Summary of FY2019 Earnings Results

Electric Power Development Co., Ltd.

April 30, 2020

Forward Looking Statements

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

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

※Display of Figures

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

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I. Summary of FY2019 Earnings Results

Summary of FY2019 Earnings Results

(Unit: billion yen)

Consolidated	FY2018 (Apr.-Mar.)	FY2019 (Apr.-Mar.)	Year-on-year change		FY2019 Forecast*1 (Apr.-Mar.)	Comparison with the forecast	
Operating Revenue	897.3	913.7	16.4	1.8 %	920.0	(6.2)	(0.7)%
Operating Income	78.8	83.6	4.7	6.1 %	75.0	8.6	11.5 %
Ordinary Income	68.5	78.0	9.5	13.9 %	71.0	7.0	10.0 %
Profit attributable to owners of parent	46.2	42.2	(3.9)	(8.6)%	41.0	1.2	3.1 %

Non-consolidated	FY2018 (Apr.-Mar.)	FY2019 (Apr.-Mar.)	Year-on-year change		FY2019 Forecast*1 (Apr.-Mar.)	Comparison with the forecast	
Operating Revenue	646.9	571.2	(75.6)	(11.7)%	575.0	(3.7)	(0.6)%
Operating Income	18.6	24.8	6.2	33.2 %	19.0	5.8	31.0 %
Ordinary Income	54.4	60.5	6.1	11.4 %	55.0	5.5	10.2 %
Profit	52.7	57.3	4.5	8.7 %	53.0	4.3	8.3 %

Growth Indicator	FY2018 (Apr.-Mar.)	FY2019 (Apr.-Mar.)	Year-on-year change		FY2019 Forecast*1 (Apr.-Mar.)	Comparison with the forecast	
J-POWER EBITDA*2	168.4	177.9	9.4	5.6 %	167.0	10.9	6.6 %

*1 Forecast released on January 31, 2020

*2 J-POWER EBITDA = Operating income + Depreciation and amortization + Share of profit of entities accounted for using equity method

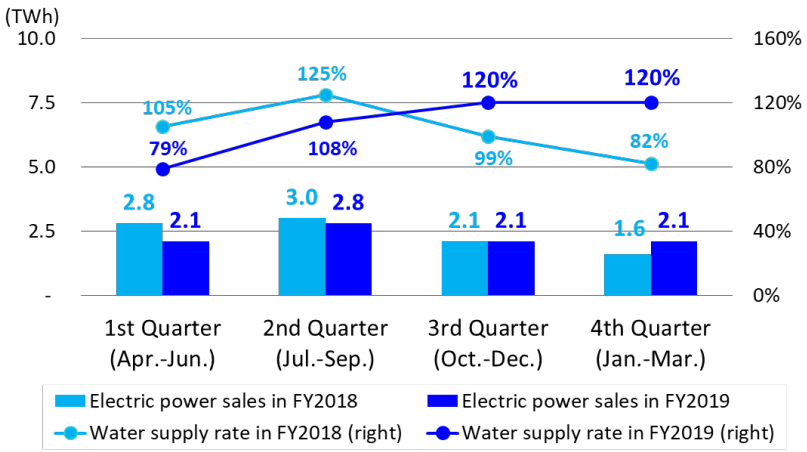
Key Data (Electric Power Sales)

	FY2018 (Apr.-Mar.)	FY2019 (Apr.-Mar.)	Year-on-year change	
Electric Power Sales (TWh)				
Electric Power Business	69.3	73.1	3.7	5.4 %
Hydroelectric Power	9.7	9.1	(0.5)	(5.3)%
Thermal Power	54.9	52.0	(2.8)	(5.3)%
Wind Power	0.8	0.8	0.0	6.1 %
Other *1	3.8	11.0	7.1	183.5 %
Overseas Business *2	10.9	15.6	4.7	43.1 %
Water supply rate	106%	101%	(5) points	
Load factor *3	79%	77%	(2) points	

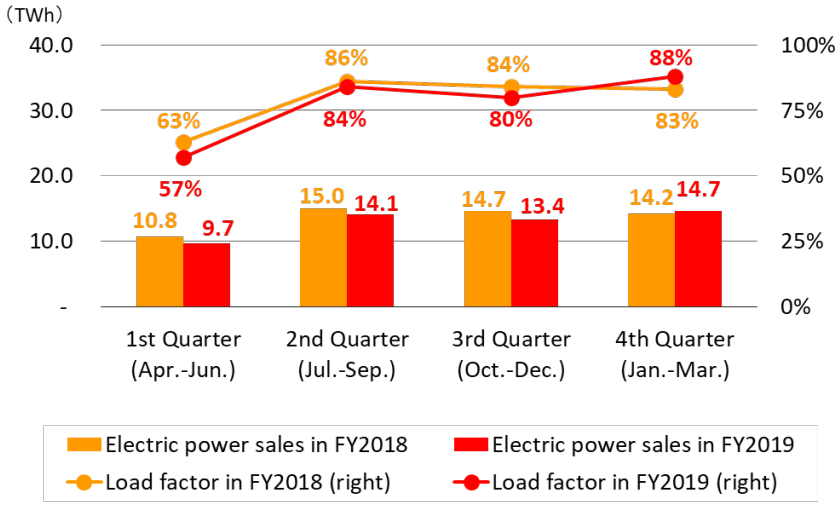
*1 Electric power sales volume of electricity procured from wholesale electricity market, etc.
*2 Electric power sales volume of overseas consolidated subsidiaries (Electric power sales volume of equity method affiliated companies is not included.)
*3 Load factors of thermal power show the results for non-consolidated only.

Electric Power Sales for each Quarter

[Domestic Hydroelectric Power Business]



[Domestic Thermal Electric Power Business]



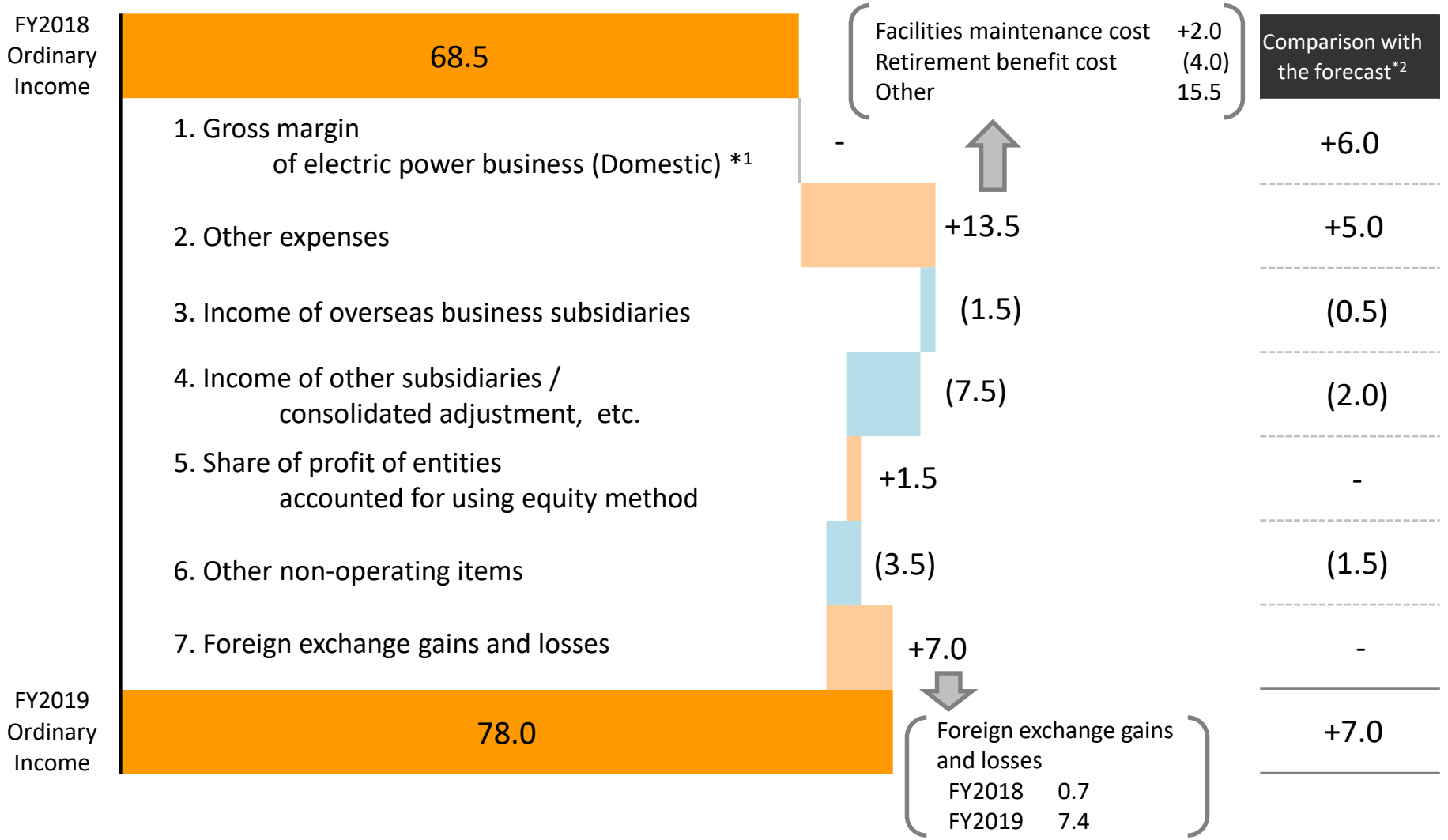
Key Data (Operating Revenue)

	FY2018 (Apr.-Mar.)	FY2019 (Apr.-Mar.)	Year-on-year change	
Operating Revenue (Billion yen)	897.3	913.7	16.4	1.8 %
Electric Power Business	693.7	684.1	(9.6)	(1.4)%
Electric Power Generation Business	642.4	631.0	(11.3)	(1.8)%
Transmission / Transformation Business	49.4	49.6	0.1	0.4 %
Overseas Business*1	141.0	179.0	38.0	27.0 %
Other Business*2	62.5	50.5	(12.0)	(19.2)%
Foreign exchange rate at the end of December (Yen/US$)	111.00	109.56		
Foreign exchange rate at the end of December (Yen/THB)	3.41	3.63		
Foreign exchange rate at the end of December (THB/US$)	32.45	30.15		
Average foreign exchange rate (Yen/US$)	110.92	108.70		

*1 Sales for the overseas business segment (Sales from overseas consolidated subsidiaries and overseas consulting business, etc.)
*2 “Other Business” is composed of “Electric Power-Related Business” segment and “Other Business“ segment.

FY2019 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.
*2 Forecast released on January 31, 2020

Revenue / Expenditure Comparison

(Unit: billion yen)

	FY2018 (Apr.-Mar.)	FY2019 (Apr.-Mar.)	Year-on-year change	Main factors for change
Operating Revenue	**897.3**	**913.7**	**16.4**	
Electric power business	693.7	684.1	(9.6)	
Overseas business	141.0	179.0	38.0	Increase in electric power sales volume at power generating companies in Thailand, etc.
Other business	62.5	50.5	(12.0)	Decreased revenue in coal sales business and an Australian coal mine investment subsidiary, etc.
Operating Expenses	**818.5**	**830.1**	**11.6**	Electric power business (23.4), Overseas business +39.8, Other business (4.6)
Operating Income	**78.8**	**83.6**	**4.7**	
Non-operating Revenue	**18.8**	**26.5**	**7.6**	
Share of profit of entities accounted for using equity method	9.6	11.3	1.6	
Foreign exchange gains	0.7	7.4	6.7	
Other	8.4	7.7	(0.7)	
Non-operating Expenses	**29.2**	**32.0**	**2.8**	
Interest expenses	26.3	26.2	(0.0)	
Other	2.8	5.7	2.9	
Ordinary Income	**68.5**	**78.0**	**9.5**	Electric power business +12.4, Overseas business +4.6, Other business (8.7)
Extraordinary losses	-	12.4	12.4	Loss equivalent to impairment loss of Birchwood project in the US +8.9, impairment loss of Narrabri Coal Mine, etc.
Total income taxes	13.2	11.9	(1.2)	Reversal of deferred tax liabilities associated with impairment of Birchwood project (2.3)
Profit attributable to owners of parent	**46.2**	**42.2**	**(3.9)**	

Balance Sheet

(Unit: billion yen)

	FY2018 End of FY	FY2019 End of FY	Change from prior year end	Main factors for change
Non-current Assets	**2,401.6**	**2,471.3**	**69.6**	
Electric utility plant and equipment	944.3	965.0	20.7	Non-consolidated (5.8), Subsidiaries and others +26.6
Overseas business facilities	312.1	316.3	4.2	
Other non-current assets	94.8	90.9	(3.9)	
Construction in progress	582.0	647.1	65.0	Non-consolidated +31.9, Subsidiaries and others +33.1
Nuclear fuel	74.5	74.8	0.2	
Investments and other assets	393.7	377.0	(16.7)	Long-term investments (24.6)
Current Assets	**364.5**	**334.0**	**(30.4)**	
Total Assets	**2,766.1**	**2,805.3**	**39.2**	
Interest-bearing debt	1,642.8	1,648.4	5.5	Non-consolidated (8.2), Subsidiaries +13.7 [Corporate bonds +10.0]
Other	277.7	299.5	21.8	
Total Liabilities	**1,920.5**	**1,948.0**	**27.4**	
Shareholders' equity	777.6	806.1	28.4	Increase in retained earnings +28.5
Accumulated other comprehensive income	19.7	1.5	(18.1)	Deferred gains or losses on hedges (15.9)
Non-controlling interests	48.1	49.6	1.5	
Total Net Assets	**845.5**	**857.3**	**11.8**	
D/E ratio (x)	2.1	2.0		
Shareholders' equity ratio	28.8%	28.8%		

II. Summary of FY2020 Earnings Forecast

Summary of FY2020 Earnings Forecast and Dividends

(Unit: billion yen)

	Consolidated			
	FY2019 Result	FY2020 Forecast	Comparison with FY2019 result	
Operating Revenue	913.7	915.0	1.2	0.1 %
Operating Income	83.6	85.0	1.3	1.6 %
Ordinary Income	78.0	75.0	(3.0)	(4.0)%
Profit attributable to owners of parent	42.2	47.0	4.7	11.2 %

(Unit: billion yen)

	Non-consolidated			
	FY2019 Result	FY2020 Forecast	Comparison with FY2019 result	
Operating Revenue	571.2	554.0	(17.2)	(3.0)%
Operating Income	24.8	21.0	(3.8)	(15.6)%
Ordinary Income	60.5	46.0	(14.5)	(24.1)%
Profit	57.3	43.0	(14.3)	(25.1)%

(Unit: billion yen)

Growth Indicator	FY2019 Result	FY2020 Forecast	Comparison with FY2019 result	
J-POWER EBITDA	177.9	195.0	17.0	9.6 %

	Cash dividends per share		
	Interim	Year end	Annual
FY2019	35 yen	40 yen	75 yen
FY2020 (Forecast)	35 yen	40 yen	75 yen

Note 1 The forecast for the electric power business assumes that electricity market price will remain lower level throughout the year due to lower natural resource prices and decreased electricity demand associated with stagnation in economic activity caused by the spread of COVID-19. The actual earnings may differ depending on when COVID-19 spread calms down.

Note 2 On April 1, 2020, J-POWER's transmission and transformation business was transferred to a wholly owned subsidiary, J-POWER Transmission Network Co., Ltd. by company split. This transaction has negatively impacted the forecasts on non-consolidated operating revenue, operating income, ordinary income and profit while there has been no impact on the consolidated earnings forecast.

