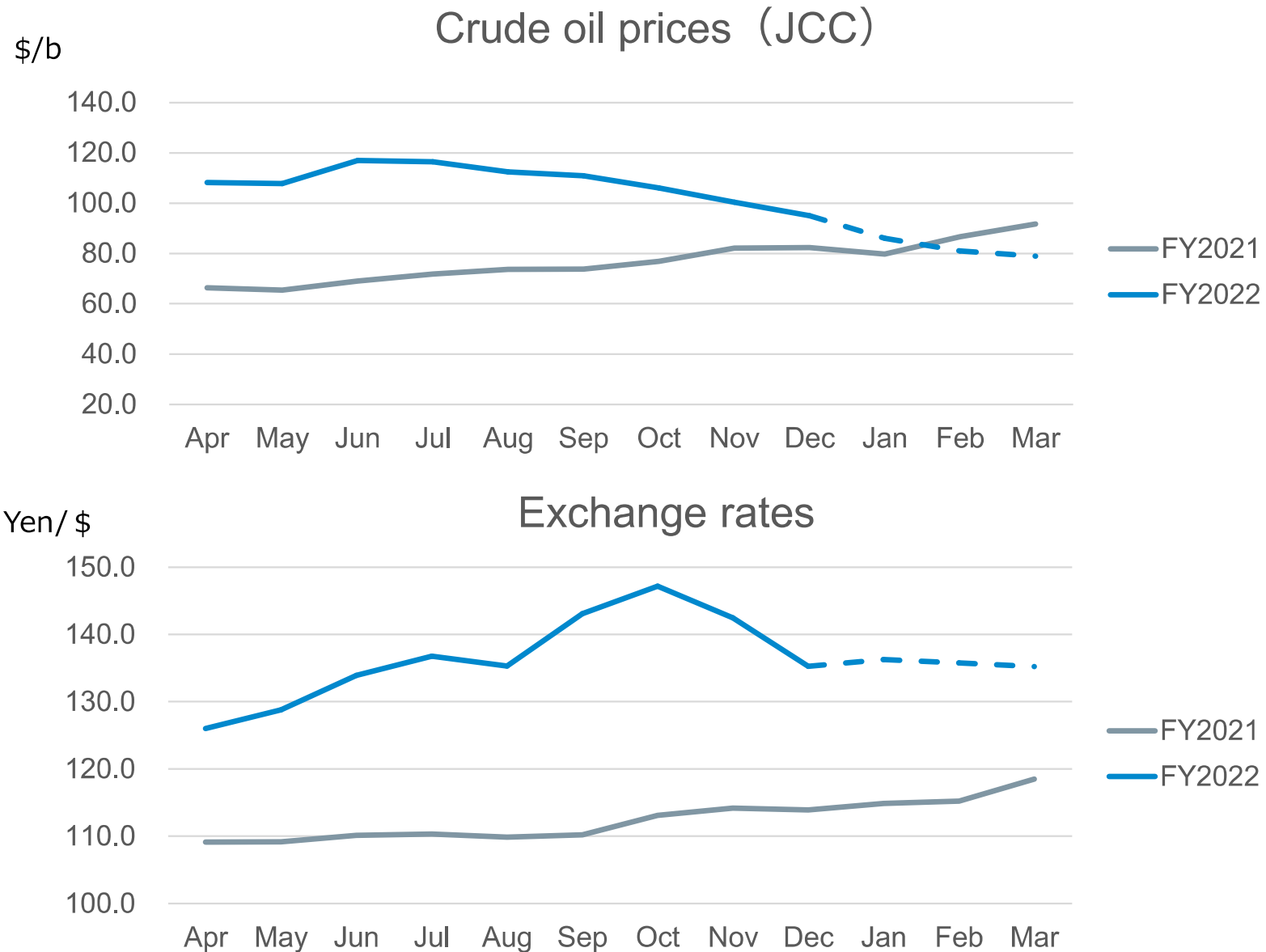
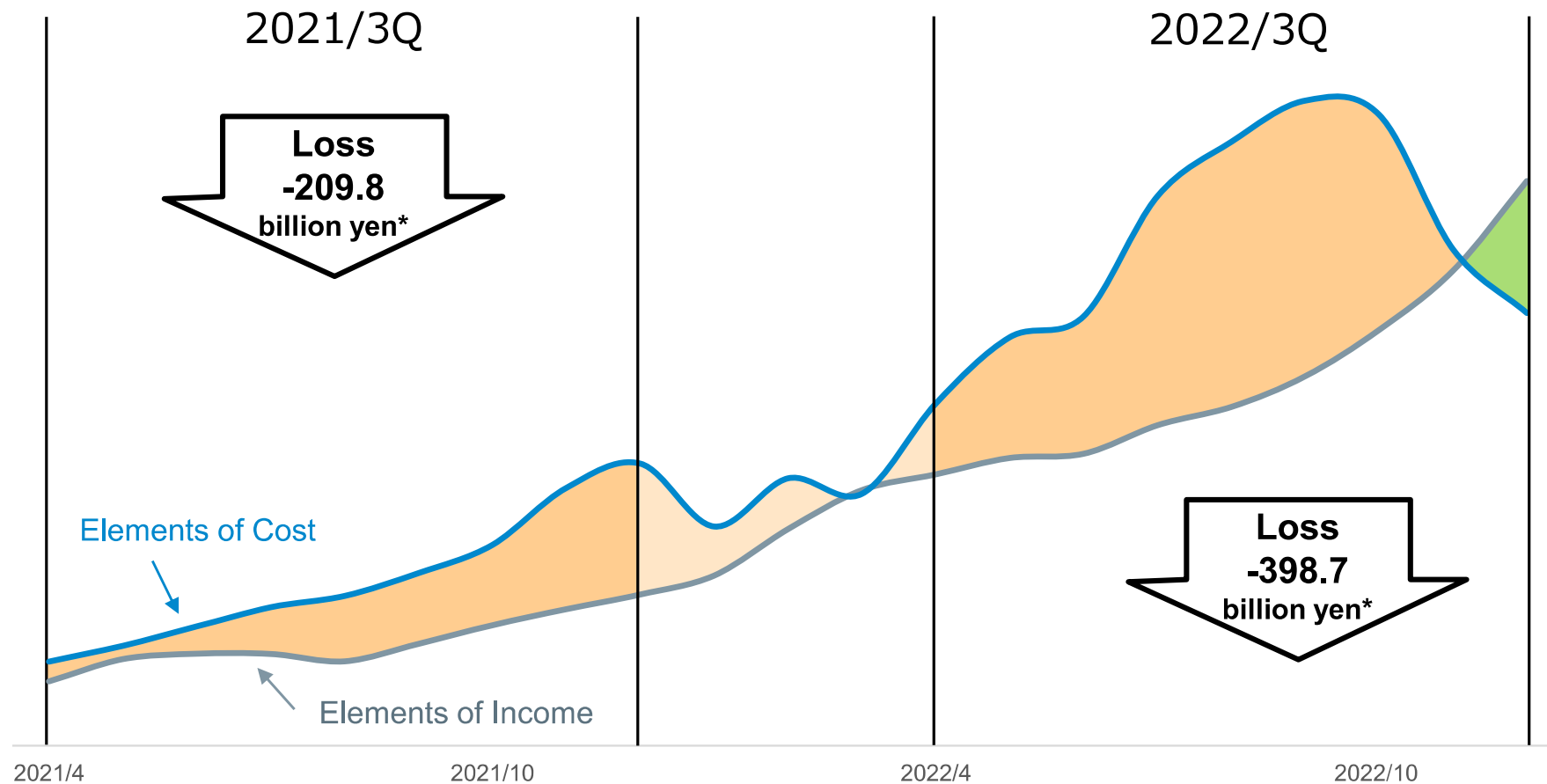