Dividend forecast for FY2020

- ✓ Our policy regarding returns to shareholders is that taking into account of factors such as the level of profit, earnings forecasts, and financial condition, we strive to enhance stable and continuous returns to shareholders in line with a consolidated pay-out ratio of around 30% excluding short-term profit fluctuation factors
- ✓ In spite Takehara Thermal Power Plant Unit New No.1 and Kashima Thermal Power Plant Unit No.2 are schedule to start operations, the business environment is unclear due to COVID-19
- ✓ Based on the dividend policy that aims at stable and continuous returns to shareholders and taking into account of COVID-19 impact on earnings forecasts, the dividend for FY2020 is forecasted to be 75 yen per share, the same amount as FY2019

Key Data

	FY2019 Result	FY2020 Forecast	Comparison with FY2019 Result	
Electric Power Sales (TWh)				
Electric Power Business	**73.1**	**76.4**	**3.2**	**4.5%**
Hydroelectric Power	9.1	9.0	(0.1)	(1.3)%
Thermal Power	52.0	53.8	1.8	3.5%
Wind Power	0.8	1.1	0.2	29.2%
Other*1	11.0	12.3	1.3	11.9%
Overseas Business*2	**15.6**	**16.2**	**0.5**	**3.7%**
Operating Revenue (Billion yen)	**913.7**	**915.0**	**1.2**	**0.1%**
Electric Power Business	**684.1**	**693.0**	**8.8**	**1.3%**
Electric Power Generation Business	631.0	627.0	(4.0)	(0.6)%
Transmission/Transformation Business	49.6	50.0	0.3	0.7%
Overseas Business*3	**179.0**	**169.0**	**(10.0)**	**(5.6)%**
Other Business*4	**50.5**	**53.0**	**2.4**	**4.9%**

	FY2019 Result	FY2020 Forecast
Water supply rate	101%	100%
Load factor	77%	76%
Foreign exchange rate at term end		
Yen/USD	109.56	110.00
Yen/THB	3.63	3.30
THB/USD	30.15	30.15
Average foreign exchange rate		
Yen/USD	108.70	110.00

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

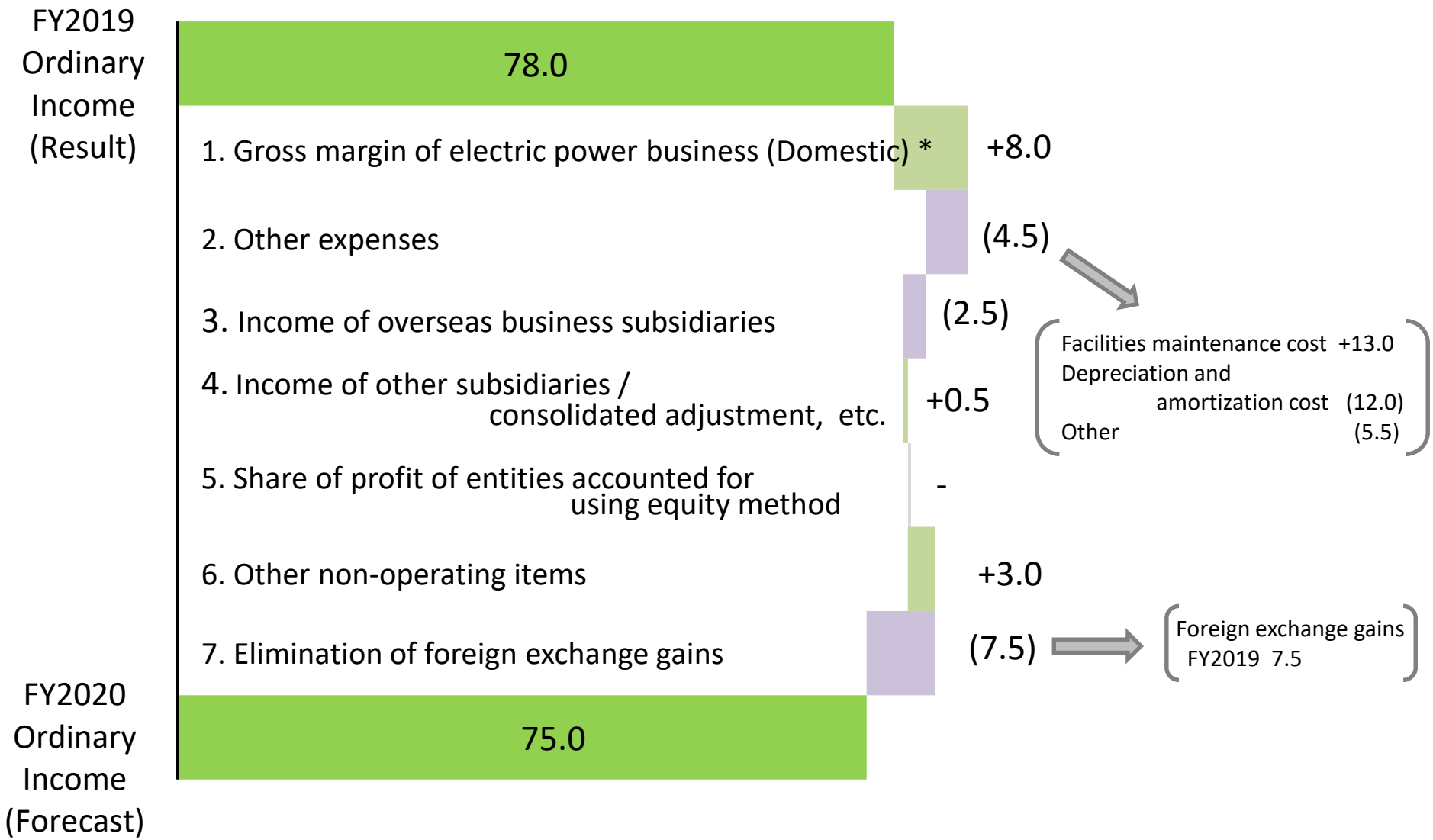
*2 Electric power sales volume of overseas consolidated subsidiaries (Electric power sales volume of equity method affiliated companies is not included.)

*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.

FY2020 Earnings Forecast (Main Factors for Change)

(Unit: billion yen)



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

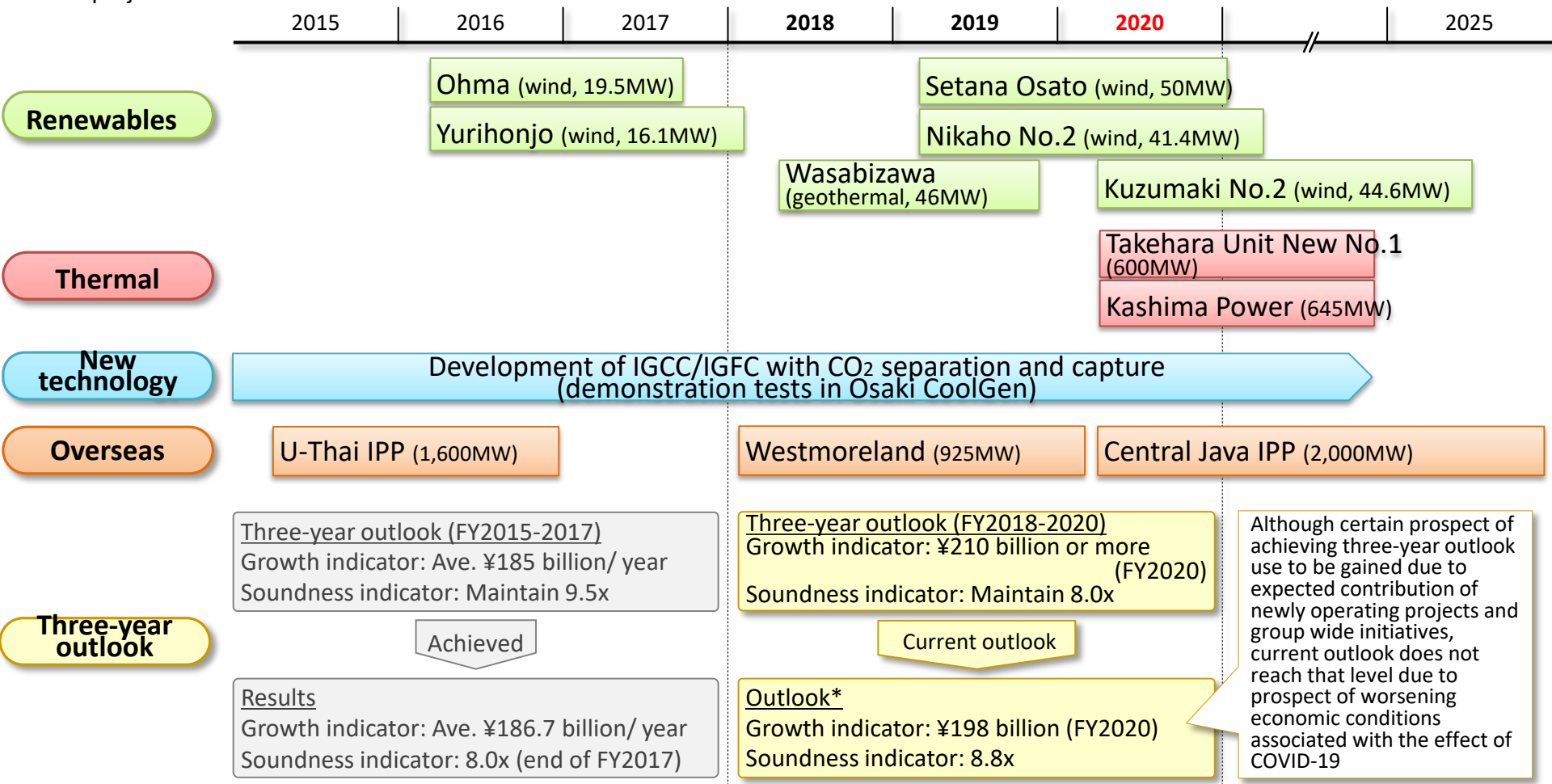
III. Progress of Medium-term Management Plan and Future Initiatives

1. Progress So Far

Progress So Far

- **The outlook for global economy is extremely unclear due to COVID-19**
- **Secure the safety and security of our stakeholders and promote Medium-term Management Plan, giving top priority to the stable power supply**

【Main projects】



Note) The amount of growth indicator shows J-POWER EBITDA (operating income + depreciation and amortization + share of profit of entities accounted for using equity method, hereinafter "JP EBITDA"), the amount of soundness indicator shows the ratio of interest-bearing debt to JP EBITDA

* Outlook based on the consolidated earnings forecasts for the year ending March 31, 2021 disclosed in the Financial Results for the Year Ended March 31, 2020 on April 30, 2020

2. Future Initiatives

Where J-POWER Goes in the Long Run

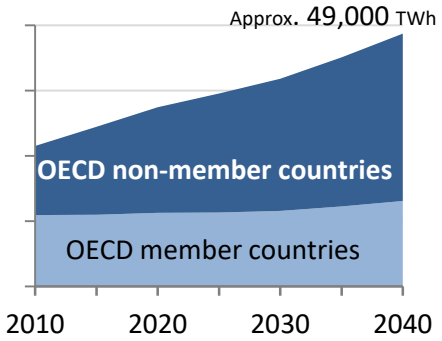
➤Energy industry around the world is standing at a major turning point toward 2050

Climate change challenges

(Paris Agreement)

- ✓ Keep a global temperature rise well below 2 ℃ and pursue efforts to limit even further to 1.5 ℃
- ✓ Balance GHG emissions and absorption in the latter half of this century

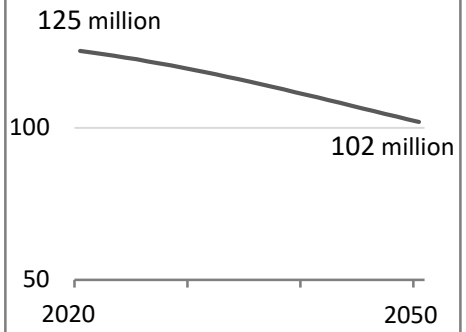
Electricity demand increase



Innovations

- ✓ Progress of digital transformation
- ✓ Development of zero emission technologies
- ✓ Price drop of renewables and batteries

Population decline in Japan



➤Setting a long-term direction toward 2050, expand business activities globally

(1) Long-term direction
…slides 19-21

Recognize growth chances and risks in the midst of major changes in business environment

Promote initiatives with defined time flame and direction

Initiatives along with the Medium-term Management Plan

(2) Business environment and direction
… slide 22

(3) Six key initiatives
… slides 23-32

(1) Long-term Direction - Japan [1/2]

➤Contribute to lower carbon emissions through realizing supply of zero emission electricity

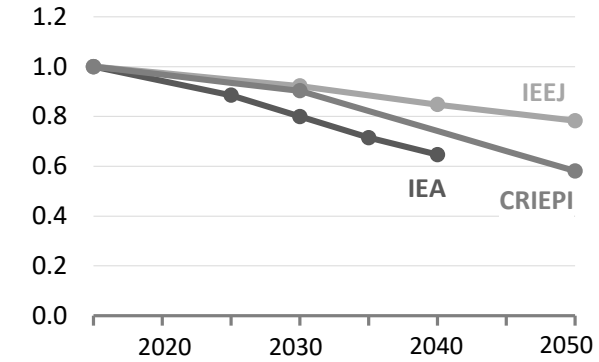
➤Continue to play an important role in Japanese power supply

- ◆ Immutable request for lower carbon emissions
- ◆ Final energy consumption↓
- ◆ Electrification↑
- ◆ Electricity demand stays flat

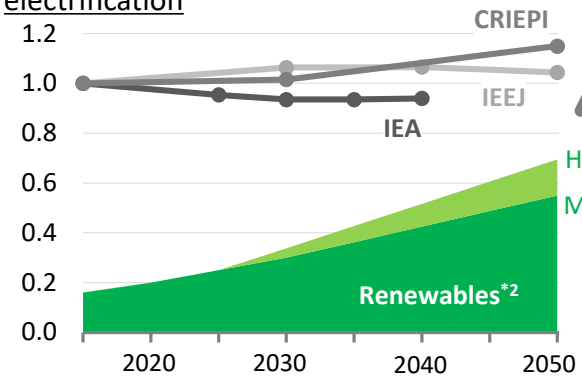
People request "CO_2-free electricity"

⇒**Realize supply of zero emission electricity** to respond to the request

✓Final energy consumption declines



✓Electricity demand stays flat due to electrification



【Toward zero emission power generation】

Development of renewables

Making fossil fuel generation zero emission

(IGCC & CCUS*1)

Steady progress toward nuclear power generation

Pursue possibility for new technology

(Hydrogen generation and others)

Supply of CO_2-free electricity

Household

Transportation

Service

Industry

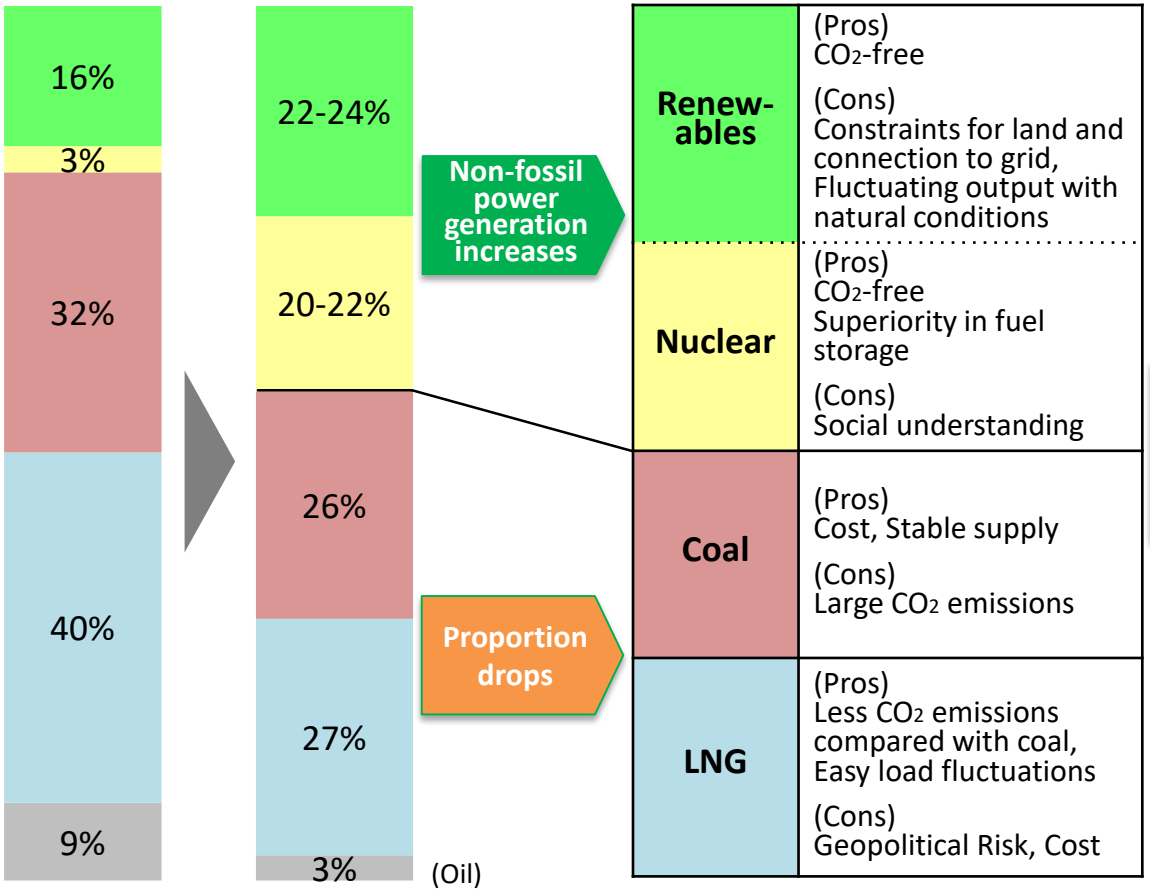
CO_2 emissions in power generation sector are assumed to be significantly reduced by replacement of fossil fuel use with lower carbon electricity

*1 Technology for **C**O_2 emitted from fossil fuel power generation and other sources to be **c**aptured and **u**tilized or **s**tored underground

*2 Referred to Ministry of Environment and Mitsubishi Research Institute "FY2014 Research Report on Feasibility Study on Dissemination of Distributed Energy Including Renewables"

(1) Long-term Direction - Japan [2/2]

- **Japan needs a well balanced power generation portfolio from the perspective of "3E+S"***
- **J-POWER is developing zero emission technology for fossil fuel power generation toward 2050 aiming to form a CO_2-free portfolio with renewables and nuclear**



Note The table above does not present estimated power generation proportion

Significance of coal-fired thermal power in 2050

- ✓ As of 2050, non fossil fuel power generation alone will not be enough to cover electricity demand
  - ⇒**Some fossil fuel power generation will be required**
- ✓ Japan depends resources on import from overseas, so has to refrain from rely on a specific fossil fuel in the view of **E**nergy security and **E**conomic efficiency
  - ⇒**There will remain some needs for coal-fired thermal power**
- ✓ Coal use faces CO_2 challenges
  - ⇒**Solve CO_2 issues which hamper coal use** by utilizing IGCC + CCUS technologies in order to respond to social demand for realizing 3E+S

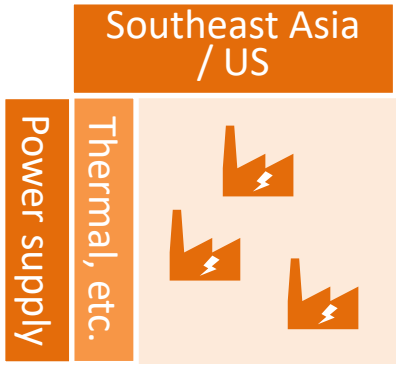
⇒ Consider global expansion

"CO2-free power generation portfolio in FY2050"
⇒In addition to renewables and nuclear with stable output,
- Variable renewables & batteries
- Fossil fuel generation & CCUS are essential

* Basic idea of energy policy which aims at realizing stable energy supply (Energy security), Economic efficiency and Environmental compatibility (Environment) with Safety as the major prerequisite

(1) Long-term Direction - Overseas

- **Contribute to both global economic growth and climate change mitigation through power supply**
- **Pursue possibilities of various types of power supply in economically developing countries and regions**



Expand areas

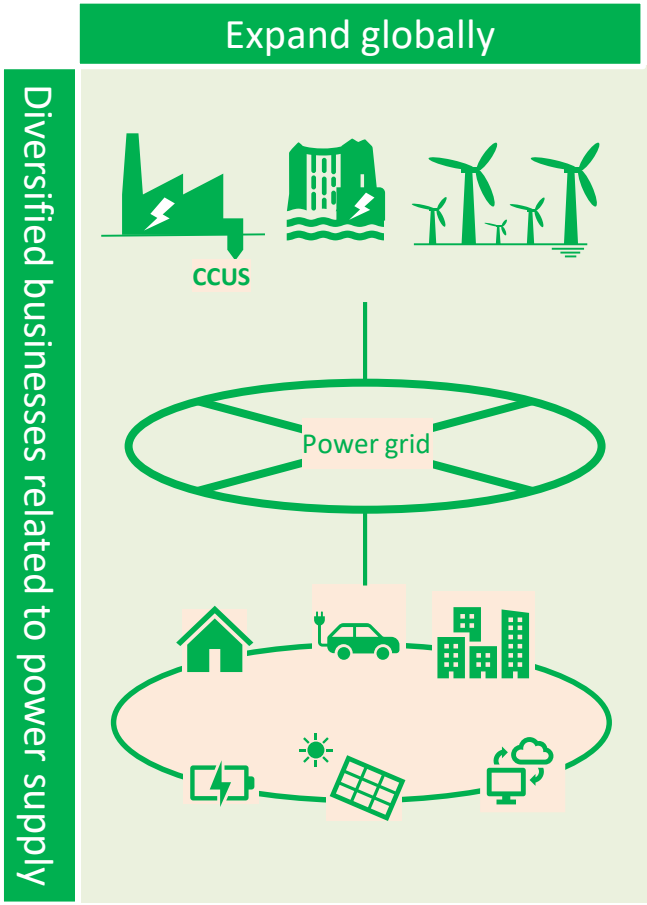
Expand to countries and regions where population increase and economic growth are expected in addition to Southeast Asia and US where we are currently active

Initiatives for zero emission power generation

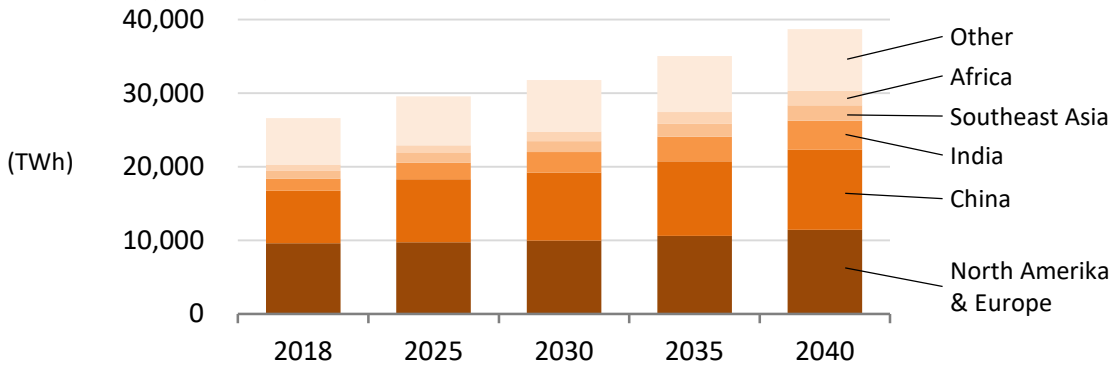
Expand IGCC and CCUS globally in addition to renewables and batteries

Diversify businesses other than power generation

Pursue business opportunities caused by structural change of power supply including decentralization



✓Estimated power generation*



* Sustainable Development Scenario in IEA "World Energy Outlook 2019"

(2) Business Environment and Direction

Current business environment

- ✓ Needs to address climate change challenges
- ✓ Japan: Deregulation of power market and intensifying competition, request for stable power supply and resilience
- ✓ Overseas: Needs to simultaneously address both increasing energy demand and climate change
- ✓ Developing business environment for distributed power systems dissemination

Direction of initiatives

- ➤ Realizing zero emission in power supply
- ➤ Further expand globally
- ➤ Expand new businesses taking advantage of business environment changes
- ➤ Strengthen business foundation to support above initiatives

Key initiatives

		Slide
① Further expansion of renewable energy	…	23-24
② Zero emission from fossil fuel power generation	…	25-26
③ Promotion of the Ohma Nuclear Power Plant Project, with safety as the major prerequisite	…	27
④ Exploring new fields in overseas business	…	28
⑤ Initiatives for distributed energy service	…	29
⑥ Strengthening profit base, financial discipline and human resource strategy	…	30-32

① Further Expansion of Renewable Energy [1/2]

➤ As a leader in renewables, newly develop 1GW (2025 target) to achieve 10GW scale, and further aim for growth

Wind

Offshore

- ✓ Expand business know-how by participating in a development project in Europe, an advanced region, in addition to accumulating track records in Japan
- ✓ Aim for **acquiring large-scale projects outside port areas in Japan** utilizing obtained know-how

2009-2019 **A demonstration project** (2MW)

2017- **A development project in a port area** [220MW (owned capacity 88MW), Start of operation is scheduled in FY2025]

2018- **Participation in a development project in UK** [857MW (owned capacity 214MW), Start of operation in scheduled in 2021]

2019- Research for development outside port areas ~ aiming for commercialization

Onshore

- ✓ **Track record of development and maintenance over 20 years** from the start of operation of Tomamae project in 2000
- ✓ Efficiently expand, maintain and operate by developing new projects nearby existing sites
- ✓ **Expand capacity by developing new projects** and **replace existing wind turbines with large-scale ones**

Development and O&M over 20 years
22 sites / total 439MW
A maintenance subsidiary specialized in windfarm

Expanding capacity nearby existing sites
Started operation in 2 projects totaling 91MW
3 new projects totaling up to 127MW are under/ preparing for construction

Prepare for development at new sits and replace existing facilities

Look for new sits for further expansion

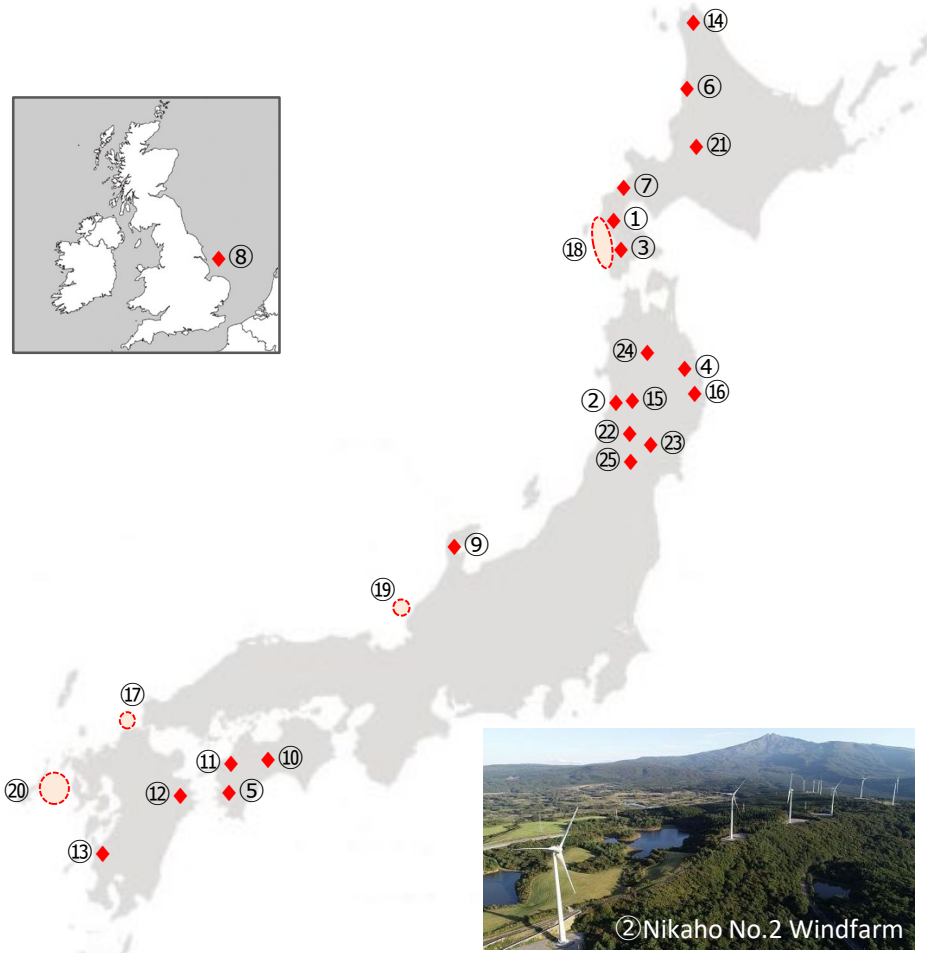
Geo-thermal

- ✓ Wasabizawa (46MW) started operation in 2019, which is the first large-scale geothermal power in these 23 year in Japan
- ✓ Develop projects following Onikobe (ended operation in 2017) Replacement and Appi

Hydro

- ✓ Contribute to stable power supply utilizing operation experience over 60 years (60 sites/ total 8,560MW)
- ✓ Enhancing power generation volume by repowering and improvement of intakes, and maintaining reservoirs by removing sediment
- ✓ Promote large-scale revitalization plans and taking measures against natural disaster risks aiming at long-term stable power source

① Further Expansion of Renewable Energy [1/2]



②Nikaho No.2 Windfarm

In operation/ Started operation

Wind	Onshore	In operation	-	22 existing sites	439.2MW
		Started operation in FY2019	①	Setana Osato	50.0MW
			②	Nikaho No.2	41.4MW
			-	Total 24 sites	Total 530.6MW

Under construction/ Preparing for construction (⑥⑦: replacing existing windfarms)

Wind	Onshore	Under construction	③	Kaminokuni No.2	[1]41.5MW
			④	Kuzumaki No.2	44.6MW
		Preparing for construction	⑤	Minamiehime No.2	Max. 40.8MW
			⑥	Tomamae	30.6MW
			⑦	Shimamaki	4.3MW
	Offshore	Under construction	⑧	Triton Knoll Offshore[2]	214MW

Preparing for development (⑭⑮⑯: replacing existing windfarms)

Wind	Onshore	Preparing for development	⑨	Wajima	Max. 90.3MW
			⑩	Reihoku Kunimiyama	Max. 50.6MW
			⑪	Seiyo Yusuhara	Max. 163.4MW
			⑫	Youra	Max. 64.5MW
			⑬	Kita-Kagoshima	Max. 215MW
			⑭	Sarakitomanai	14.9MW
			⑮	Nikaho	24.8MW
			⑯	Kuzumaki	21MW
	Offshore	Preparing for development	⑰	Hibikinada Offshore[3]	Max. 88MW

Researching for development (Capacity figures are current estimation)

Wind	Offshore	Researching for development	⑱	Hiyama-area Offshore	Max. 722MW
			⑲	Awara Offshore	Max. 350MW
			⑳	Saikai Offshore	Max. 513MW

*Operator is determined by bid after each sea area is designated as a promotion area

Hydro	In operation	-	60 existing sites	8,560MW
	Under construction	㉑	Shinkatsurazawa/Kumaoi	*+17MW
Geothermal	In operation	㉒	Wasabizawa[4]	46MW
	Under construction	㉓	Onikobe	14.9MW
		㉔	Appi[5]	14.9MW
	Researching for development	㉕	Takahinatayama	-

* "+" shows the change of capacity by the project

1 Presents only phase 1 construction. Total plan amounts up to 120.4MW
2 J-POWER's owned capacity; 25% Joint project with innogy SE and Kansai Electric Power
3 J-POWER's owned capacity; 40% Joit project with KyudenMirai Energy Company, Hokutaku, Saibu Gas, and Kyudenko Corporation
4 J-POWER's owned capacity; 50% Joint project with Mitsubishi Materials Corporation and Mitsubishi Gas Chemical Company
5 J-POWER's owned capacity; 15% Joint project with Mitsubishi Materials Corporation and Mitsubishi Gas Chemical Company

Note; Projects with "max." notation is under scrutinization of capacity

② Zero Emission from Fossil Fuel Power Generation [1/2]

➤ Commercialization of IGCC toward realizing zero emission

Demonstration tests

Multi purpose coal gasification technology development (2002-2013)

Osaki CoolGen demonstration project (Phase 1; 2016-2018)

Advantage of IGCC*

Able to contribute to zero emission

① **Generation technology toward zero emission**
- High affinity with CCUS

② **Quick load change ability**
- Able to absorb output fluctuations of renewables

③ **High thermal efficiency**
- Able to reduce fuel consumption

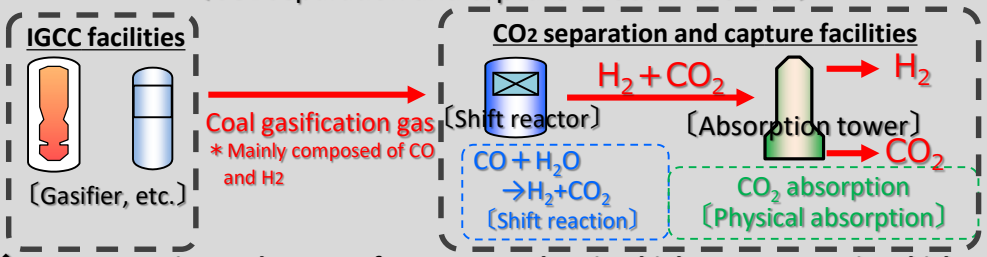
Target

Commer-cialize in the latter half of 2020s

➤ Establish CO_2 separation and capture technology essential for zero mission

Efforts undergoing (2019-)

〔CO_2 separation and capture at Osaki CoolGen〕



◆ **CO_2 separation and capture from pre-combustion high pressure gas in which CO_2 is highly concentrated enables significantly higher efficiency compared with post-combustion CO_2 separation and capture**

Osaki CoolGen demonstration project (Phase 2; 2019-2020)

Target

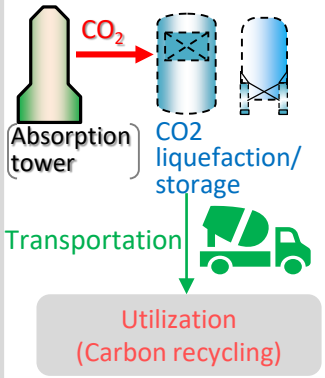
Establish technology in FY2020

* Oxygen-blown IGCC (integrated coal gasification combined cycle) demonstration tests at Osaki CoolGen (partially sponsored by NEDO) have proved not only world highest level of thermal efficiency (gaining perspective for approx. 53% of gross efficiency at a commercial plant with 1500°C-class gas turbine) and quick load change abilities (up to 16% per minute) but also facility reliability being able to withstand commercialization and expected economy which achieves the same level as current coal-fired thermal power plants when commercialized

② Zero Emission from Fossil Fuel Power Generation [2/2]

➤ **Promote initiatives for CO_2 utilization and storage toward zero emission from fossil fuel generation and also promote diverse initiatives including hydrogen use utilizing gasification technology**

CO_2 liquefaction - Demonstration of total utilization flow



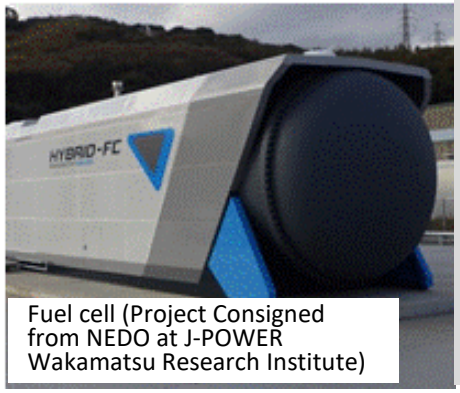
- Demonstrate total utilization flow in which CO_2 is liquefied, stored, transported and utilized, at Osakikamijima, a research center for carbon recycling
- Period：FY2022

Participation in Australian Brown Coal Hydrogen Pilot Test Project


Source:HySTRA (partially sponsored by NEDO)

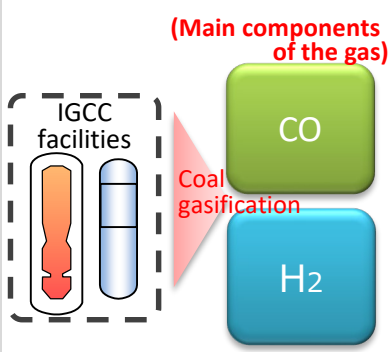
- Participating in Japan-Australia joint demonstration test of "constructing supply chain for CO_2-free hydrogen" utilizing unused brown coal
- Participating mainly in gasification of brown coal and manufacturing hydrogen
- CO_2 generated with gasification is planed to be stored (CCS) when commercialized

IGFC* demonstration (Osaki CoolGen phase 3)


Fuel cell (Project Consigned from NEDO at J-POWER Wakamatsu Research Institute)

- Demonstrate IGFC aiming for achieving higher efficiency, in which hydrogen generated when CO_2 is separated and captured is used in fuel cells
- Period : FY2021-22

Taking advantage of oxygen-blown gasification technology



- Coal gasification gas from oxygen-blown IGCC technology mainly consists of raw material components (CO_2 and H_2 account for approx. 80%) and is available for various use
- Aiming at expanding business regardless of power generation business

*Abbreviation of "integrated coal gasification fuel cell combined cycle" which add fuel cell to IGCC (integrated coal gasification combined cycle)

③ Promotion of the Ohma Nuclear Power Plant Project, with Safety as the Major Prerequisite

- **Contribute to energy security in Japan by using full-MOX fuel that leads to supporting nuclear fuel cycle, while supporting industries in Japan as semi-domestically produced energy**
- **Contribute to address climate change challenges as large-scale CO_2-free power generation**

(Specific activities)

- ✓ Pursue further improvements in safety continuously
- ✓ Sincerely and appropriately respond to compliance reviews and aim to restart full scale construction work quickly
- ✓ Strive for more polite information communication and mutual communication so that we can gain the understanding and trust of the community

Overview of the Ohma Nuclear Power 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)
Start of construction	May, 2008
Start of operation	To be determined
Status	After submitting to NRA an application for permission for alteration of reactor installment license and an application for construction plan approval in December 2014, J-POWER has been undertaking review of compliance with the new safety standards

④ Exploring New Fields in Overseas Business

- **Developing new businesses including renewable energy projects**
- **Entering new areas other than power generation business**

Current business


Gas-fired thermal power under development in US[1]

- ✓ **Fully entered into overseas power generation business in 2000**
  (Started from acquiring projects with long-term PPAs*)
- ✓ Expanded business scale and revenue after 2010 by developing green field thermal power projects with long-term PPAs
- ✓ Currently also developing a gas-fired thermal power without PPA in US