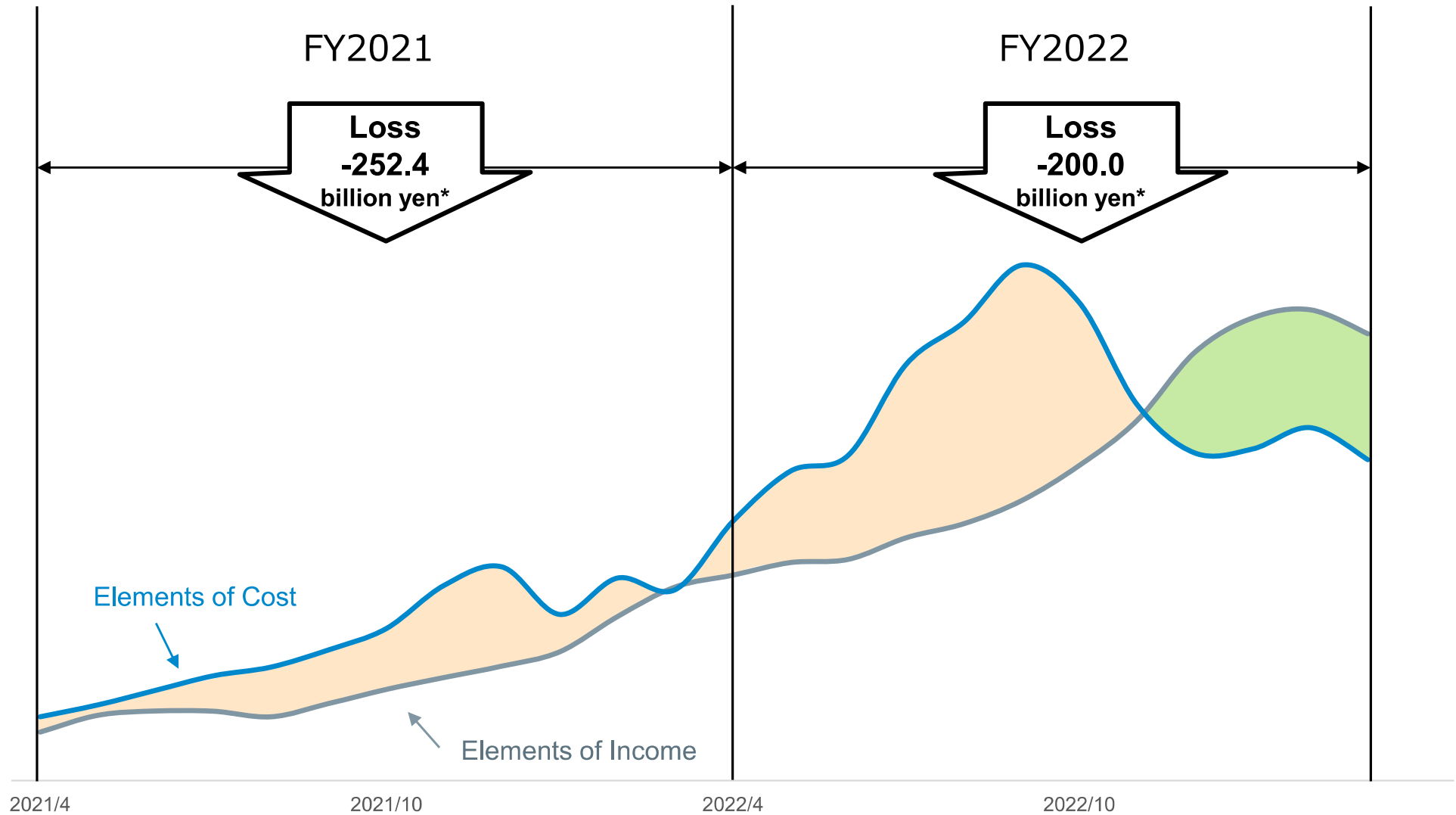
Image of Time Lag (2021/3Q – 2022/3Q)

- Time lag is profits and losses due to the time difference between changes in fuel prices and their reflection in sales prices.
- The impact on profits and losses will be neutral in the medium to long term.



* Figures are after-tax amounts.

Image of Time Lag (FY2021 – FY2022)



* Figures are after-tax amounts.

Electrical Energy Sold and Electrical Power Generated

【Electrical Energy Sold(TWh)】

	Apr to Jun	Jul to Sep	Oct to Dec	Jan to Mar	Total
FY2022	57.9	69.9	63.6		191.4
FY2021	53.7	64.6	64.9	72.3	255.5