Generating capacity in operation

Overseas 7GW/29%	Japan

Total 24GW

Segment income

Overseas business ¥33.9 billion/43%	Other segments

Total ¥78.0 billion

➔ 3 projects are under construction totaling 4.1GW (2.1GW in owned capacity basis)

Changes in business environment

- ✓ Thermal power development projects with long-term PPAs are decreasing
- ✓ Needs for development are diversifying by countries and regions
- ✓ Power business structures are changing in countries where deregulation and introduction of renewables are expanding

Future business


Offshore windfarm under development in UK[2]

- ✓ To be engaged in **new development of renewables** including wind and solar in addition to thermal power

  ⇒ Expand chances for acquiring projects and secure profitability commensurate with risks

  - ➢ Take risks in joining projects from early stages of development
    (expand development chances, secure return as a developer)
- ✓ Explore new fields in areas where power business structure changes are advancing

1 Jackson Gas-fired Thermal Power Plant (Illinois, US, J-POWER has 100% of stake, output; 1,200MW, start of operation is scheduled in 2022)
2 Triton Knoll Offshore Wind Project (UK, J-POWER has 25% of stake, output; 857MW (214MW is owned), start of operation is schedule in 2021)
The picture shows a wind turbine to be adopted (Photo provided by MHI Vestas Offshore Wind A/S)

* Power Purchase Agreement in which conditions of power supply including price and period are stipulated

⑤ Initiatives for Distributed Energy Services

- **Decentralization driven primarily by renewables such as solar is expected to progress**
- **Position distributed energy services as new business areas which is expected to spread and expand**

【Long-term direction】

Reducing CO_2 emissions

Decentralization

Core business of J-POWER

CO2-free power supply by large-scale power plants

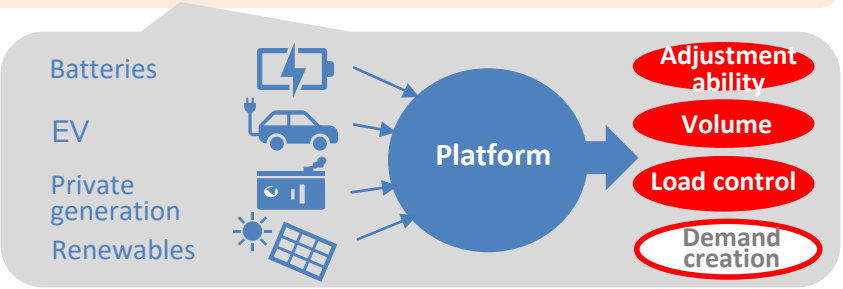
Key initiatives ①-④

【Key initiative ⑤】 Initiatives for distributed energy services

Pursue new business opportunities by developing current efforts and collaborating with partners

【Current efforts】

- ✓ Entering power retailing business in cooperation with partners (slide 32)
- ✓ Create new value (in cooperation with partners)
  - Supply green power that meets RE100 Project*
  - Virtual power plant (VPP) business
  - Utilize adjustment ability of customer's resources (batteries and pumps, etc.)
  - Construction of distributed energy integrated control platform



【Collaboration with start-ups】

- ✓ Combine various start-ups' technologies centered on off-grid type connected living environment
- ✓ Approach distributed services from fields other than energy service

J-POWER — Participate → 

← Provide technologies

10 partners

J-POWER has invested in;

WOTA (Decentralized water supply)

BELLDESIGN™ (Wireless power supply)

*An environmental initiative targeting to cover 100% energy necessary for business operations by renewable energy

⑥ Strengthening Profit Base, Financial Discipline and Human Resource Strategy [1/3]

Strengthening profit base

- Steadily progress the projects under construction*1
  - ✓ Japan : Takehara Thermal Power Plant New Unit No.1 (FY2020), Kashima Power (FY2020)
  - ✓ Overseas*2 : Central Java IPP (Indonesia, FY2020), Jackson Gas-fired Thermal Power (US, FY2022)
- Improve maintenance of power generation facilities
  - ✓ Summarize the maintenance and operation of thermal power plants into a thermal maintenance subsidiary (completed by one company) 【refer to slide 32】
  - ✓ Transfer the maintenance and operation of windfarms to a hydro, transmission and transformation maintenance subsidiary in FY2020 (enhanced system responding to expansion)
- Diversify electricity sales
  - ✓ Aim for maximization and stabilization of revenue by diverse ways of sales combining sales based on long-term PPAs with short-term PPAs and retail business 【refer to slide 32】
- Enhance reliability of transmission and transformation facilities, improve wide area network 【refer to slide 31】
  - ✓ Secure stable revenue by enhancing resilience, managing aging facilities and new installation of New Sakuma Frequency Converter Station
- Strengthen profit base of hydro
  - ✓ Improve reliability by taking measures against facilities' aging and promote initiatives to enhance competitiveness

Financial discipline

- Financial soundness
  - ✓ Utilize interest-bearing debt within the range where the cash flow (JP EBITDA) ratio improves from the level at the end of FY2014 (9.5x)
- Investment projects
  - ✓ Conduct review including screening by hurdle rate when making investment decisions, regularly monitor projects

Utilization of human resources

- Bring diverse human resources to play an active role (diverse personalities, generations and values, etc.)
  - ✓ Acquire and cultivate human resources with the ability and individuality contributing to support business expansion in Japan and overseas, and put them into growing fields
  - ✓ Open call to support voluntary learning (work experience at startups, internal internship)
  - ✓ Realize diverse work styles (flexible working hours, promote childcare / nursing care leave and work at home)
  - ✓ Develop a safe work environment (Utilizing IT tools, advanced risk assessment)
  - ✓ Promote health of human resources (collaborate with the health insurance association, awarded a Health & Productivity Management Outstanding Organization prize)

*1 Refer to slide 24 for renewable projects under development
*2 The impacts of COVID-19 are under examination

⑥ Strengthening Profit Base, Financial Discipline and human resource strategy [2/3]

- **Contribute to wide-area network development for large-scale introduction of renewables**
- **Take measures for resilience and against aging of facilities while achieving cost efficiency**

J·POWER 送変電

J-POWER Transmission Network has been established in April 2020

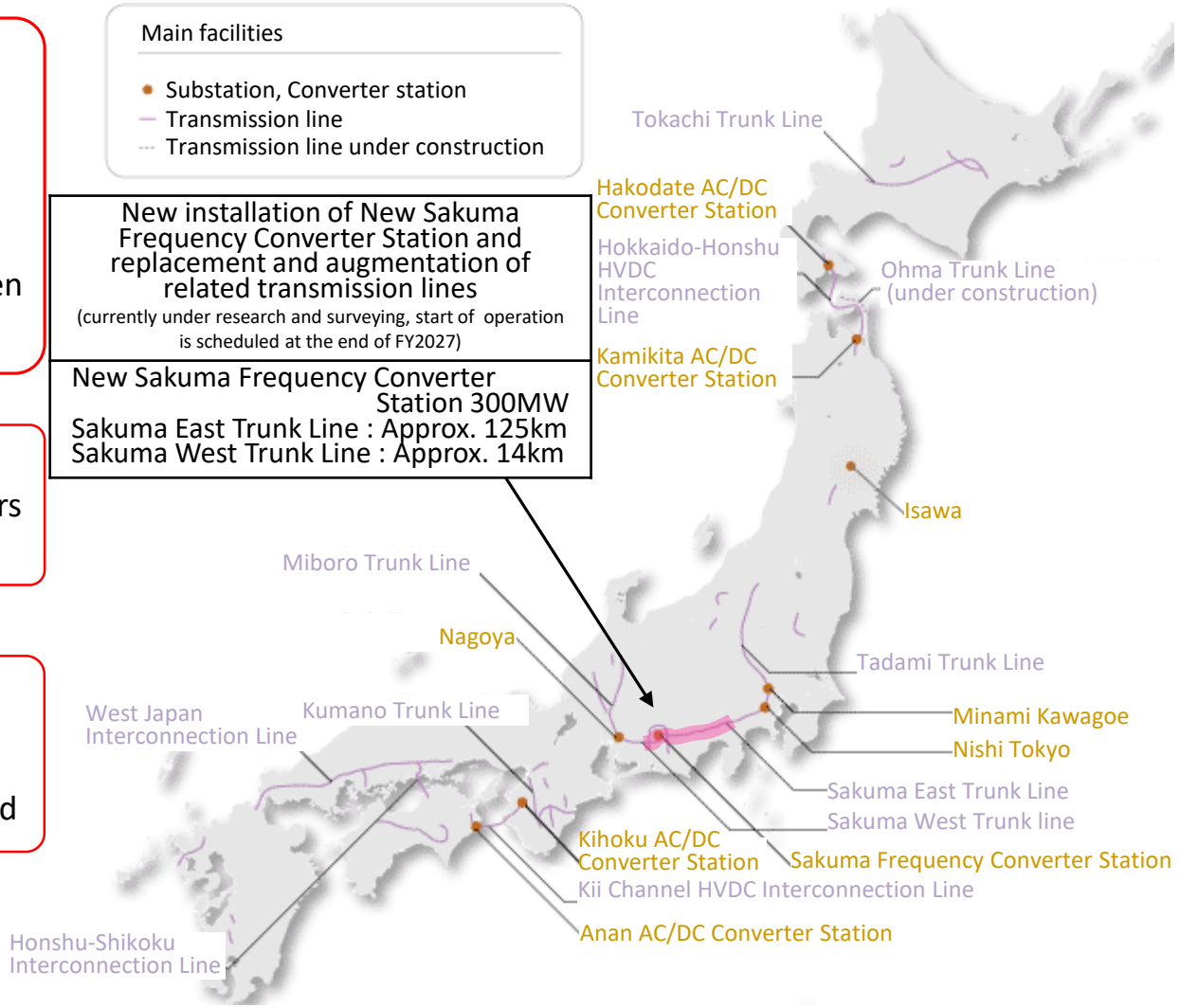
Challenges

- ✓ Expansion of renewables
- ✓ Intensification of natural disasters
- ✓ Aging of facilities

Key initiatives

- ➢ Steadily progress frequency converter station enhancement projects, etc.
- ➢ Enhance resilience
- ➢ Pursue efficient maintenance and R&D

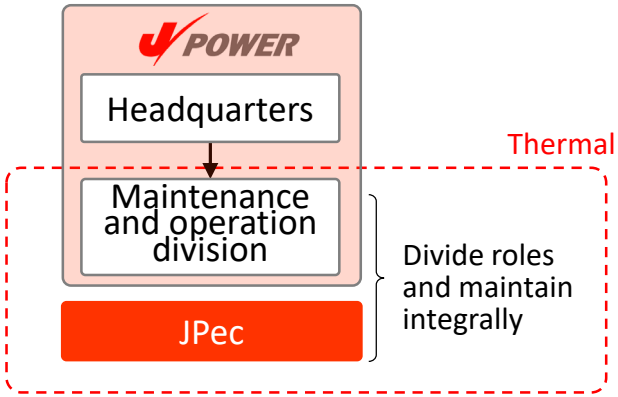
Stable power supply
(Strengthening profit base)



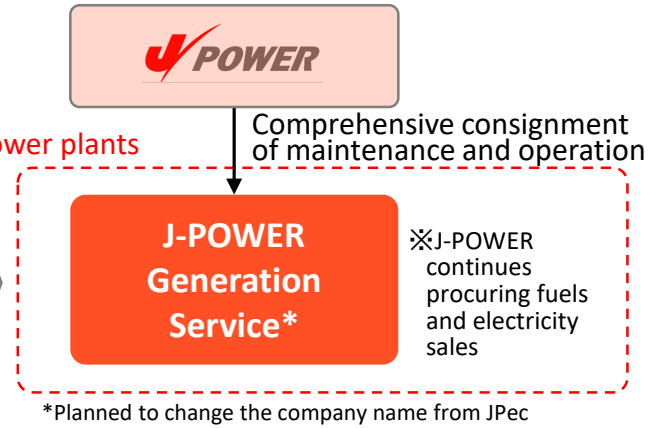
⑥ Strengthening Profit Base, Financial Discipline and human resource strategy [3/3]

➤ New system to maintain and operate thermal power plants

【Cooperation of two companies】



【Completed by one company】

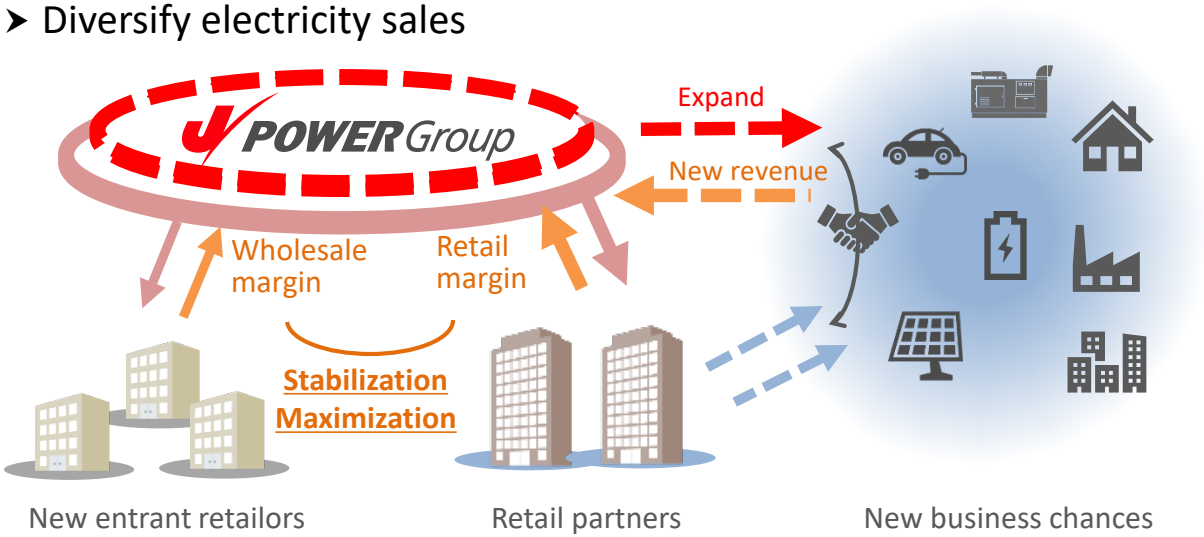


*Planned to change the company name from JPec

- ✓ Start building a new system from FY2020
- ✓ Achieve cost reduction and more efficient staffing through elimination of redundant management structure and utilizing digital technologies (reduce about 30% of O&M personnel by FY2024)

➔Enhance cost competitiveness while increasing personnel in renewable and overseas businesses

➤ Diversify electricity sales



- ✓ While most of electricity sales are based on long-term PPAs which derive stable revenue, market sales ratio is increasing
- ✓ Aims for mitigating impacts of price fluctuations at power exchange due to changes in natural resource prices and supply-demand balance through combining short-term PPAs, retail business and other initiatives

➔Aims for maximizing and stabilizing revenue by diversifying ways of sales

（Reference）

Response against COVID-19

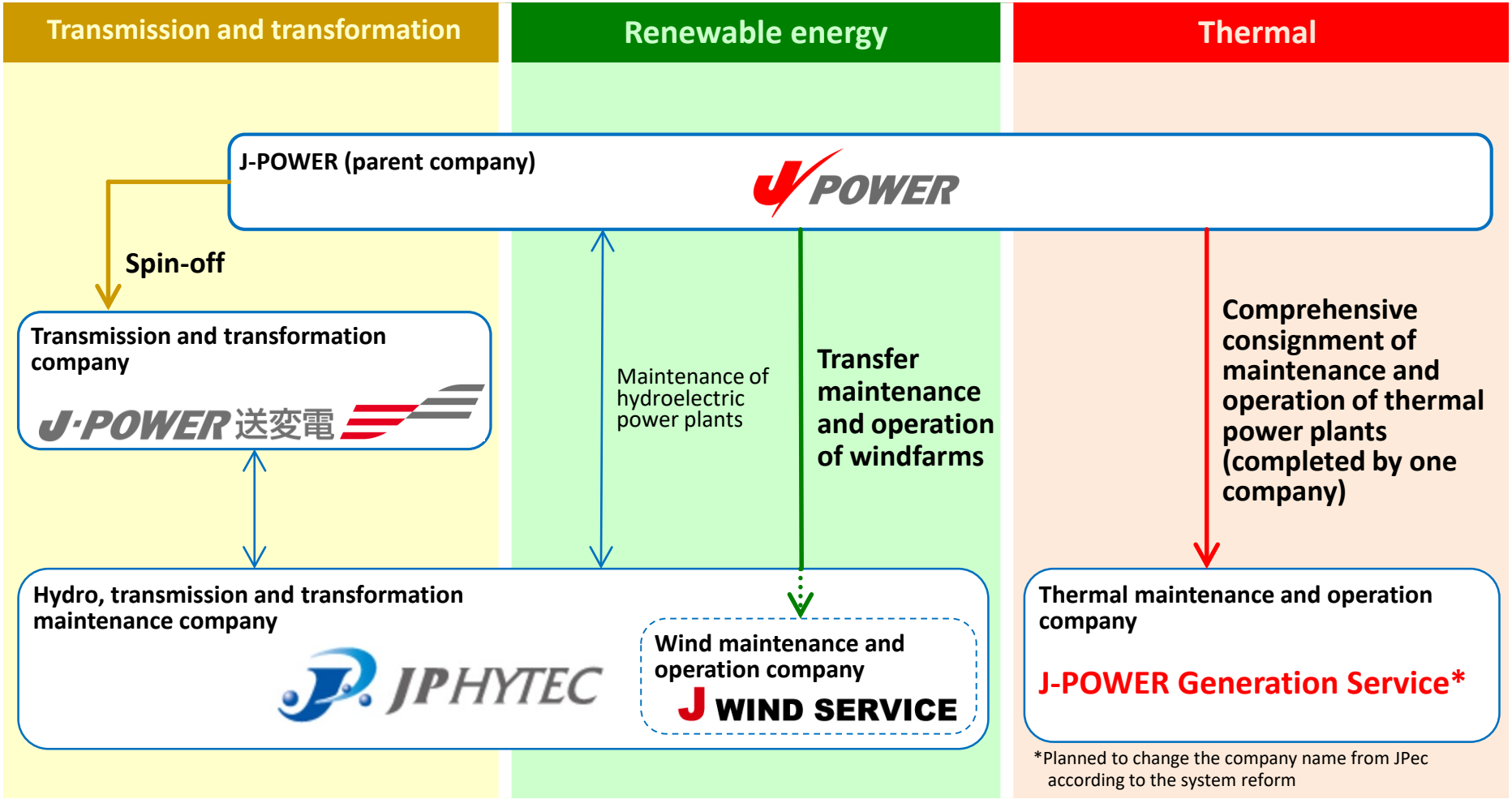
➤ **Contribute to mitigate impacts on people's life and economy through stable power supply**