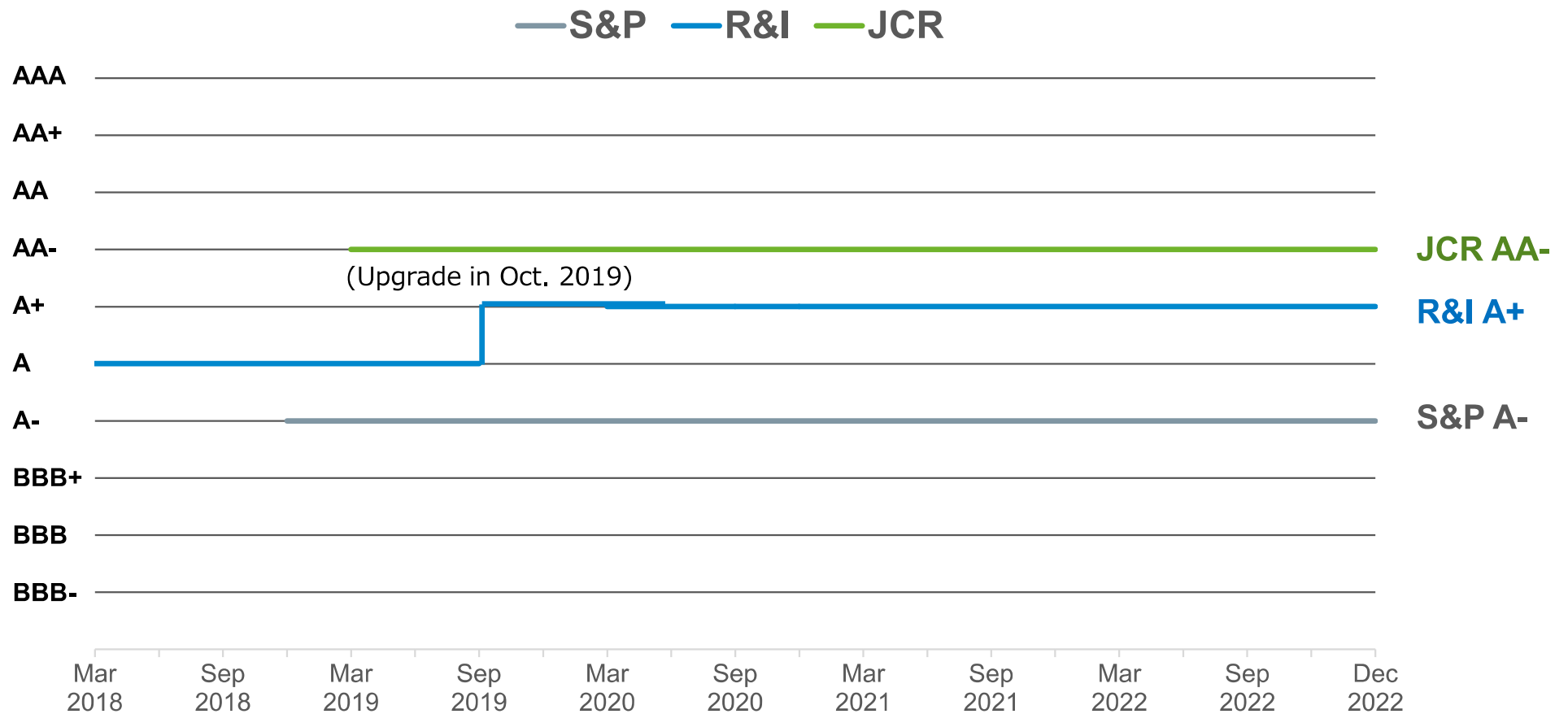
【Electrical Power Generated(TWh)】

		Apr to Jun	Jul to Sep	Oct to Dec	Jan to Mar	Total
FY2022		52.8	63.5	58.0		174.3
	LNG	41.7 (79%)	47.0 (74%)	43.9 (76%)		132.6 (76%)
	Coal	11.2 (21%)	16.5 (26%)	14.0 (24%)		41.7 (24%)
	Others	0 (0%)	0 (0%)	0 (0%)		0 (0%)
FY2021		53.4	61.7	62.3	69.9	247.3
	LNG	41.2 (77%)	46.8 (76%)	48.4 (78%)	55.8 (80%)	192.3 (78%)
	Coal	12.2 (23%)	14.9 (24%)	13.8 (22%)	14.1 (20%)	55.0 (22%)
	Others	0 (0%)	0 (0%)	0 (0%)	0% (0%)	0 (0%)

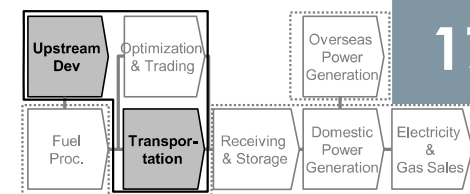
*The total may not match due to rounding.



【 Issuer Credit ratings history 】



Reference:
**Overview and topics of
each segment**



[Fuel Upstream / Fuel Transportation Business]

- By leveraging the world's largest LNG transaction volume (FY2021: Approximately 37 million tons*) and participating in LNG upstream projects, we acquire Equity LNG and information that contributes to procurement and trading. Additionally, our ownership of upstream interests and fuel carriers contributes to our highly consistent, flexible, and competitive fuel supply.

*JERA Group as a whole

Upstream Project

Project Name	Address	LNG production / liquefaction capability	JERA's stake *1
Darwin LNG Project	Australia	Approx. 3.7 million tons/year	6.132%
Gorgon LNG Project	Australia	Approx. 15.6 million tons/year	0.417%
Ichthys LNG Project	Australia	Approx. 8.9 million tons/year	0.735%
Wheatstone LNG Project	Australia	Approx. 8.9 million tons/year	Gas field: 10%, LNG plant: 8%
Freeport LNG Project(Train1)	United States	Approx. 5.15 million tons/year	25%
Freeport LNG Development, L.P.*2	United States	Approx. 15.45 million tons/year*3 for all three lines	25.7%

*1 The stake of Wheatstone LNG Project represents the ratio of shares held through PE Wheatstone which JERA invests in

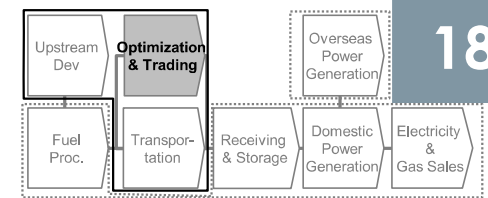
*2 Freeport LNG Project Management Company

*3 Including 5.15 million tons/year from Train 1

- Additionally, we invested in the following project.
- The project is brownfield projects and development risks are limited. We will strive to secure and stably supply competitive LNG by fully leveraging the knowledge and expertise we have accumulated through our LNG value chain business.

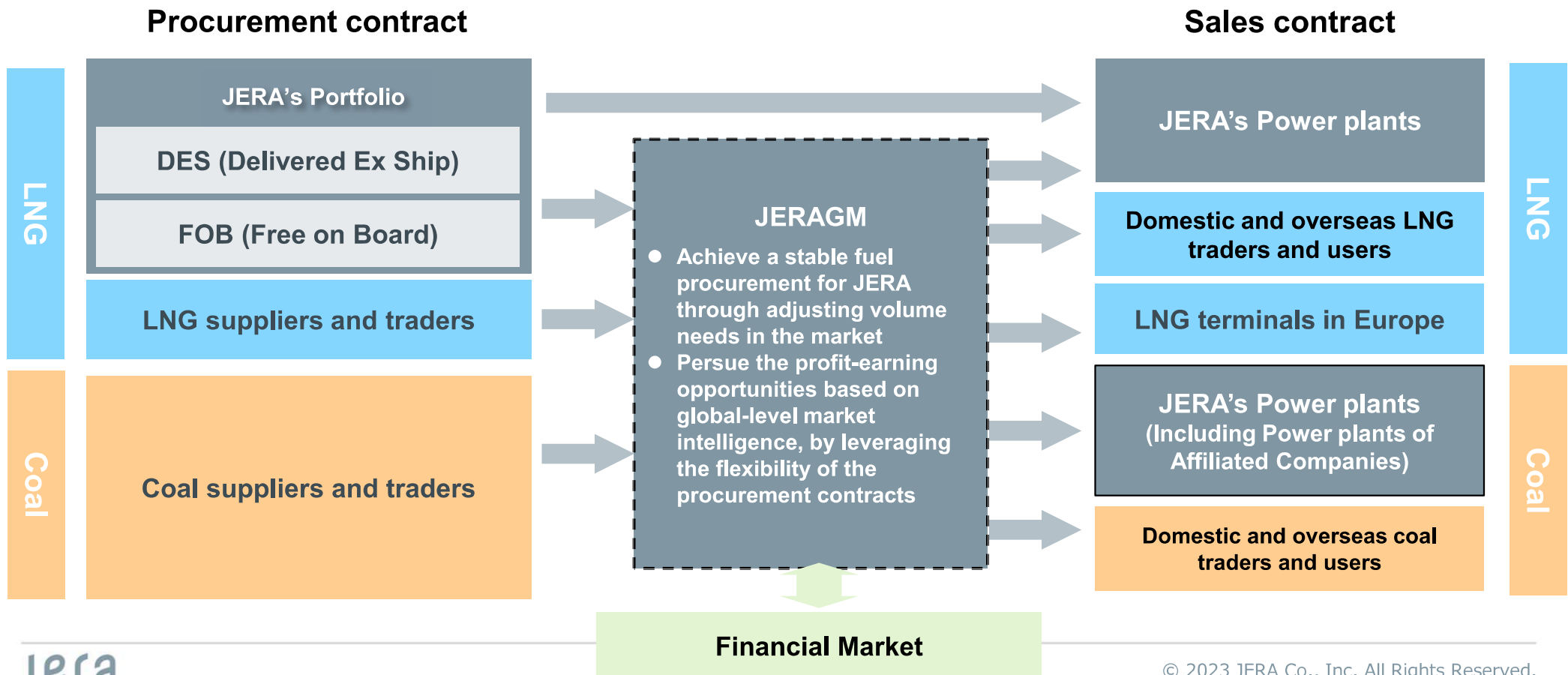
Project Name	Address	LNG production / liquefaction capability	JERA's stake
Barossa gas field Project	Australia	LNG production and liquefaction capacity is the same scale as Darwin LNG Project.	12.5%

Fuel-related Business: Trading Business

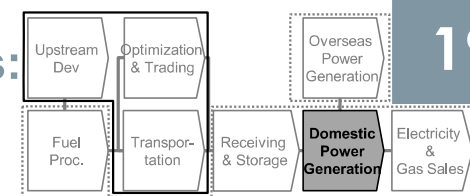


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- In addition to the Singapore headquarters, JERAGM has offices in the United Kingdom, the Netherlands, the United States, and Japan, and approximately 300 employees engage in asset-backed trading.
- Utilizing a global trading network, JERAGM meets the world's largest demand for LNG and coal in JERA's domestic power generation business. Leveraging this commercial flow, JERAGM has been able to achieve both the enhancement of supply stability and the expansion of profits by efficiently capturing profit opportunities through transactions with markets and third parties and by expanding transaction volume.
(FY2022 3Q : Net income 153.1 billion yen)
- JERAGM trades within the limited volume under the governance of the Board of Directors elected by shareholders.



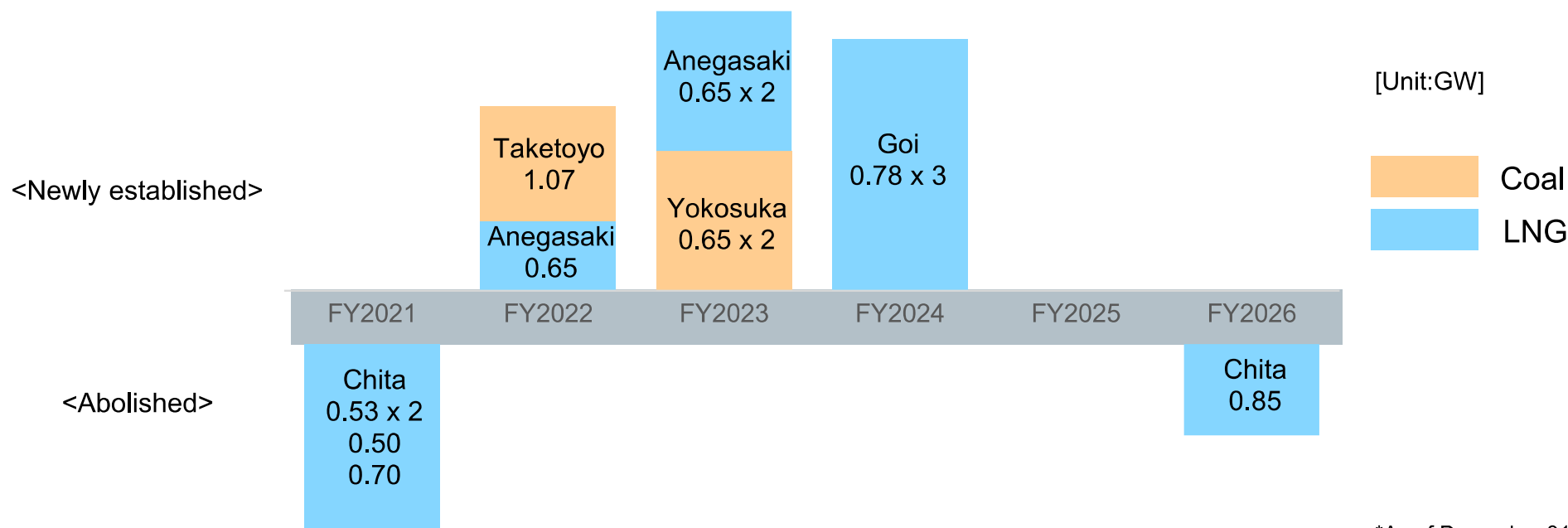
Domestic Thermal Power Generation and Gas Supply Business: Progress of Replacement of Thermal Power Plants in Japan



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Replacement Plan

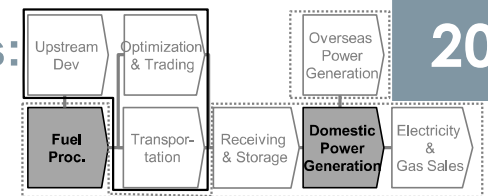
- Shifting to the latest high-efficiency thermal power generation facilities at three locations: Anegasaki, Yokosuka and Goi. Taketoyo Thermal Power Station Unit 5 has already started commercial operation on August 5, 2022.
- Unit 1 to 4 of Chita Thermal Power Station were abolished in FY2021, and Unit 5 is planned to be abolished in FY2026. Construction of Unit 7 and 8 is under consideration (environmental impact assessment has been done).



*As of December 31, 2022

Development point	Status of development
Anegasaki	Full-scale construction started in February 2020. Construction progress: 97%
Yokosuka	Full-scale construction started in August 2019. Construction progress: 92%
Goi	Full-scale construction started in April 2021. Construction progress: 68%

Domestic Thermal Power Generation and Gas Supply Business: Composition of Power Sources

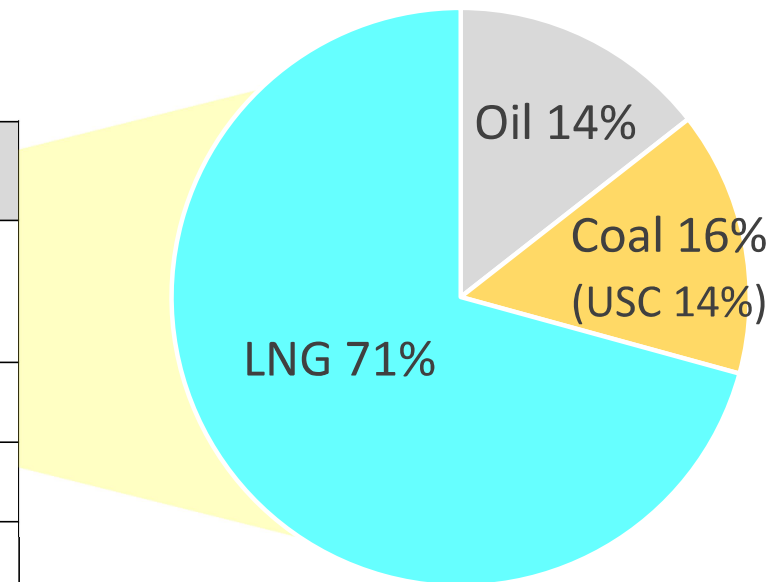


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- Our power generation composition is characterized by a large share of LNG, which has low CO₂ emissions.
- In coal, ultra super critical power generation system (USC), which emits comparatively small amount of CO₂, accounts for a large proportion. We will shut down all inefficient coal power plants by 2030*¹.

Composition of Power sources*²

Fuel	Capacity (Generator output)
Coal (USC)	10.32 GW (8.92 GW)
LNG* ³	46.44 GW
Oil	9.00 GW
Total	65.76 GW



*1 Press release on October 13, 2020 "Towards Zero CO₂ Emissions in 2050"

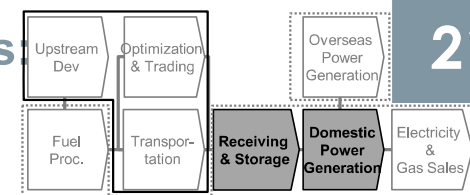
https://www.jera.co.jp/english/information/20201013_539

*2 As of December 31, 2022. Includes capacity under construction.
Excludes capacity of affiliates.

*3 Includes LPG and City Gas.