- ✓ Established COVID-19 Response Headquarters headed by the president in February
- ✓ Take all group-wide measures to continue business focusing on following measures

Infection prevention	➢ Work at home (excluding important work at the office related to business continuation) ➢ Management of important work areas at power plants and other facilities (access restrictions, separation of flow lines)
Securing personnel	➢ Shift work by dividing personnel engaged in important work into two groups ➢ Securing backup personnel in preparation for infection
Fuel procure-ment	➢ Utilizing diverse coal procurement sources, stable procurement by ingenuity of distribution of carrier vessels ➢ Securing required amount through adequate operation of coal yards and coal centers

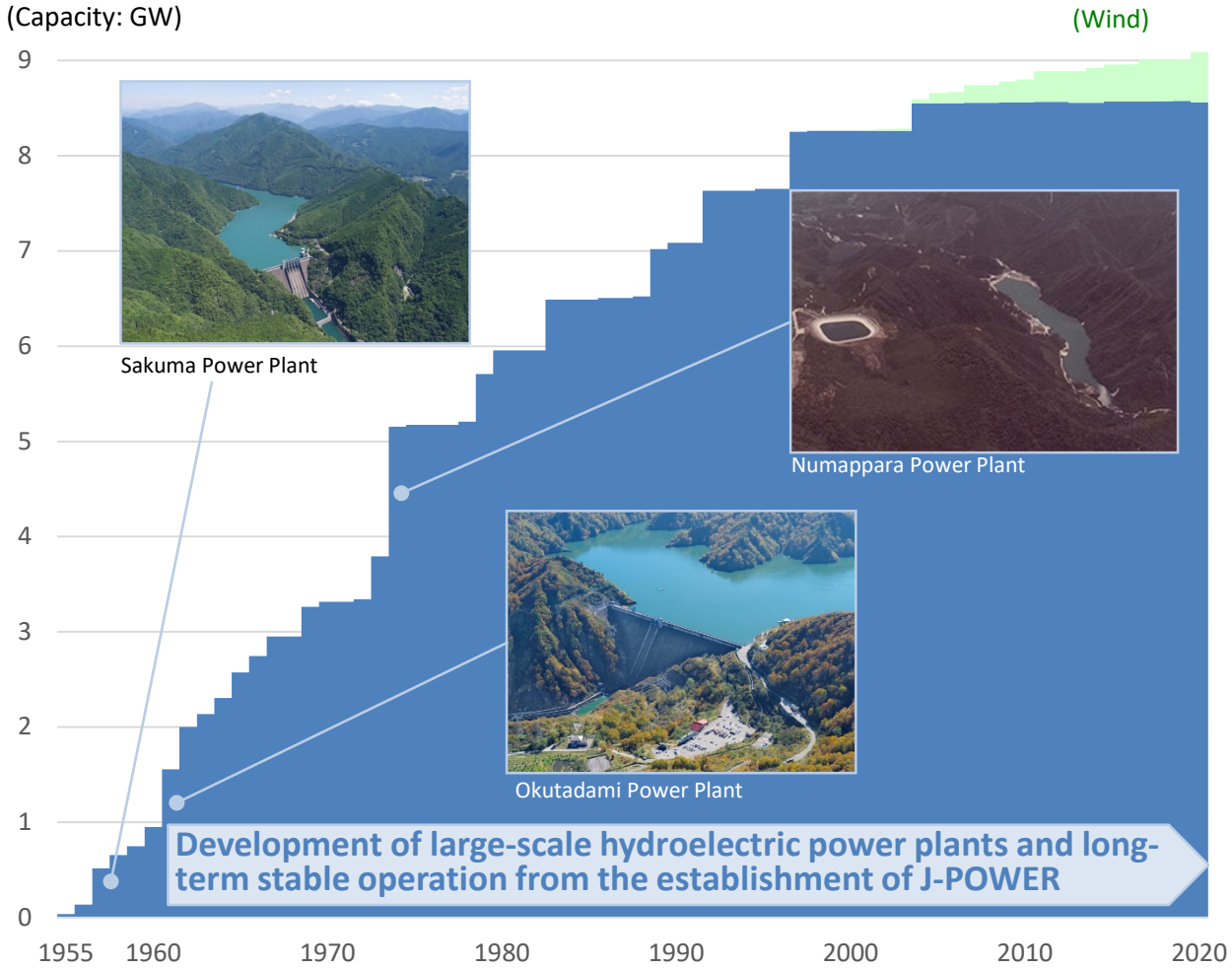
Reform of J-POWER Group Management System

- **In FY2020, implement reform of group management system in transmission and transformation business, renewable energy business and thermal business**
- **Continue to anticipate changes in the business environment as a united group through continuous reform**



J-POWER's Renewable Energy (Hydro)

- **Large-scale CO_2-free domestic energy which has constantly contributed to stable power supply from the establishment of J-POWER**
- **Realize permanent and stable operation of this valuable power source and improve power generation volume**



Maintain and expand long-term stable power source for the next 100 years

- Repowering (comprehensive replacement of main equipment)
- Revitalization plan (considering large-scale replacement of facilities)
- Efficiency improvement (improvement of intakes, etc.)
- Maintenance and management of reservoirs (measures against sediment)
- Measures against natural disaster risks

Maintain function permanently and improve power generation volume

In operation	60 sites	8,560MW
Under construction	Shinkatsurazawa /Kumaoi	+17MW
Under repowering	Ashoro	-
Preparing for repowering	Nagayama	+2.5MW
	Ogamigo	+1.3MW

Note: "+" shows the change of capacity by the project

Lower carbon initiatives at J-POWER's existing thermal power plants

Efficiency improvement by replacing existing facilities


Takehara Thermal Power Plant Unit New No.1 (complete image)

- Contribute to carbon reduction through improving generating efficiency by replacing facilities at thermal power plants
- Takehara Thermal Power Plant Unit New No.1 which starts operation in FY2020 will achieve world highest-level generating efficiency and greatly contribute to carbon reduction

Toward CO_2 separation, capture and utilization

CHRYSALIX VENTURE CAPITAL

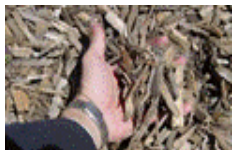
☐ The target of the technology to access is as follows

	CO_2 capture	CO_2 utilization
Existing thermal	✓	✓
IGCC	Demon-strating	

- Access to global CCUS technologies through Chrysalix*, a venture capital
- Considering efficient CO_2 separation and capture at existing power plants
- Considering new utilizing ways in addition to existing ways (photosynthesis promotion in agriculture, jet fuel production using microalgae, etc.)

Biomass fuel mixed combustion over many years

Biomass fuel


Wood-base chips


Wood-base pellets


Sewage sludge oil-desiccated fuel


Sewage sludge carbonized fuel

Coal-fired thermal power plants

- Started biomass mixed combustion at coal-fired thermal power plants in 2003 (sewage sludge oil-desiccated fuel mixed combustion at Matsuura Thermal Power Plant)
- Proactively involving in wood-base biomass fuel manufacturing in order also to utilize unused forest offcuts
- Combusting 20-30 thousand tons per year in recent years
- Strengthen efforts after FY2020 onward (aiming at 10% mixed combustion at Takehara Thermal Power Plant Unit New No.1)

*A global technology venture capital based in Netherland and Canada. In collaboration with the world's top level universities and research institutes, investing in companies around the world who are engaged in technological development in various fields including energy and environmental solutions.

Contribute to SDGs through Power Supply

J-POWER Group's mission	Stable power supply
Value sharing with stakeholders	End consumer / Business partners / Share-holders/ investors / Local commu-nity / Employ-ees / Nature/ environ-ment
Contribution to SDGs	

APPENDIX

（1） Financial Data 40 - 52

（2） Business Data 53 - 67

（1）Financial Data Contents

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(1)-1. Consolidated: Revenues and Expenses

(Unit: 100 million yen)

	FY2015	FY2016	FY2017	FY2018	FY2019
Operating revenue	**7,800**	**7,444**	**8,562**	**8,973**	**9,137**
Electric utility operating revenue	5,708	5,385	6,319	6,937	6,841
Overseas business operating revenue	1,559	1,498	1,630	1,410	1,790
Other business operating revenue	532	559	612	625	505
Operating expenses	**6,921**	**6,626**	**7,519**	**8,185**	**8,301**
Operating income	**879**	**817**	**1,043**	**788**	**836**
Non-operating revenue	**178**	**205**	**291**	**188**	**265**
Share of profit of entities accounted for using equity method	108	132	97	96	113
Other	69	72	193	92	152
Non-operating expenses	**472**	**351**	**309**	**292**	**320**
Interest expenses	304	297	283	263	262
Other	167	53	25	28	57
Ordinary income	**585**	**671**	**1,024**	**685**	**780**
Extraordinary losses	-	-	33	-	124
Profit attributable to owners of parent	**400**	**414**	**684**	**462**	**422**

(1)-2. Consolidated: Cash Flow

(Unit: 100 million yen)

	FY2015	FY2016	FY2017	FY2018	FY2019
Operating activities	**1,461**	**1,154**	**1,603**	**1,484**	**1,592**
Profit before income taxes	584	671	990	685	655
Depreciation and amortization	945	756	822	799	830
Share of (profit) loss of entities accounted for using equity method	(108)	(132)	(97)	(96)	(113)
Investing activities	**(1,315)**	**(1,376)**	**(1,096)**	**(1,704)**	**(1,617)**
Purchase of non-current assets	(1,408)	(1,081)	(988)	(1,060)	(1,495)
Payments of investment and loans receivable	(25)	(180)	(81)	(744)	(109)
Free cash flow	**145**	**(222)**	**506**	**(220)**	**(24)**

(1)-3. Consolidated: Segment Information

(Unit: 100 million yen)

		Electric power	Electric power -related	Overseas	Other	Subtotal	Elimination*	Consolidated
FY2019	Sales	6,860	4,005	1,790	221	12,878	(3,740)	9,137
	Sales to customers	6,841	319	1,790	185	9,137	-	9,137
	Ordinary income	274	185	339	5	805	(24)	780
FY2018	Sales	6,956	4,553	1,410	303	13,223	(4,250)	8,973
	Sales to customers	6,937	355	1,410	270	8,973	-	8,973
	Ordinary income	149	264	292	13	721	(35)	685
year-on-year change	Sales	(96)	(547)	380	(82)	(345)	509	164
	Sales to customers	(96)	(35)	380	(84)	164	-	164
	Ordinary income	124	(79)	46	(8)	83	11	95

"Electric Power Business"

J-POWER group's hydroelectric, thermal power (including subsidiaries' thermal power (IPPs, for PPSs and others)), wind power and transmission business. The majority of consolidated revenue is derived from this segment.

"Electric Power-Related business"

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

"Overseas business"

Overseas power generation business, overseas engineering and consulting business

"Other business"

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

* Elimination includes elimination of intersegment sales

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

(Unit: 100 million yen)

		FY2015	FY2016	FY2017	FY2018	FY2019
(PL)	Operating revenue	7,800	7,444	8,562	8,973	9,137
	Operating income	879	817	1,043	788	836
	Ordinary income	585	671	1,024	685	780
	Profit attributable to owners of parent	400	414	684	462	422
(BS)	Total assets	25,407	26,062	26,470	27,661	28,053
	Construction in progress	4,410	4,761	5,257	5,820	6,471
	Shareholders' equity	6,665	7,238	7,872	7,974	8,077
	Net assets	6,754	7,640	8,361	8,455	8,573
	Interest-bearing debt	16,287	16,200	15,613	16,428	16,484
(CF)	Investing activities	(1,315)	(1,376)	(1,096)	(1,704)	(1,617)
	Free cash flow	145	(222)	506	(220)	(24)
	(Ref) Non-consolidated CAPEX*1	(1,063)	(998)	(941)	(889)	(908)
	(Ref) Non-consolidated depreciation	734	496	534	510	527
ROA (%)		2.3	2.6	3.9	2.5	2.8
ROA (ROA excl. Construction in progress) (%)		2.8	3.2	4.8	3.2	3.6
ROE (%)		5.9	6.0	9.1	5.8	5.3
EPS (¥)		218.97	226.33	373.93	252.68	230.96
BPS (¥)		3,641.59	3,954.22	4,300.98	4,356.54	4,412.84
Shareholders' equity ratio (%)		26.2	27.8	29.7	28.8	28.8
D/E ratio (x)		2.4	2.2	2.0	2.1	2.0
Number of shares issued*2 (thousand)		183,049	183,049	183,049	183,048	183,048

*1 Non-consolidated 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)

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

(Unit: 100 million yen)

	FY2015	FY2016	FY2017	FY2018	FY2019
Operating revenue	**5,523**	**5,224**	**6,145**	**6,469**	**5,712**
Electric power business	**5,430**	**5,109**	**6,014**	**6,336**	**5,638**
Sold power to other suppliers	4,902	4,579	5,456	5,806	5,104
Transmission and other	527	529	558	529	533
Incidental business	**93**	**115**	**131**	**133**	**74**
Operating expenses	**5,107**	**4,948**	**5,715**	**6,282**	**5,464**
Electric power business	**5,023**	**4,842**	**5,593**	**6,157**	**5,397**
Personnel expense	318	436	342	324	358
Amortization of the actuarial difference in retirement benefits	(23)	107	(1)	(14)	24
Fuel cost	2,184	1,968	2,573	2,890	2,332
Repair and maintenance cost	583	683	634	697	666
Depreciation and amortization cost	734	496	534	510	527
Other	1,202	1,257	1,508	1,734	1,512
Incidental business	**84**	**105**	**122**	**125**	**66**
Operating income	**415**	**276**	**430**	**186**	**248**

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

(Unit: 100 million yen)

【Amortization of the actuarial difference】		FY2015	FY2016	FY2017	FY2018	FY2019
Actuarial difference	The remaider in the previous year (c)	(20)	(10)	49	(0)	(6)
	Actuarial difference in the previous year	(13)	167	(51)	(20)	42
	Subtotal (a)	(33)	156	(1)	(21)	35
Amortization *(b)		(23)	107	(1)	(14)	24
The remainder in the present year (c=a-b)		(10)	49	(0)	(6)	11

(Unit: 100 million yen)

【Repair and maintenance cost】	FY2015	FY2016	FY2017	FY2018	FY2019
Hydroelectric	121	119	119	168	129
Thermal	409	507	460	452	472
Transmission	34	39	39	59	48
Others	16	17	15	16	16
Total	583	683	634	697	666

(Unit: 100 million yen)

【Depreciation and amortization cost】	FY2015	FY2016	FY2017	FY2018	FY2019
Hydroelectric	206	132	151	143	147
Thermal	334	230	243	230	239
Transmission	138	100	105	100	102
Others	55	33	34	35	37
Total	734	496	534	510	527

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

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

(Unit: million yen)

	FY2018 End of FY	FY2019 End of FY
Assets		
Non-current assets	2,015,859	2,252,958
Electric utility plant and equipment	922,427	916,563
Hydroelectric power production facilities	363,959	367,545
Thermal power production facilities	309,185	303,682
Transmission facilities	153,577	150,839
Transformation facilities	31,156	30,175
Communication facilities	9,255	9,312
General facilities	55,293	55,007
Incidental business facilities	2,361	2,507
Non-operating facilities	409	505
Construction in progress	559,618	591,528
Construction in progress	558,080	589,775
Retirement in progress	1,538	1,753
Nuclear fuel	74,514	74,812
Nuclear fuel in processing	74,514	74,812
Investments and other assets	456,527	667,041
Long-term investments	54,408	43,948
Long-term investment for subsidiaries and associates	348,888	572,635
Long-term prepaid expenses	21,034	16,408
Deferred tax assets	32,195	34,047
Current assets	195,956	167,147
Cash and deposits	12,060	63,040
Accounts receivable-trade	36,832	32,596
Other accounts receivable	1,242	1,034
Short-term investments	66,000	-
Supplies	39,175	35,601
Prepaid expenses	2,213	2,668
Short-term receivables from subsidiaries and associates	15,694	9,482
Other current assets	22,737	22,723
Total assets	2,211,815	2,420,106

(Unit: million yen)

	FY2018 End of FY	FY2019 End of FY
Liabilities		
Non-current liabilities	1,293,525	1,279,081
Bonds payable	614,992	604,993
Long-term loans payable	606,370	604,686
Long-term accrued liabilities	5,269	5,269
Lease obligations	221	208
Long-term debt to subsidiaries and associates	1,636	1,505
Provision for retirement benefits	43,561	44,550
Asset retirement obligations	6,149	4,549
Other non-current liabilities	15,324	13,317
Current liabilities	296,013	480,208
Current portion of non-current liabilities	140,789	144,258
Short-term loans payable	14,750	14,750
Accounts payable-trade	5,612	4,642
Accounts payable-other	14,329	14,870
Accrued expenses	15,116	13,514
Accrued taxes	5,512	6,259
Deposits received	498	319
Short-term debt to subsidiaries and associates	94,200	278,286
Other advances	658	710
Other current liabilities	4,545	2,597
Total liabilities	1,589,538	1,759,289
Net assets		
Shareholders' equity	613,807	657,456
Capital stock	180,502	180,502
Capital surplus	109,904	109,904
Legal capital surplus	109,904	109,904
Retained earnings	323,408	367,057
Legal retained earnings	6,029	6,029
Other retained earnings	317,379	361,028
Reserve for special disaster	71	74
Exchange-fluctuation preparation reserve	1,960	1,960
General reserve	262,861	302,861
Retained earnings brought forward	52,486	56,132
Treasury shares	(7)	(8)
Valuation and translation adjustments	8,469	3,360
Valuation difference on available-for-sale securities	11,313	4,562
Deferred gains or losses on hedges	(2,843)	(1,201)
Total net assets	622,277	660,817
Total liabilities and net assets	2,211,815	2,420,106