Domestic Thermal Power Generation and Gas Supply Business

Domestic Thermal Power Plants

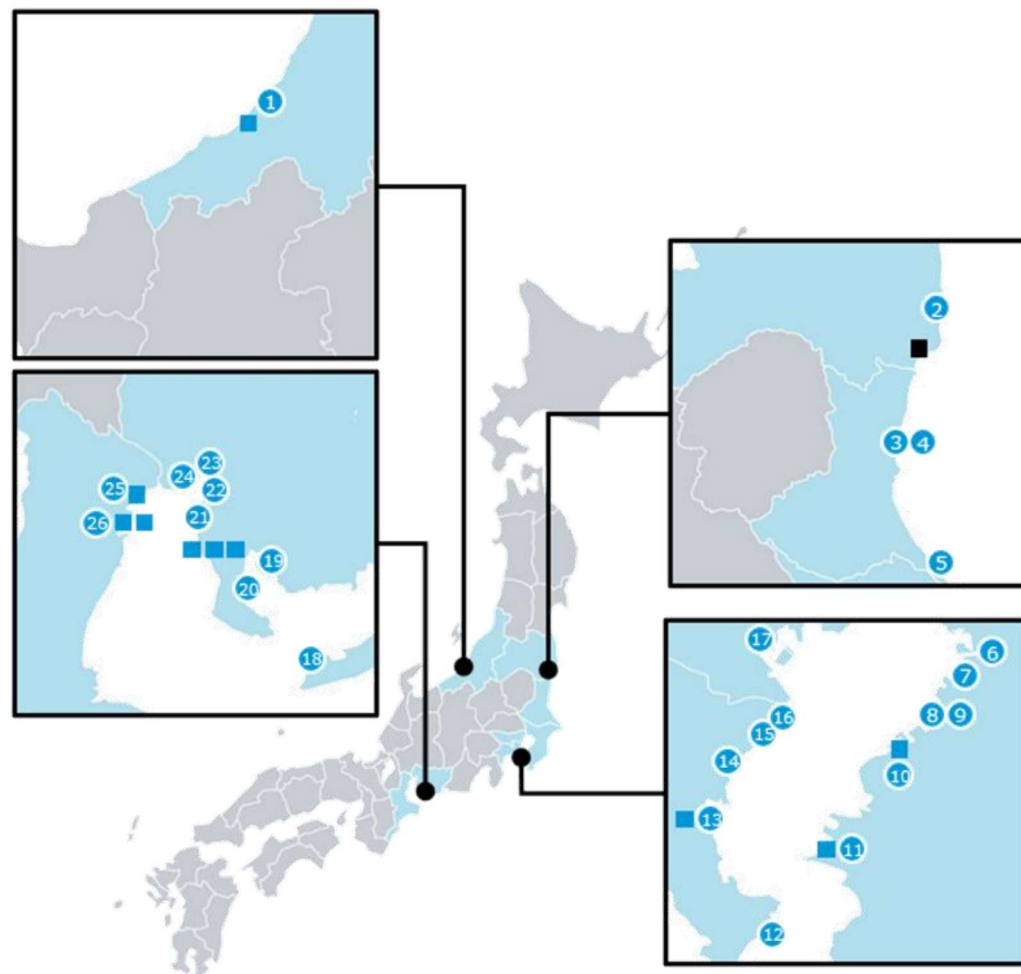


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List of Thermal Power Plants in Japan¹ (Total output and fuel type listed for each thermal power plant)

As of December 31, 2022

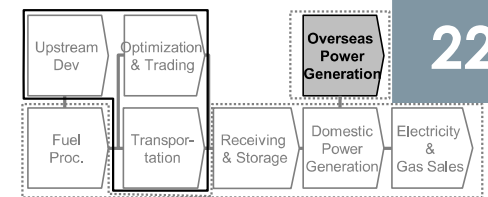
①	Joetsu	2.38 GW	◆
②	Hirono	4.40 GW	◆◆◆
③	Hitachinaka	2.00 GW	◆
④	Hitachinaka Kyodo <HITACHINAKA GENERATION>	0.65 GW	◆
⑤	Kashima	5.66 GW	◆◆◆
⑥	Chiba	4.38 GW	◆
⑦	Goi <GOI UNITED GENERATION> *Scheduled to start operation in FY2024	2.34 GW	◆
⑧	Anegasaki	1.20 GW	◆
⑨	Anegasaki <JERA Power ANEGASAKI> *Scheduled to start operation in FY2023	1.941 GW	◆
⑩	Sodegaura	3.60 GW	◆
⑪	Futtsu	5.16 GW	◆
⑫	Yokosuka <JERA Power YOKOSUKA> *Scheduled to start operation in FY2023	1.30 GW	◆
⑬	Minami-Yokohama	1.15 GW	◆
⑭	Yokohama	3.016 GW	◆
⑮	Higashi-Ohgishima	2.00 GW	◆
⑯	Kawasaki	3.42 GW	◆
⑰	Shinagawa	1.14 GW	◆
⑱	Atsumi	1.40 GW	◆◆
⑲	Hekinan	4.10 GW	◆
⑳	Taketoyo <JERA Power TAKETOYO> *Started operation in August 2022	1.07 GW	◆
㉑	Chita	1.708 GW	◆
㉒	Chita Daini	1.708 GW	◆
㉓	Shin-Nagoya	3.058 GW	◆
㉔	Nishi-Nagoya	2.376 GW	◆
㉕	Kawagoe	4.802 GW	◆
㉖	Yokkaichi	0.585 GW	◆



1 Power plant's name <Operator's name>

2 Includes jointly operated terminals in the Chita and Yokkaichi areas

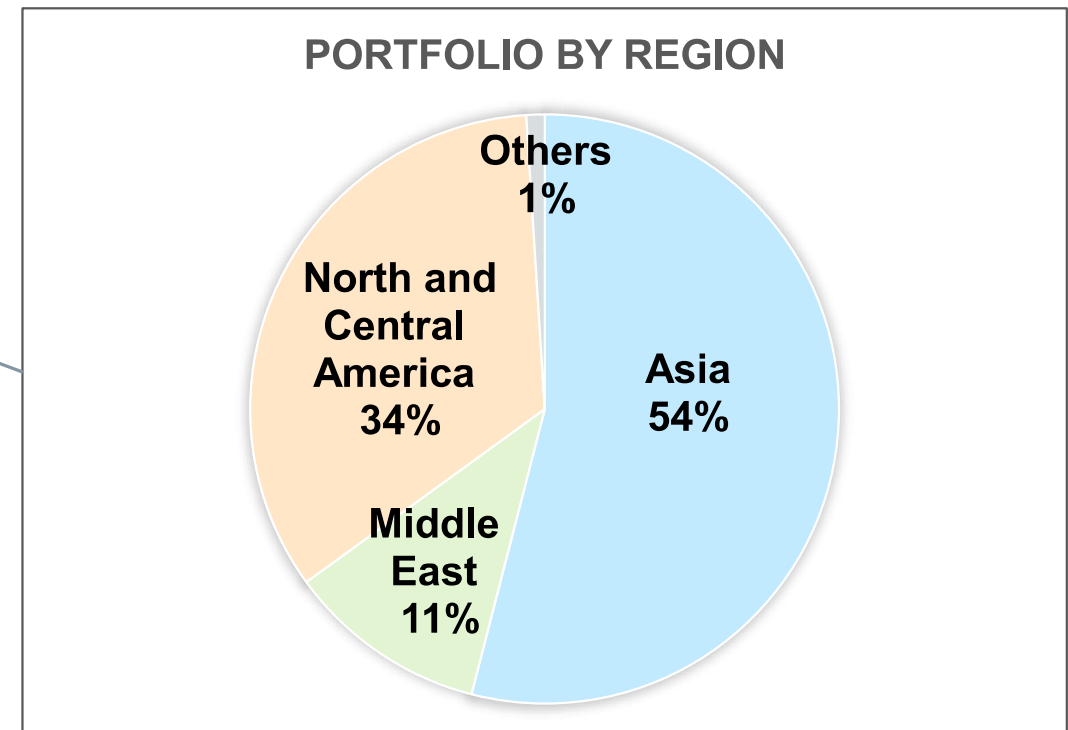
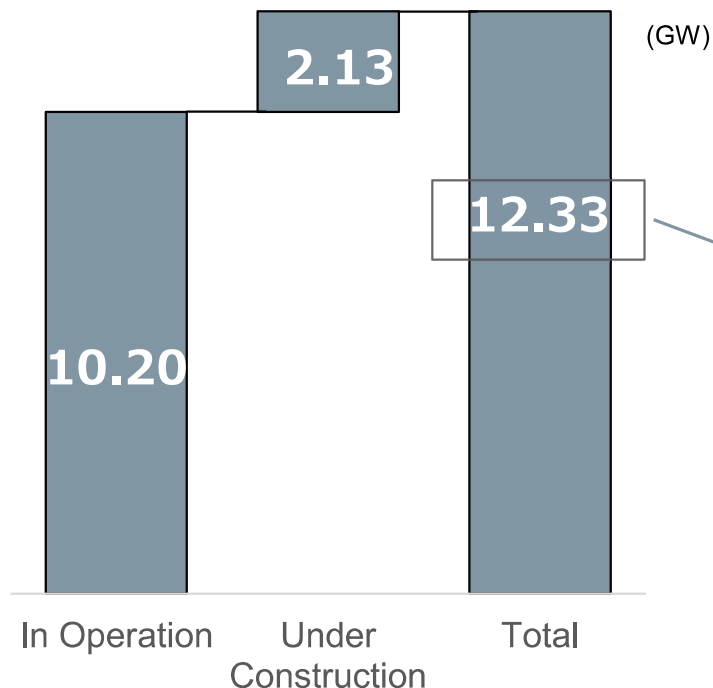
Overseas Power Generation Business: Portfolio of Overseas Power Generation Business



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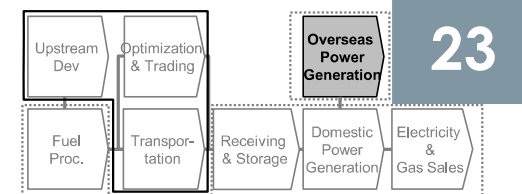
- JERA is expanding its businesses through the experience gained from existing projects around the world. Total capacity of power generation in overseas projects is 12.33 GW (including under construction).
- JERA sold shares in Falcon Gas Thermal Power Co. in Mexico in November 2022, and acquired shares in Brady thermal IPP project in the United States and Gia Lai Electricity Joint Stock Company in Vietnam in December 2022. JERA aims to secure funds and expand earnings by replacing its portfolio through the sale and reinvestment of assets to achieve an optimal asset structure in line with changes in the business.

< Power generation capacity (As of December 31, 2022) >



Overseas Power Generation Business:

List of overseas power generation projects (1)



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(As of December 31, 2022)

Investment on Platform Companies* *Companies participating in multiple power generation projects

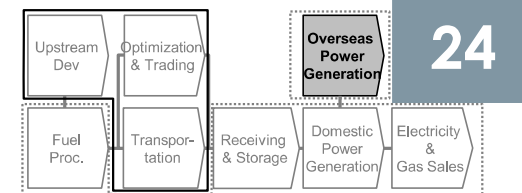
Country	Project Name	Investment ratio	Capacity	Fuel type	Notes
Philippines	TeaM Energy IPP	25.0%~50.0%	2,341 MW	Coal	
Philippines	Aboitiz Power Corporation	27%	4,806 MW	Coal/Oil/ Renewable	Including under construction
Thailand	EGCO Corporation	12.3%	6,377 MW	Coal/Gas/ Renewable	Including under construction
Vietnam	Gia Lai Electricity Joint Stock Company	35.1%	503 MW	Solar/Wind/Hydro	Including under construction
India	ReNew Company	6.8%	13,369 MW	Solar/Wind/Hydro	Including under construction
Bangladesh	Summit Power IPP	22.0%	2,418 MW	Gas	Including under construction
United Kingdom	Zenobe Battery Storage	9.9%	235 MW	-	

IPP Projects (1/2)

Taiwan	Chang Bin/Fong Der/Star Buck Gas Thermal IPP	19.5%~22.7%	3,060 MW	Gas	Including under construction
Taiwan	Formosa 1 Offshore Wind IPP	32.5%	128 MW	Offshore Wind	
Taiwan	Formosa 2 Offshore Wind IPP	49.0%	376 MW	Offshore Wind	Under construction
Vietnam	Phu My Gas Thermal IPP	15.6%	715 MW	Gas	
Indonesia	Cirebon2 Coal Thermal IPP	10.0%	1,000 MW	Coal	Under construction
Thailand	AT Biopower Rice Husk Biomass Thermal IPP	26.0%	20 MW	Biomass	
Thailand	Ratchaburi Gas Power Thermal IPP	15.0%	1,400 MW	Gas	

Overseas Power Generation Business:

List of overseas power generation projects (2)



(As of December 31, 2022)

IPP Projects (2/2)