* For consolidated balance sheet, please refer to the Financial Results disclosed on April 30, 2020

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

(Unit: million yen)

	FY2018 (Apr.-Mar)	FY2019 (Apr.-Mar)
Operating revenue	646,958	571,291
Electric utility operating revenue	633,617	563,813
Sold power to other suppliers	580,652	510,429
Transmission revenue	49,497	49,673
Other electricity revenue	3,467	3,710
Incidental business operating revenue	13,340	7,478
Operating revenue-consulting business	2,152	1,320
Operating revenue-coal sale business	10,130	5,040
Operating revenue-other businesses	1,057	1,117
Operating expenses	628,279	546,405
Electric utility operating expenses	615,712	539,708
Hydroelectric power production expenses	64,834	62,337
Thermal power production expenses	415,484	355,331
Purchased power from other suppliers	17,110	11,813
Transmission expenses	33,540	24,738
Transformation expenses	5,756	5,446
Selling expenses	1,036	1,110
Communicating expenses	4,340	4,599
General and administrative expenses	63,434	65,722
Expenses for third party's power transmission service	2,195	1,446
Enterprise tax	7,980	7,162
Incidental business operating expenses	12,567	6,697
Operating expenses-consulting business	1,713	884
Operating expenses-coal sale business	10,089	4,987
Operating expenses-other businesses	764	825
Operating income	18,678	24,886

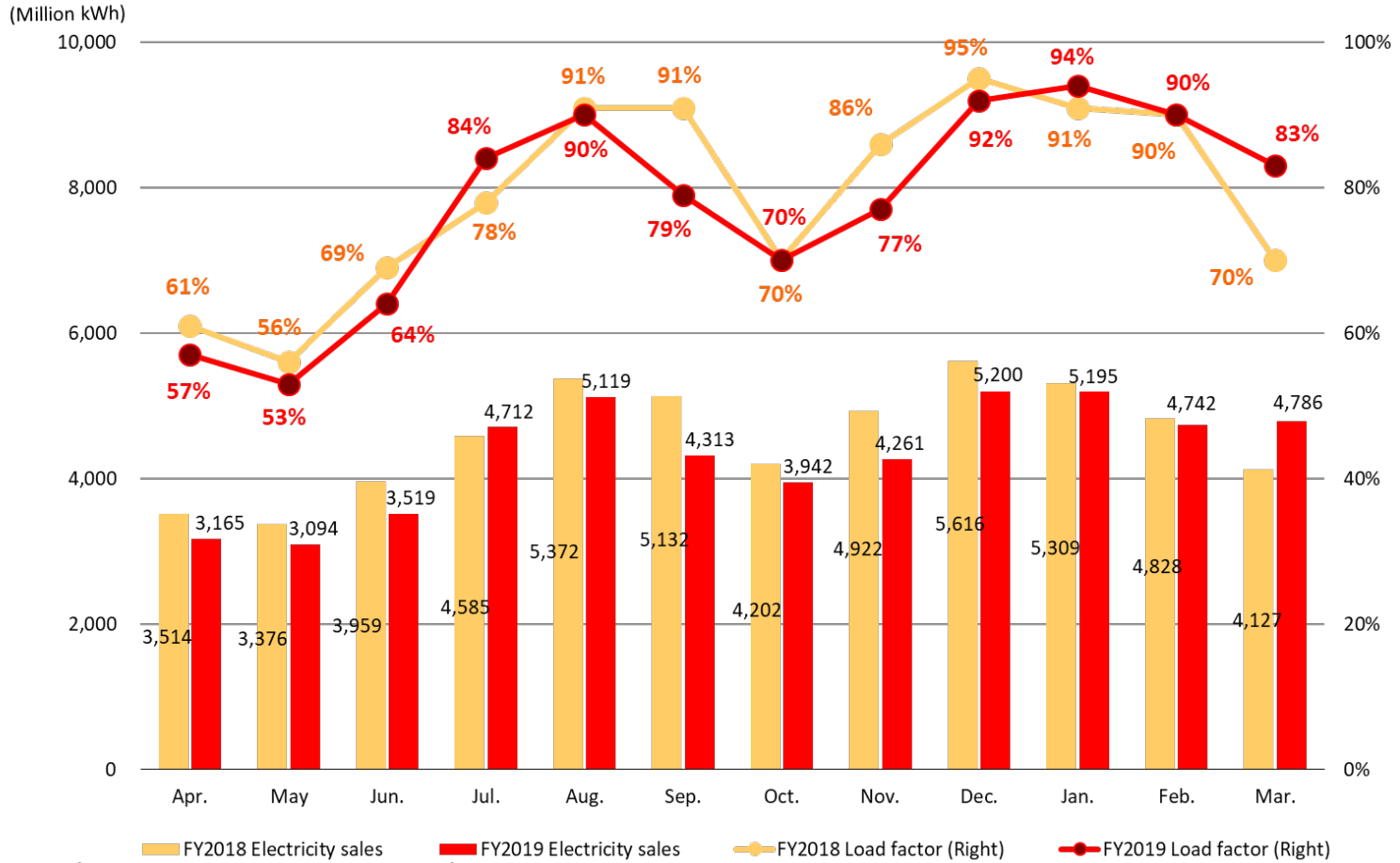
(Unit: million yen)

	FY2018 (Apr.-Mar)	FY2019 (Apr.-Mar)
Non-operating income	51,469	52,749
Financial revenue	46,227	50,594
Dividend income	45,532	49,781
Interest income	695	812
Non-operating revenue	5,242	2,155
Gain on sales of non-current assets	0	13
Miscellaneous revenue	5,241	2,141
Non-operating expenses	15,742	17,037
Financial expenses	13,569	13,012
Interest expenses	13,118	12,711
Bond issuance cost	451	301
Non-operating expenses	2,172	4,024
Loss on sales of non-current assets	6	0
Miscellaneous loss	2,166	4,023
Total ordinary revenue	698,428	624,041
Total ordinary expenses	644,022	563,443
Ordinary income	54,405	60,597
Profit before income taxes	54,405	60,597
Income taxes-current	3,278	3,457
Income taxes-deferred	(1,657)	(238)
Total income taxes	1,621	3,219
Profit	52,784	57,377

* For consolidated statement of income, please refer to the Financial Results disclosed on April 30, 2020

(1)-8. Monthly Electricity Sales: Domestic Power Generation Business (Thermal Power)

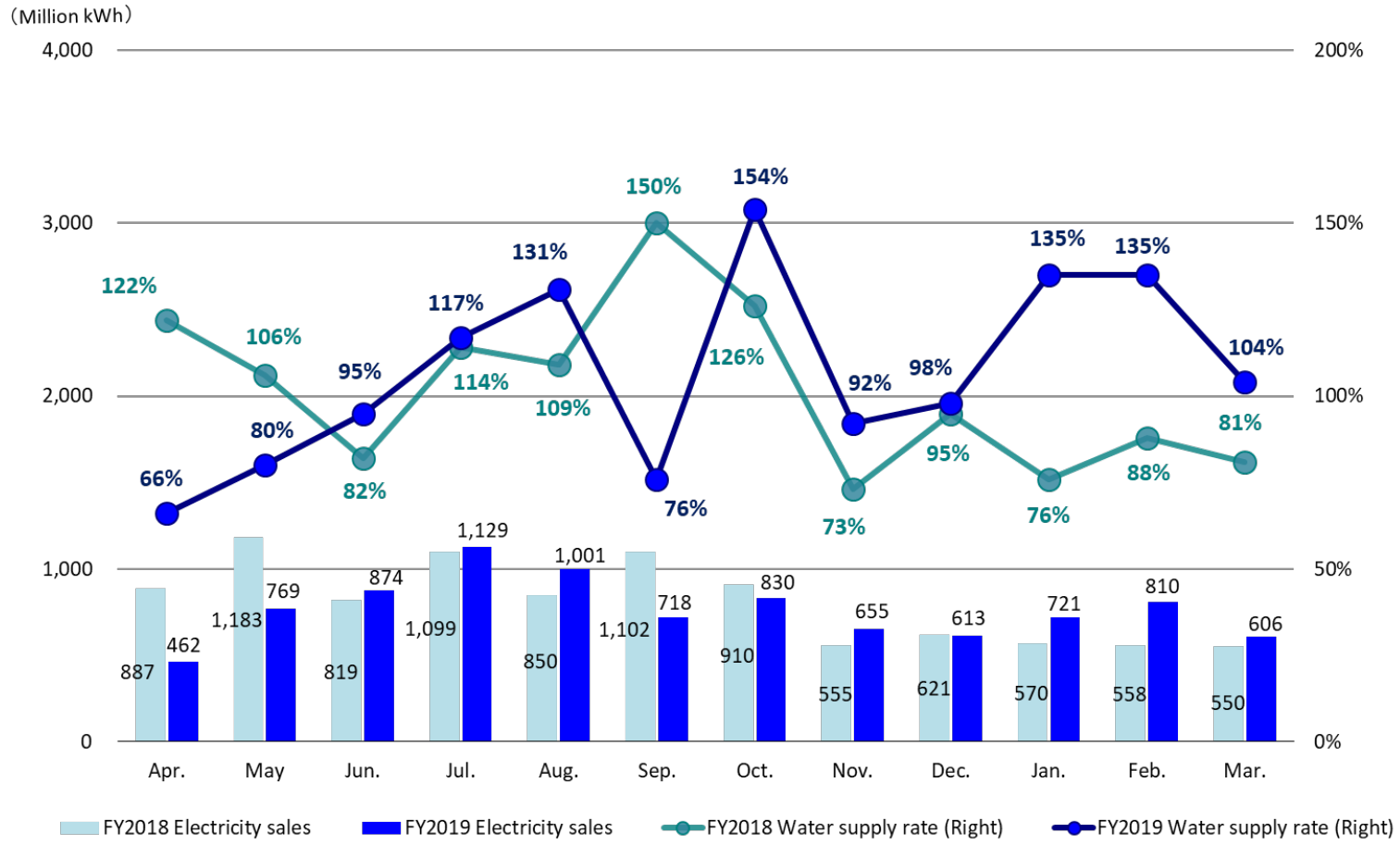
- Apr. 2018 - Mar. 2019 Results (Cumulative)
  - Load factor ⇒ 79%
  - Electricity sales ⇒ 54.9TWh
- Apr. 2019 - Mar. 2020 Results (Cumulative)
  - Load factor ⇒ 77%
  - Electricity sales ⇒ 52.0TWh



* Load factors of thermal power show the results for non-consolidated only.
* Proportion of equity holding is not taken into account.

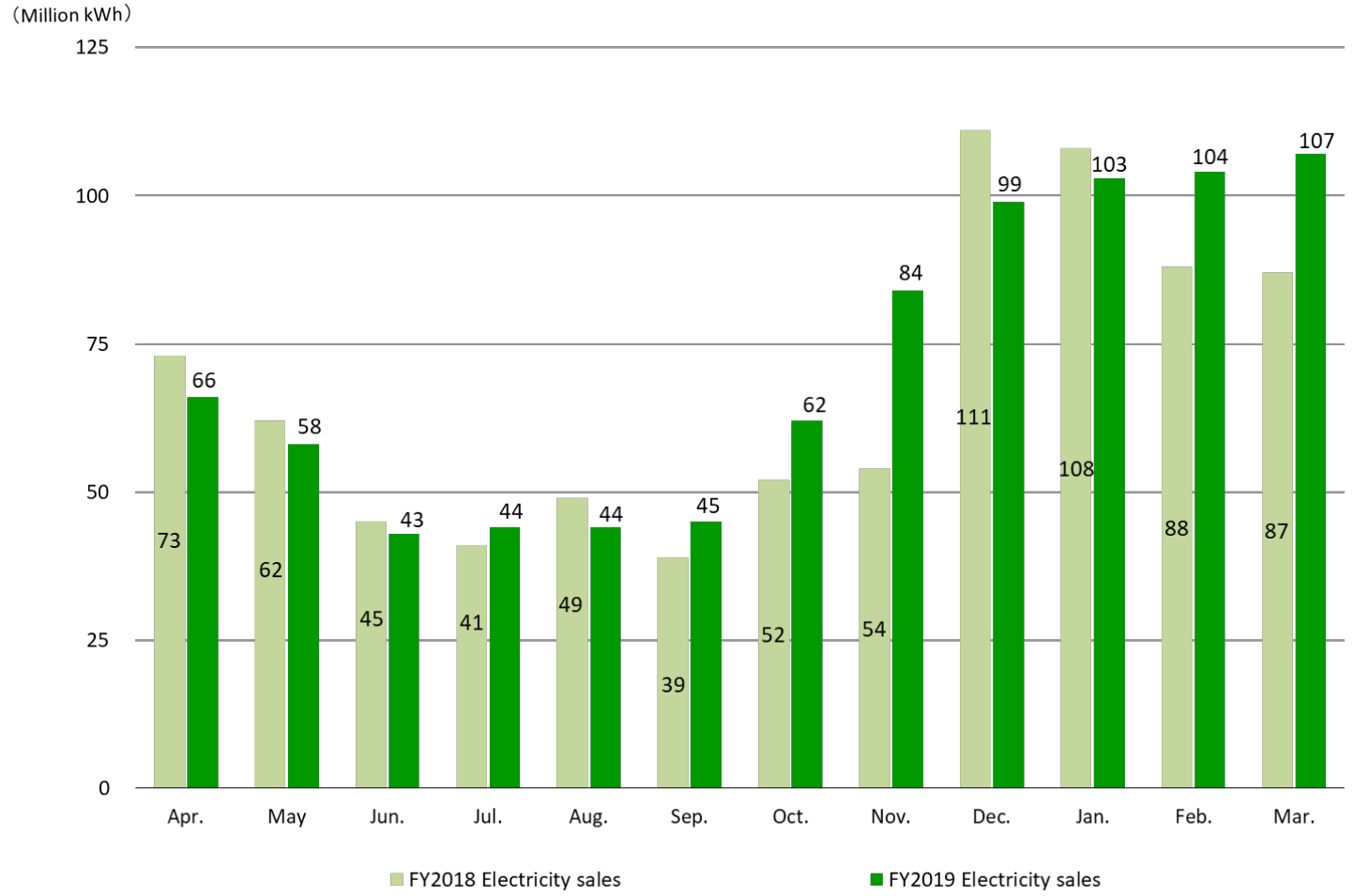
(1)-8. Monthly Electricity Sales: Domestic Power Generation Business (Hydroelectric Power)

- Apr. 2018 - Mar. 2019 Results (Cumulative)
  Water supply rate ⇒ 106%
  Electricity sales ⇒ 9.7 TWh
- Apr. 2019 - Mar. 2020 Results (Cumulative)
  Water supply rate ⇒ 101%
  Electricity sales ⇒ 9.1 TWh



(1)-8. Monthly Electricity Sales: Domestic Power Generation Business (Wind Power)

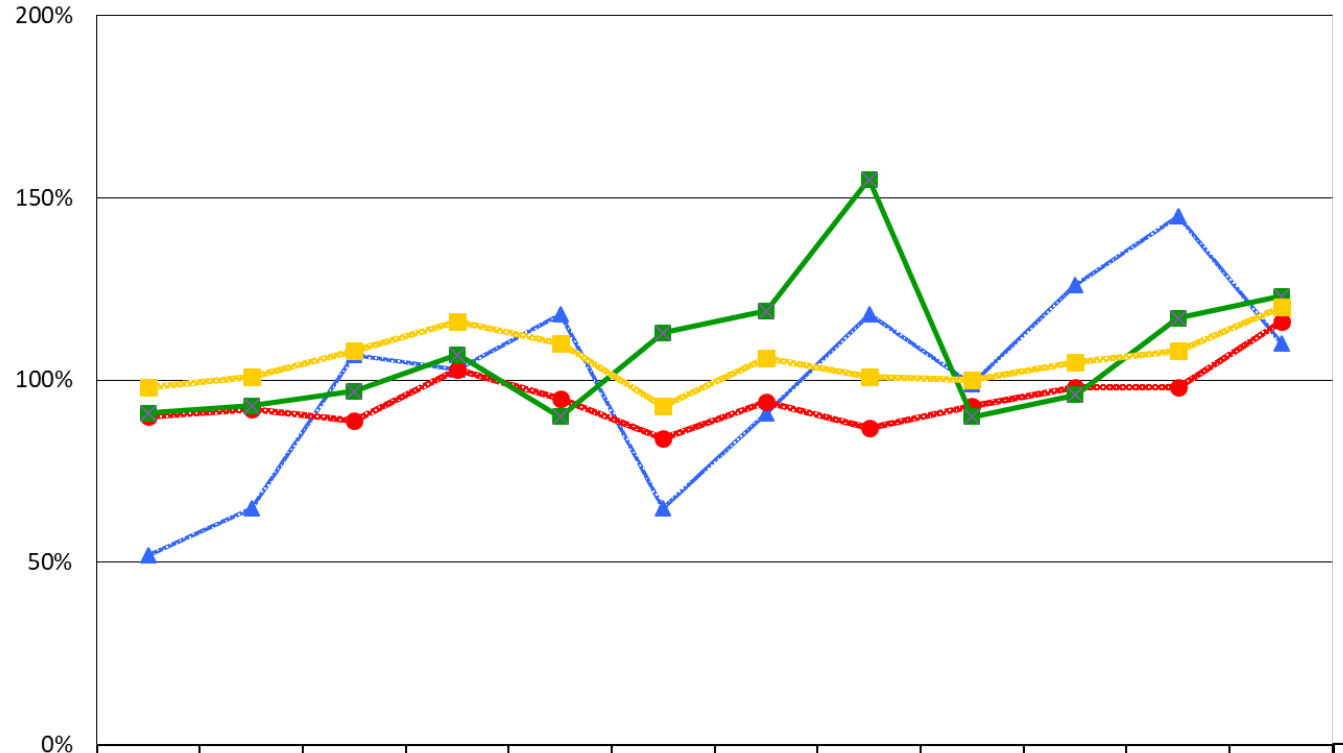
- Apr. 2018 - Mar. 2019 Results (Cumulative) ⇒ 0.81 TWh
- Apr. 2019 - Mar. 2020 Results (Cumulative) ⇒ 0.86 TWh



* Proportion of equity holding is not taken into account.

(1)-8. Change in Monthly Electricity Sales: Domestic Power Generation Business

- Apr. 2018 - Mar. 2019 Total Results (Cumulative) ⇒ 69.3 TWh
- Apr. 2019 - Mar. 2020 Total Results (Cumulative) ⇒ 73.1 TWh



	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr. - Mar.
Year-on-year (Hydro)	52%	65%	107%	103%	118%	65%	91%	118%	99%	126%	145%	110%	95%
Year-on-year (Thermal)	90%	92%	89%	103%	95%	84%	94%	87%	93%	98%	98%	116%	95%
Year-on-year (Wind)	91%	93%	97%	107%	90%	113%	119%	155%	90%	96%	117%	123%	106%
Year-on-year Total	98%	101%	108%	116%	110%	93%	106%	101%	100%	105%	108%	120%	105%

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

(2) Business Data Contents

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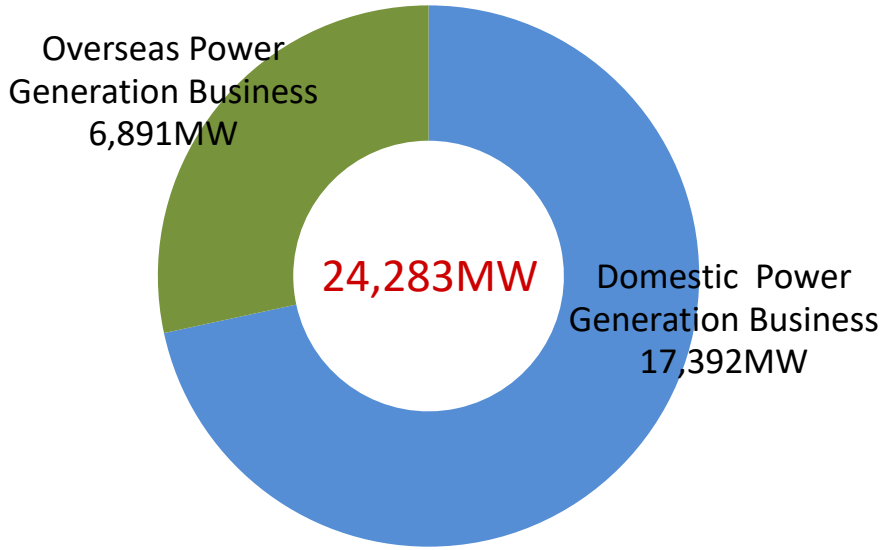
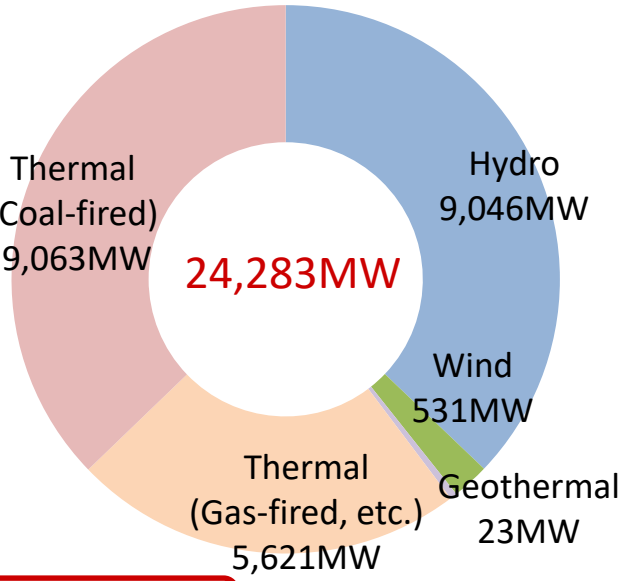
(2)-1. Overview of J-POWER Group Power Generation Facilities

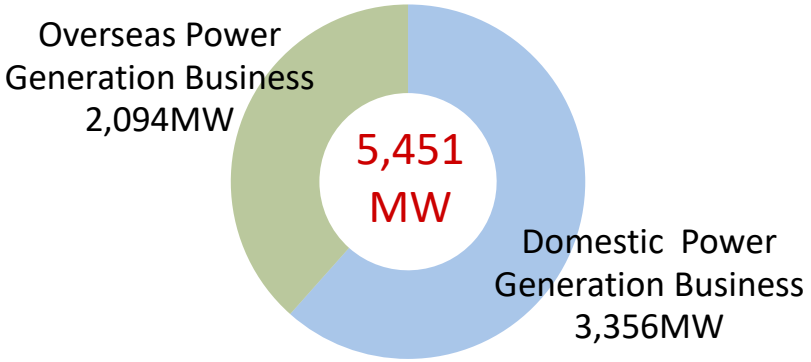
Consolidated Power Generation Capacity*1

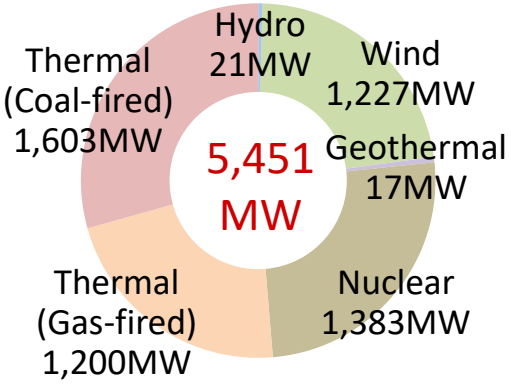
(As of March 31, 2020)





Development Projects*1*2*3*4





In addition to projects counted in the left graphs, domestic offshore wind projects outside of port areas (3 projects, max. 1,585MW in total *5) are under preparation for development and one geothermal project is under research for development

*1 Capacity figures show owned capacity which takes into account of equity ratio *2 For replacement project, only change amount in capacity is counted
*3 In case capacity is to be determined, maximum capacity at environmental impact assessment is used
*4 Yamaguchi Ube Power is excluded due to plan review *5 2 projects are jointly conducted with other companies

(2)-2. Domestic Electric Power Business Facilities (As of March 31, 2020)

Hydroelectric: 60 power plants, 8,560MW*1

Power plant	Location	Beginning of operation	Capacity（MW）
Shimogo	Fukushima	1988	1,000
Okutadami	Fukushima	1958	560
Otori	Fukushima	1963	182
Tagokura	Fukushima	1959	400
Okukiyotsu	Niigata	1978	1,000
Okukiyotsu No.2	Niigata	1996	600
Numappara	Tochigi	1973	675
Shintoyone	Aichi	1972	1,125
Sakuma	Shizuoka	1956	350
Miboro	Gifu	1961	215
Nagano	Fukui	1968	220
Tedorigawa No.1	Ishikawa	1979	250
Ikehara	Nara	1964	350
Sendaigawa No.1	Kagoshima	1965	120
Other 46 plants			

Wind Power: 24 wind farms, 531MW*2

Wind farm	Location	Ownership	Output capacity (MW)
Tomamae Winvilla	Hokkaido	100%	30.6
Setana Osato	Hokkaido	100%	50.0
Kaminokuni	Hokkaido	100%	28.0
Green Power Kuzumaki	Iwate	100%	21.0
Nikaho Kogen	Akita	100%	24.8
Nikaho No.2	Akita	100%	41.1
Koriyama-Nunobiki Kogen	Fukushima	100%	66.0
Hiyama Kogen	Fukushima	100%	28.0
Irouzaki	Shizuoka	100%	34.0
Tahara Bayside	Aichi	100%	22.0
Awara-Kitagata	Fukui	100%	20.0
Minami Ehime	Ehime	100%	28.5
Minami Oosumi	Kagoshima	100%	24.7
Other 11 wind farms			

*1 Including 3,275MW of pure pumped storage type.
*2 Owned capacity: Output capacity of each facility is multiplied by J-POWER's investment ratio (equity ratio).

(2)-2. Domestic Electric Power Business Facilities (As of March 31, 2020)

Thermal (J-POWER): 7 power plants, 7,812MW

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

Thermal (Others): 4 power plants, 383MW[*1]

Power plant	Location	Fuel	Ownership	Output capacity (MW)
J-POWER Supply and Trading Ichihara	Chiba	Gas	100%	108
Mihama Seaside Power Shinminato	Chiba	Gas	100%	105
Itoigawa	Niigata	Coal	64%	149
Tosa	Kochi	Coal	45%	167

*1 Owned capacity: Output capacity of each facility is multiplied by J-POWER's investment ratio (equity ratio).
*2 Takehara No.1 and No.2 were abolished for replacement in April, 2018 and June, 2019 respectively.

(2)- 3. Overseas Power Generation Projects (As of March 31, 2020)

Project	Type	Output capacity (MW)	Ownership	Owned capacity (MW)	Power purchaser	Purchase agreement valid through
Thailand (15 projects)		**5,836**		**3,246**		
Roi-Et	Biomass (Chaff)	9	24.7%	2	EGAT*1	2024
Rayong	CCGT*3	112	20%	22	EGAT*1/ Companies in the industrial park	2024
Samutprakarn	CCGT*3	117	49%	57	EGAT*1/ Companies in the industrial park	2020
Nong Khae	CCGT*3	120	49%	59	EGAT*1/ Companies in the industrial park	2021
Yala	Biomass (Rubber wood waste)	20	49%	10	EGAT*1	2031
Kaeng Khoi 2	CCGT*3	1,468	49%	719	EGAT*1	2033
7 SPPs*2	CCGT*3	790	57.7%	456	EGAT*1/ Companies in the industrial park	2038
Nong Saeng	CCGT*3	1,600	60%	960	EGAT*1	2039
U-Thai	CCGT*3	1,600	60%	960	EGAT*1	2040
United States (11 projects)		**5,429**		**2,016**		
Tenaska Frontier	CCGT*3	830	31%	257	Exelon Generation Company, LLC	2020
Elwood Energy	SCGT*4	1,350	50%	675	PJM market	-
Green Country	CCGT*3	795	50%	398	Exelon Generation Company, LLC	2022
Birchwood	Coal	242	50%	121	Consolidated Edison, Inc.	2021
Pinelawn	CCGT*3	80	50%	40	Long Island Power Authority	2025
Equus	SCGT*4	48	50%	24	NYISO market	-
Fluvanna	CCGT*3	885	15%	133	Shell Energy North America	2024
Edgewood	SCGT*4	88	50%	44	Long Island Power Authority	2023
Shoreham	Jet Fuel (Simple cycle)	90	50%	45	Long Island Power Authority	2020
Orange Grove	SCGT*4	96	50%	48	San Diego Gas & Electric	2035
Westmoreland	CCGT*3	925	25%	231	PJM market	-

Consolidated Subsidiaries

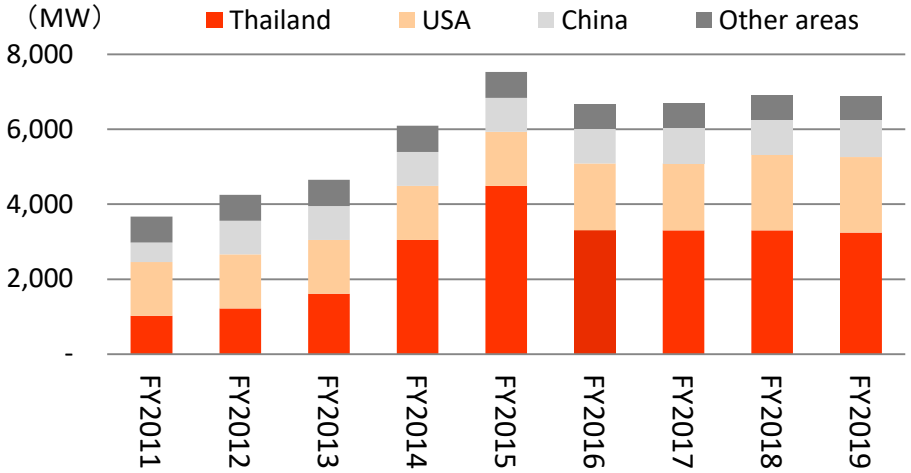
*1 EGAT(Electricity Generating Authority of Thailand): State-owned electric power utility in Thailand

*2 7 SPP projects (KP1,KP2,TLC,NNK,NLL,CRN,NK2). J-POWER holds 45% stake in NLL and 60% stake in other 6 plants.
*3 CCGT: Combined Cycle Gas Turbine *4 SCGT: Simple Cycle Gas Turbine

(2)- 3. Overseas Power Generation Projects (As of March 31, 2020)

Project	Type	Output capacity (MW)	Ownership	Owned capacity (MW)	Power purchaser	Purchase agreement valid through
China (4 projects)		9,982		998		
Hanjiang (Xihe/Shuhe)	Hydroelectric	450	27%	122	Shaanxi Electric Power Company	Renewed every year*1
Gemeng*2	Mainly Coal	7,442	7%	521	Shanxi Province Power Corporation	-
Hezhou	Coal	2,090	17%	355	Guanxi Power Grid Co.	Renewed every year*1
Other country/region (4 projects)		1,398		632		
CBK (3 projects) (Philippines)	Hydroelectric	728	50%	364	National Power Corporation	2026
Chiahui (Taiwan)	CCGT*3	670	40%	268	Taiwan Power Company	2028

[Owned capacity of overseas projects (in operation)]



(MW)

Country/ Region	In operation	Under development	Total
Thailand	3,246	-	3,246
USA	2,016	1,200	14,016
China	998	-	998
Other areas	632	894	1,526
Total	6,891	2,094	8,986

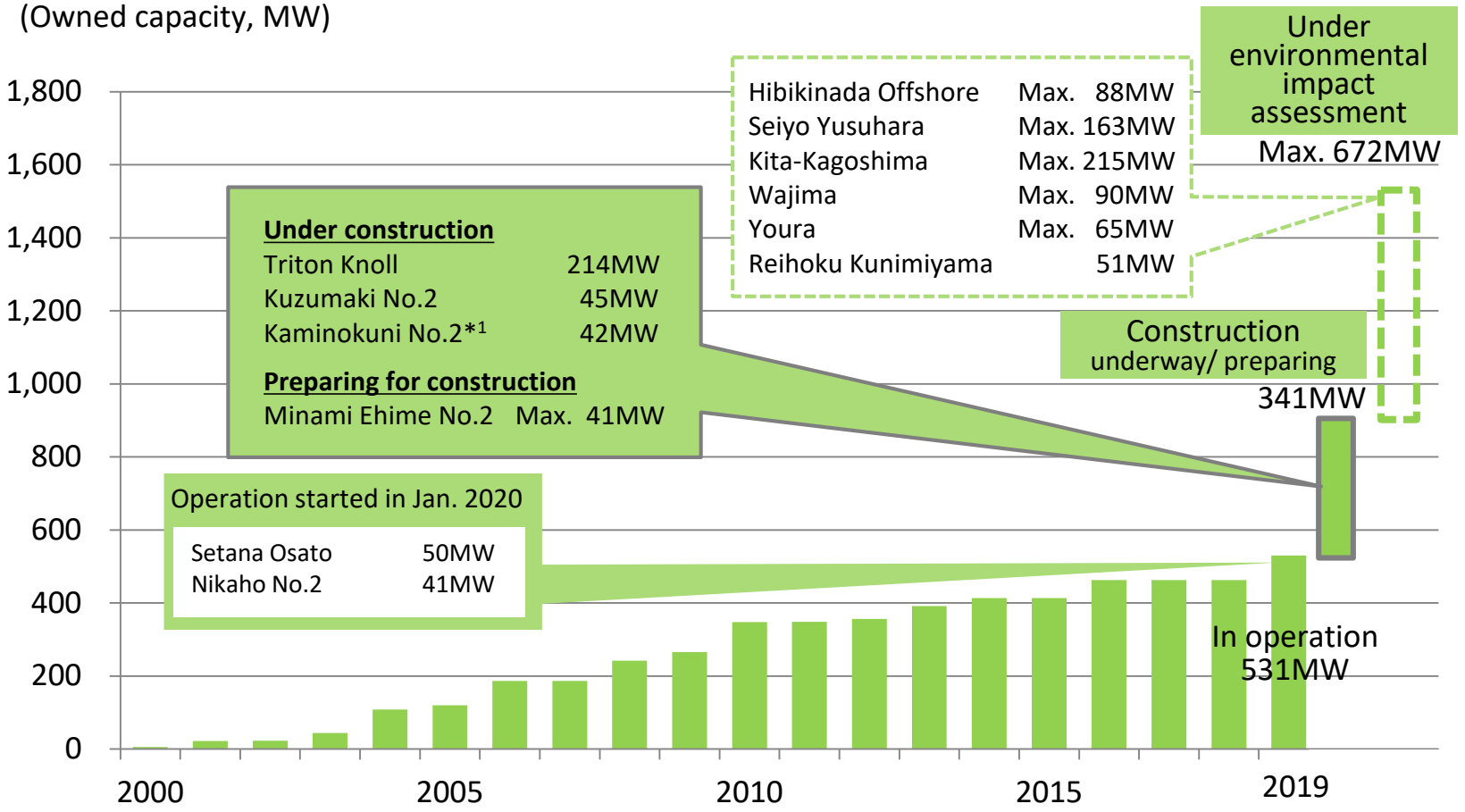
*1 Although power purchase agreements are renewed every year, J-POWER makes other agreements with power purchasers for continuous power purchase during the plant operation.

*2 Gemeng International Energy Co., Ltd. is an electric power company that owns 14 power generation companies.

*3 CCGT: Combined Cycle Gas Turbine

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

Wind



In addition the above, three domestic offshore wind projects outside of port areas are under research for development

Saikai Offshore*2	Max. 513MW
Hiyama-area Offshore	Max. 722MW
Awara Offshore*3	Max. 350MW

*1 Presents only phase 1 construction. Total plan amounts up to 120.4MW
*2 Conducted jointly with SUMITOMO CORPORATION *3 Conducted jointly with Mitsui Fudosan Co., Ltd.