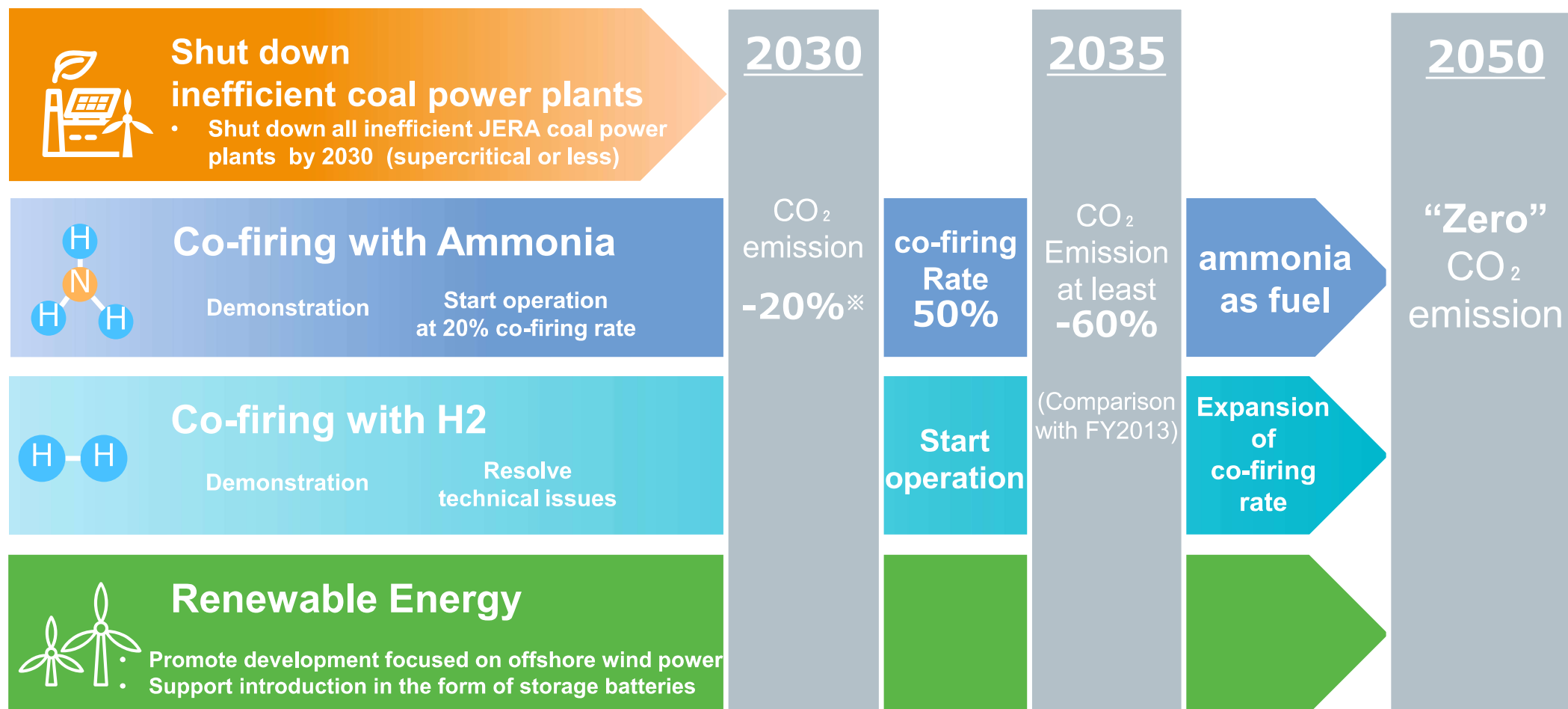
Country	Project Name	Investment ratio	Capacity	Fuel type	Notes
Thailand	Solar Power IPP	49.0%	31 MW	Solar	
Thailand	Wind Power IPP	5.0%	180 MW	Onshore Wind	
Bangladesh	Meghnaghat Gas Thermal IPP	49.0%	718 MW	Gas	Under construction
UAE	Umm Al Nar Gas Thermal IWPP	20.0%	1,550 MW	Gas	
Qatar	Ras Laffan B Gas Thermal IWPP	5.0%	1,025 MW	Gas	
Qatar	Ras Laffan C Gas Thermal IWPP	5.0%	2,730 MW	Gas	
Qatar	Mesaieed Gas Thermal IPP	10.0%	2,007 MW	Gas	
Qatar	Umm Al Houl Gas Thermal IWPP	10.0%	2,520 MW	Gas	
Oman	Sur Gas Thermal IPP	19.5%	2,000 MW	Gas	
Mexico	Valladolid Gas Thermal IPP	50.0%	525 MW	Gas	
United States	Tenaska Gas Thermal IPP	11.1%~17.5%	2,950 MW	Gas	
United States	Carroll County Gas Thermal IPP	20.0%	702 MW	Gas	
United States	Cricket Valley Gas Thermal IPP	38.0%	1,100 MW	Gas	
United States	Linden Gas Thermal IPP	50.0%	972 MW	Gas	
United States	Compass Gas Thermal IPP	50.0%	1,123 MW	Gas	
United States	Brady Thermal IPP	100.0%	1,633 MW	Oil/Gas	
United States	El Sauz Onshore Wind IPP	100.0%	302 MW	Onshore Wind	Under construction
United Kingdom	Gunfleet Sands Offshore Wind IPP	25.0%	173 MW	Offshore Wind	

Reference: Progress of JERA Zero CO₂ Emissions 2050

JERA Zero CO₂ Emissions 2050: Roadmap for its Business in Japan

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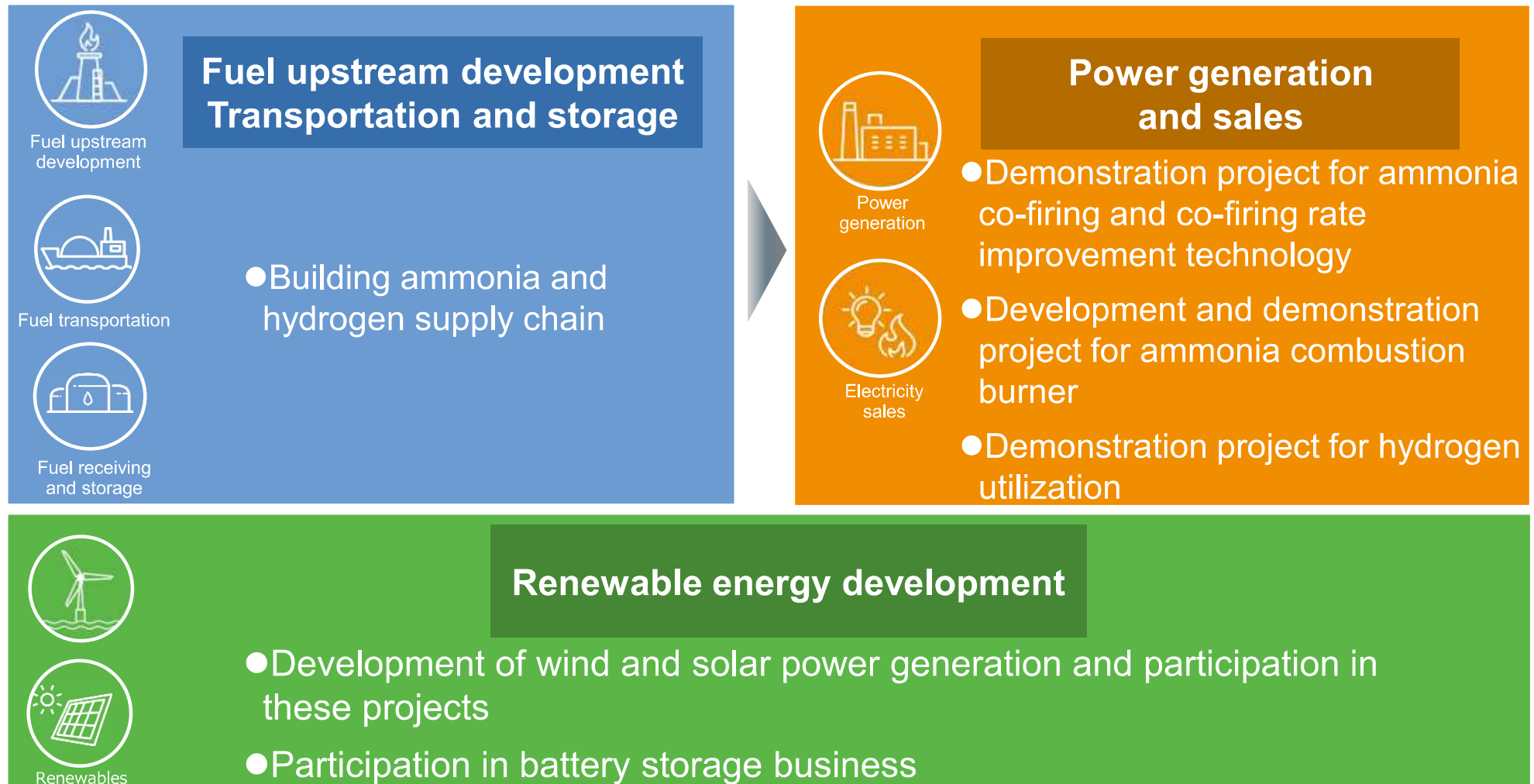
- JERA established “JERA Zero CO₂ Emissions 2050 Roadmap for its Business in Japan”, including four initiatives.



※Reduce carbon emission intensity of thermal power plants by 20% based on the long-term energy supply-demand outlook for FY2030 as set by the government

JERA Zero CO₂ Emissions 2050: Efforts to Achieve Zero CO₂ Emissions in JERA's Value Chain

- JERA is participating in business throughout the value chains, from fuel upstream development, transportation, and storage and to the power generation and electricity sales. We are working with many countries and companies around the world to achieve zero emissions at each stage.