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

Hydro

Project	Capacity	Note
Shinkatsurazawa/ Kumaoi	17.0MW	Start of operation : FY2022 (planned)
Ashoro Repowering	-	Completion of construction : FY2022 (planned)
Ogamigo Repowering	20.0MW→21.3MW	Completion of construction : FY2023 (planned)
Nagayama Repowering	37.0MW→39.5MW	Completion of construction : FY2025 (planned)

Geo-thermal

Project	Capacity	Equity ratio	Owned capacity	Start of operation
Wasabizawa	46.2MW	50%	23.1MW	Started operation in May 2019
Onikobe Replacement	14.9MW	100%	14.9MW	April 2023 (planned)
Appi	14.9MW	15%	2.2MW	April 2024 (planned)
Takahinatayama-area	-	-	-	Under research for development

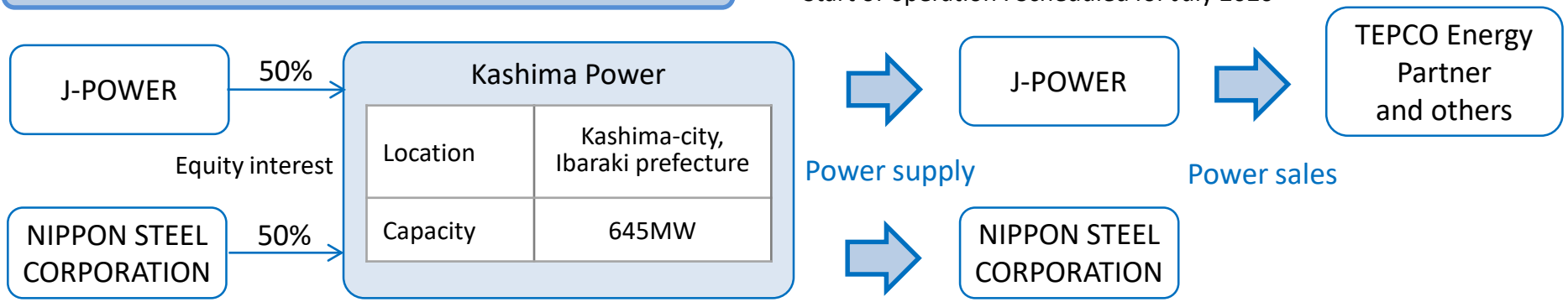
(2)-5. New Coal-fired Power Projects in Japan

Takehara Thermal Power Plant New Unit No.1 (Replacement)

Location	Takehara-city, Hiroshima prefecture
Status	Under construction
Start of operation	Scheduled for June 2020
Capacity	600MW (Unit No.1 &2) → 600MW (New Unit No.1) (Replacement in the same capacity)
Steam Condition	Sub-Critical → Ultra-supercritical

Kashima Power (New Capacity)

- ✓ Status : Under construction (Commenced in November 2016)
- ✓ Start of operation : Scheduled for July 2020



Yamaguchi Ube Power (New Capacity)

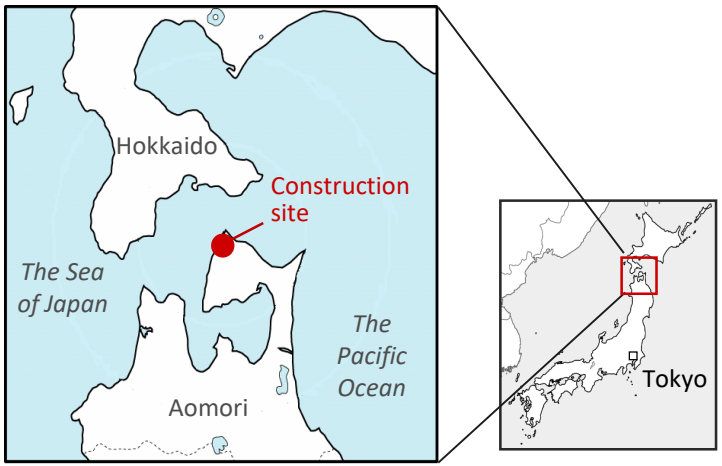
- ✓ The development plan for Yamaguchi Ube Power Project is to be reviewed due to withdrawal of one of the partners

(2)-6. Ohma Nuclear Power Project

- In December 2014, J-POWER submitted to NRA* an application for permission for alteration of reactor installment license and an application for construction plan approval in order to undertake review of compliance with the new safety standards
- Pursue further improvements in safety continuously
- Sincerely and appropriately respond to compliance reviews and aim to restart full scale construction work quickly
- Strive for more polite information communication and mutual 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



Process (Results)

Construction commenced in May

Construction resumed in October

Application for review of compliance with new safety standards in December

(Year) 2008 2009 2010 2011 2012 2013 2014 2015-

Obtained permission to install nuclear reactor in April

Suspension of construction work due to Great East Japan Earthquake Disaster in March

Status of construction (March, 2020)

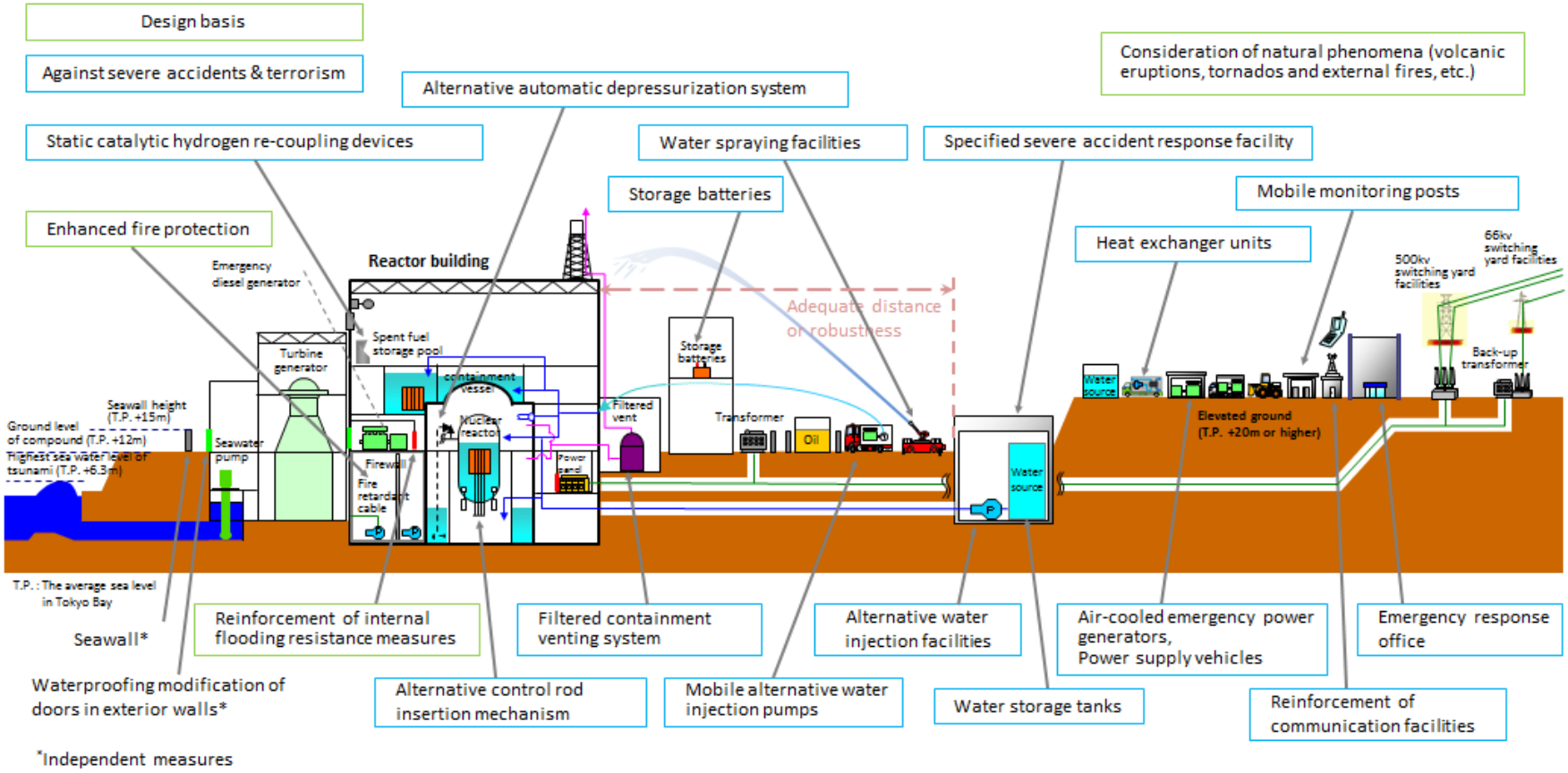
* Nuclear Regulatory Authority

Construction Works for Measures for Reinforcing Safety

- ✓ Construction Period: From the 2nd half of 2020 to the 2nd half of 2025
- ✓ Construction Cost: Approx. 130 billion yen

(The construction plan is based on J-POWER's projections, which incorporate estimations of examination and permit process durations by the NRA)

Measures for Reinforcing Safety



(2)-8. Overseas Projects under Development (As of March 31, 2020)

Project	Overview	Location of the project
Central Java (Indonesia) Capacity: 2,000MW (1,000MW x 2) Type: Coal-fired (USC*1) Ownership: 34% Status: Under construction Start of operation: FY2020	• IPP project (newly developed coal-fired power plant) awarded through international tender in Indonesia in 2011. • The plan is to construct a high-efficiency coal-fired power plant in Batang city, Central Java Province. • After startup of operation, the plant will sell electricity to Indonesia's state-owned electric power utility for a period of 25 years.	
Triton Knoll (UK) Capacity: 857MW Type: Offshore wind Ownership: 25% Status: Under construction Start of operation: 2021	• Participating in an overseas offshore wind power project from the construction phase. • A fixed price is guaranteed for 15 years under UK CfD*2 regime. • Taking advantage of the expertise regarding offshore wind power business obtained by participating in this project, J-POWER will accelerate its commitment to promoting its renewable energy business across the world, including Japan.	
Jackson (USA) Capacity: 1,200MW Type: CCGT*3 Ownership: 100% Status: Under construction Start of operation: 2022	• Concluded in June 2019 to construct a new power plant next to Elwood plant now under operation • A greenfield project to build a power plant from scratch • Close to Chicago, a high power-demand area • Electricity is sold in the PJM*4 market	

*1 USC: Ultra – Supercritical

*2 CfD regime: The CfD is an investment incentive program of UK, which will be granted to wind power generators and other low carbon electric power resources. Accredited electricity generators shall execute the CfD agreement with the LCCC (Low Carbon Contracts Company), a CfD management company owned by the British Government, and then, the parties thereto will make settlements for an electricity price based on the difference between the strike price, which is provided under the agreement, and the reference price, which is determined according to wholesale market prices from time to time.

*3 CCGT: Combined Cycle Gas Turbine

*4 PJM: The independent system operator in the Eastern US that operates the largest wholesale electricity market in the US as well as runs its electric power system.

Note The impacts of COVID-19 are under examination

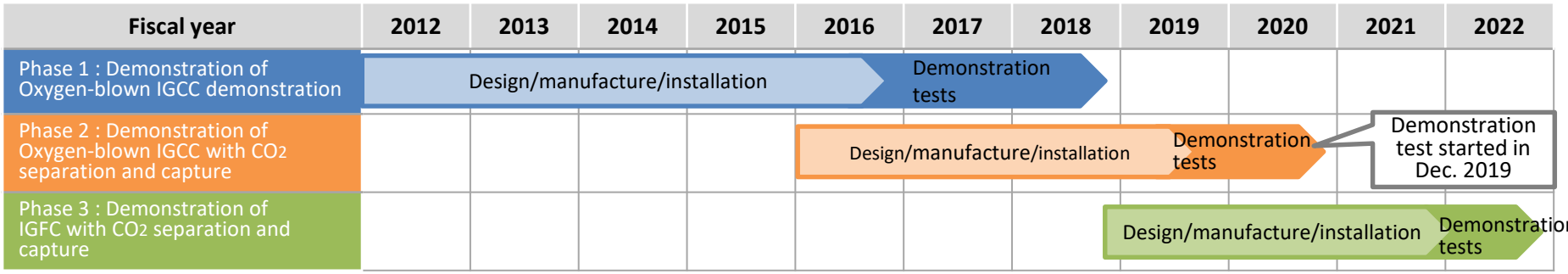
(2)-9. Osaki CoolGen Project: Demonstration Test of Oxygen- blown IGCC

➢ Large-scale demonstration test on oxygen-blown IGCC, IGFC and CO_2 separation and capture to verify total system performance aiming for commercialization*

*This demonstration test is subsidized by the New Energy and Industrial Technology Development Organization (NEDO)

Company	Osaki CoolGen Corporation (Ownership: J-POWER 50%, Chugoku Electric Power Company 50%)	Output	166MW
Location	Chugoku Electric Power Company Osaki Power Station premises (Hiroshima)	Generation type	Oxygen-blown IGCC (Gas turbine: 1,300℃ class)

Demonstration Test Schedule



Phase 1 demonstration tests completed in February 2019, achieving targets in all testing items.
Phase 2 demonstration tests started in December 2019

- Gross efficiency reached 51.9% (LHV), which stands at world top level as 170 MW-class demonstration plant
  ⇒ Gaining perspective for approx. 57% of gross efficiency at an oxygen-blown IGCC plant with 1500℃-class gas turbine, which enables significant CO_2 emission reduction
- Results of load change rate approx. 16%/minute*1 and stable operation at 0MW net output*2 prove quick output control ability
  ⇒ Demonstrating high flexibility in operation, which enables supplement for sudden output changes in renewables
- With a view to CO2 zero emissions in the future, started CO2 separation and capture demonstration tests

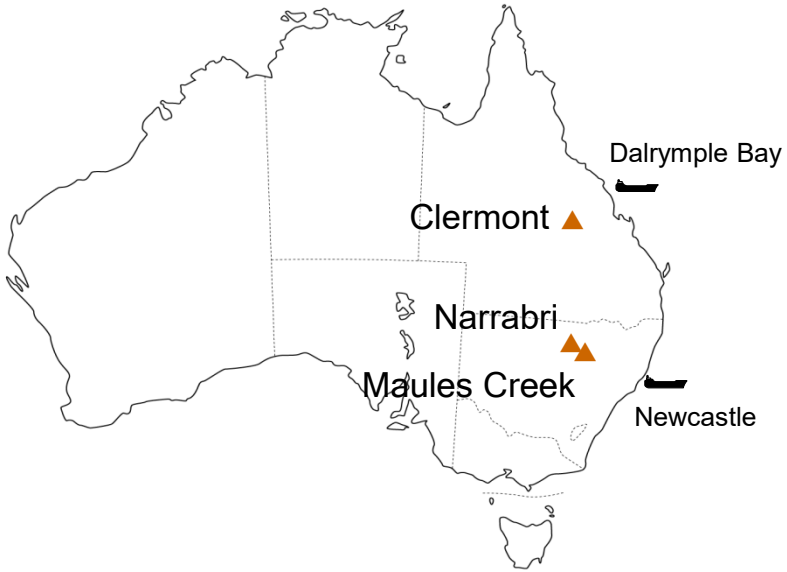
*1 Output change rate to rated load per minute. Larger figure shows higher ability of quick output change in response to change of electricity demand.
*2 Net output represents MW of generator minus MW consumed in the plant itself. 0MW net output means generating the same volume of electricity as consumed in the plant.

(2)-10. Coal Mine Projects in Australia

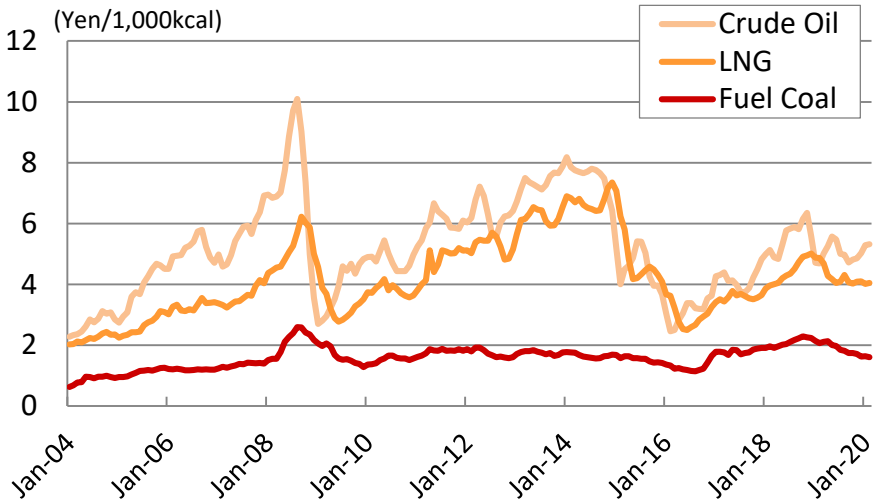
Coal Mine Projects

Coal mine	Location	Loading port	Production volume in 2019	Ownership*1	Start of commercial production
Clermont	Queensland	Dalrymple Bay	11.39 Million t	22.2%	2010
Narrabri	New South Wales	Newcastle	5.68 Million t	7.5%	2012
Maules Cleek	New South Wales	Newcastle	8.93 Million t	10%	2014

*1 Investment through a subsidiary, J-POWER AUSTRALIA PTY. LTD.



Calorific Unit Price by Fossil Fuel (Imports) in Japan



Data charted up to February 2020
Source: The Institute of Energy Economics, Japan

(2)-11. Initiatives Aiming at Reducing Costs

Main factors for increase in costs in resent years

- Repair and maintenance costs have increased with ageing of thermal power plants whose average age was 31 years at the end of FY2018
- Repair and maintenance costs have increased with increasing sediment management costs at dam reservoirs
- Consignment costs and research costs have increased with promotion of initiatives in accordance with the medium-term management plan which takes major changes in business environment surrounding J-POWER group as opportunities for growth
  - ✓ Costs for investigation toward further expansion of renewable energy
  - ✓ Research costs aiming at realizing zero emission in coal use including Osaki CoolGen Project which is engaged in demonstration tests of oxygen-blown IGCC, IGFC and CO2 separation and capture
- Quality maintenance costs of equipment for construction of Ohma Nuclear Power Plant

Initiatives aiming at reducing costs

FY2020 FY2021-

Start of operation of Takehara Thermal Power Plant New Unit No.1 (Scheduled for June 2020)

Repair and maintenance costs can be reduced compared to before replacement

Considering extension of inspection interval for thermal power plants

Considering extension of periodic inspection interval which is currently every two years

Rationalization of operation and maintenance system for thermal power plants

Considering dam operation and facility modification to reduce sediment volume in the dam reservoir by flowing sediment downstream

Review the necessity and ordering method regarding all costs

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