JERA Zero CO₂ Emissions 2050:

Efforts towards Zero CO₂ Emissions

(Ammonia and Hydrogen Supply Chain)

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- To build supply chains for ammonia and hydrogen, JERA collaborates with leading companies in Japan and overseas. The table below summarizes the details of the collaborations announced in the latest one year.

	Business Partners	Contents
Upstream Transportation	CF Industries (United States)	Concluded MOU for the joint project development and sales & purchase of clean ammonia for the 20% co-firing operations at the Hekinan Thermal Power Plant Unit 4 (January 2023).
	Yara International ASA (Norway)	
	Chevron Corporation (United States)	Signed a Joint Study Agreement to collaborate on multiple lower carbon opportunities, including co-development of lower carbon fuel and hydrogen, and using of liquid organic hydrogen carriers in Asia Pacific region (Australia) and the United States (November 2022).
	Nippon Yusen Kabushiki Kaisha (Japan) Mitsui O.S.K. Lines, Ltd. (Japan)	Concluded MOUs related to cooperation in transporting fuel ammonia, including development of large-volume ammonia carriers and establishment of safe transport systems. (November 2022).
Supply Chain	Japan	Kyushu Electric Power Co., Inc. Chugoku Electric Power Co., Inc. Shikoku Electric Power Co., Inc. Tohoku Electric Power Co., Inc.
		Idemitsu Kosan Co., Ltd.
		ENEOS Corporation JFE Holdings, Inc.
	Overseas	Electricity Generating Public Company Limited(Thailand)
		IHI Asia Pacific Pte. Ltd.(Singapore)
		Uniper Global Commodities S.E. (Germany) Uniper Global Commodities North America L.L.C. (United States)

JERA Zero CO₂ Emissions 2050: Efforts towards Zero CO₂ Emission (Power Generation)

Initiatives for Ammonia Co-firing

- The following projects have been adopted by NEDO and are currently being implemented.

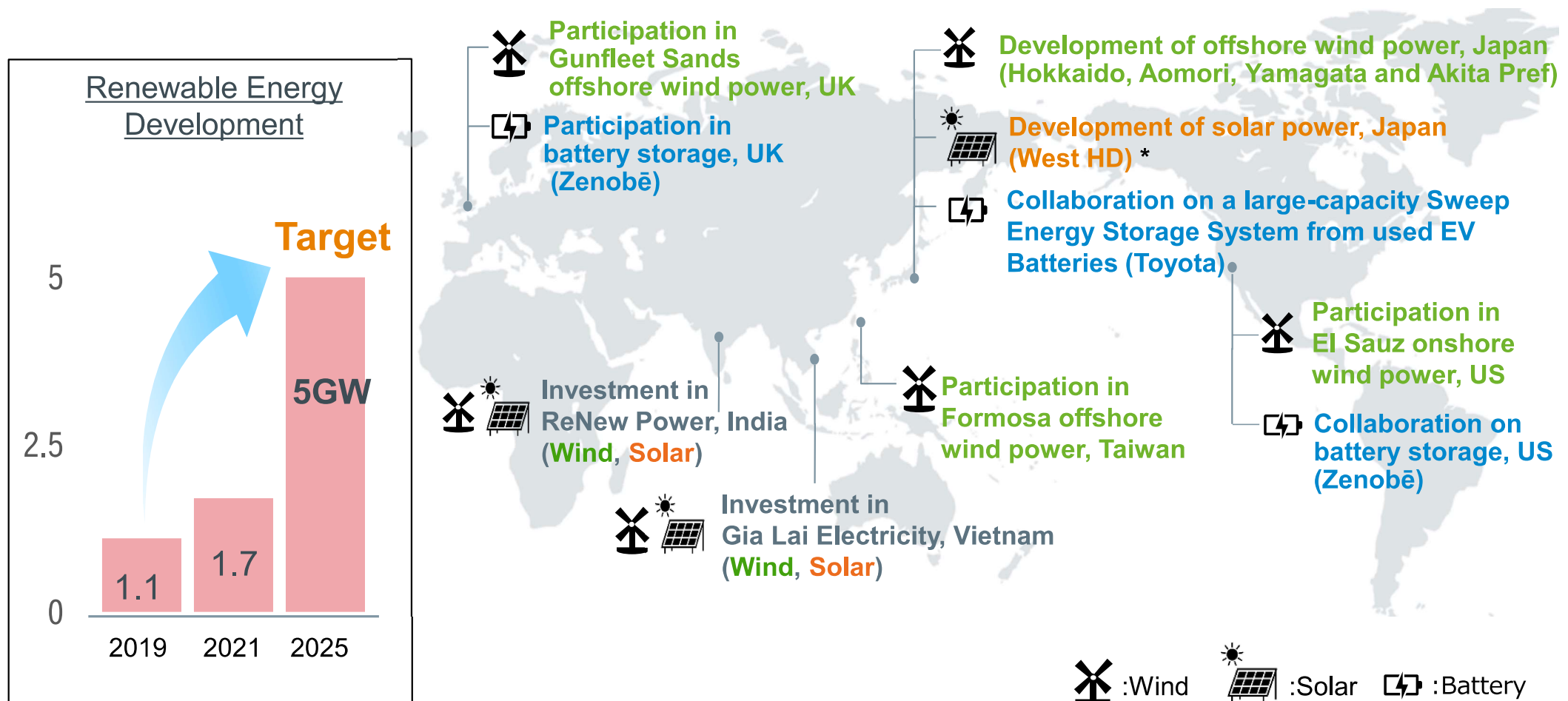
Project	Development of technologies for carbon recycling and next-generation thermal power generation / Research, development and demonstration of technologies for ammonia co-firing thermal power generation	Green Innovation Fund Program / Establishment of Fuel Ammonia Supply Chains project / Demonstration project to develop technology to increase the ammonia co-firing rate at coal-fired boilers
Overview	- At Hekinan Thermal Power Station Unit 4 (power output: 1 million kW), JERA will aim to achieve 20% co-firing of ammonia by FY2023. - In addition, small-scale tests using burners of different materials has been conducted at Unit 5 of Hekinan Thermal Power Station (power output: 1 million kW).  Hekinan Thermal Power Station	- Ammonia high co-firing burners will be implemented in Hekinan Thermal Power Station Units 4 or 5, with the aim of increasing the ammonia co-firing rate to 50% or more. - JERA will plan to develop a burner capable of 50% or more ammonia co-firing by FY2024, and to start 50% or more ammonia co-firing in actual equipment by FY2028. - JERA will plan to develop an ammonia-fired burner suitable for coal boilers and to demonstrate its operation with actual equipment. - We have the plan to develop the burner that can exclusively co-fire ammonia by FY2024, and verify that two units of different boiler types can co-fire more than 50% ammonia by FY2028.

Initiatives for Hydrogen Co-firing

- Received notice of acceptance of “Demonstration project related to hydrogen utilization at an LNG thermal power plant in Japan” under Green Innovation Fund program lead by NEDO, and started evaluation of operational and environmental characteristics for hydrogen utilization at existing LNG thermal power plants in Japan from October 2021 to March 2026.
- Considering the co-firing with hydrogen at Unit 6 of Linden Gas Thermal Power plant in the United States. We remodeled existing gas turbines and started trial operation using fuel gas containing hydrogen.

JERA Zero CO₂ Emissions 2050: Efforts towards Zero CO₂ Emission (Renewable energy development)

- JERA has set a target of 5GW renewable energy development by FY2025, and is widely promoting wind power, solar power, battery storage, etc.



*In November 2022, the first solar power project has started its operation.