

# Summary of FY2019 Second Quarter Earnings Results



Electric Power Development Co., Ltd.

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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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# Summary of FY2019 Second Quarter Earnings Results



(Unit: billion yen)

Consolidated	FY2018 2nd Quarter (Apr.-Sep.)	FY2019 2nd Quarter (Apr.-Sep.)	Year-on-year change	
Operating Revenue	424.2	461.9	37.6	8.9 %
Operating Income	47.9	49.4	1.5	3.3 %
Ordinary Income	42.6	51.4	8.7	20.6 %
Profit attributable to owners of parent	31.1	28.2	(2.9)	(9.4) %

Non-consolidated	FY2018 2nd Quarter (Apr.-Sep.)	FY2019 2nd Quarter (Apr.-Sep.)	Year-on-year change	
Operating Revenue	315.2	286.1	(29.1)	(9.2) %
Operating Income	22.9	22.0	(0.8)	(3.8) %
Ordinary Income	34.5	49.3	14.8	42.9 %
Profit	30.2	45.1	14.8	49.2 %

Growth indicator	FY2018 2nd Quarter (Apr.-Sep.)	FY2019 2nd Quarter (Apr.-Sep.)	Year-on-year change	
J-POWER EBITDA <sup>*1</sup>	92.0	94.7	2.7	3.0 %

\*1 J-POWER EBITDA = Operating income + Depreciation and amortization cost + Share of profit of entities accounted for using equity method

# Key Data (Electric Power Sales)

	FY2018 2nd Quarter (Apr.-Sep.)	FY2019 2nd Quarter (Apr.-Sep.)	Year-on-year change	
Electric Power Sales (TWh)				
Electric Power Business	33.3	34.8	1.4	4.4 %
Hydroelectric Power	5.9	4.9	(0.9)	(16.2) %
Thermal Power	25.9	23.9	(2.0)	(7.8) %
Wind Power	0.3	0.3	(0.0)	(2.9) %
Other <sup>*1</sup>	1.1	5.6		
Overseas Business <sup>*2</sup>	5.6	8.7	3.0	54.8 %
Water supply rate	113%	91%	(22) points	
Load factor <sup>*3</sup>	75%	71%	(4) points	

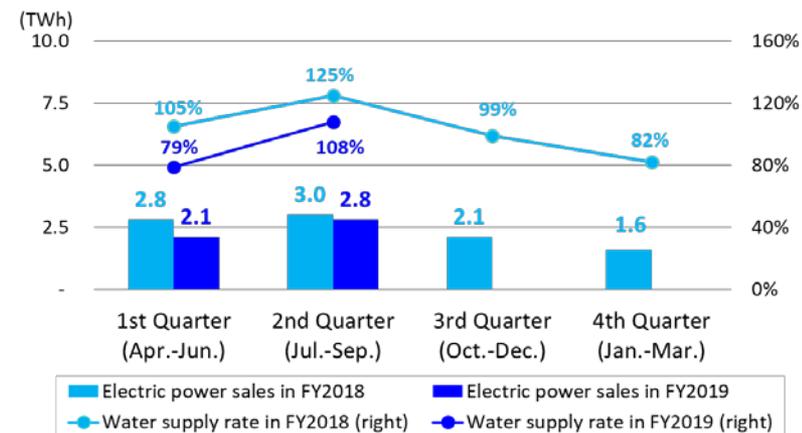
\*1 Electric power sales volume of electricity procured from wholesale electricity market, etc.

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

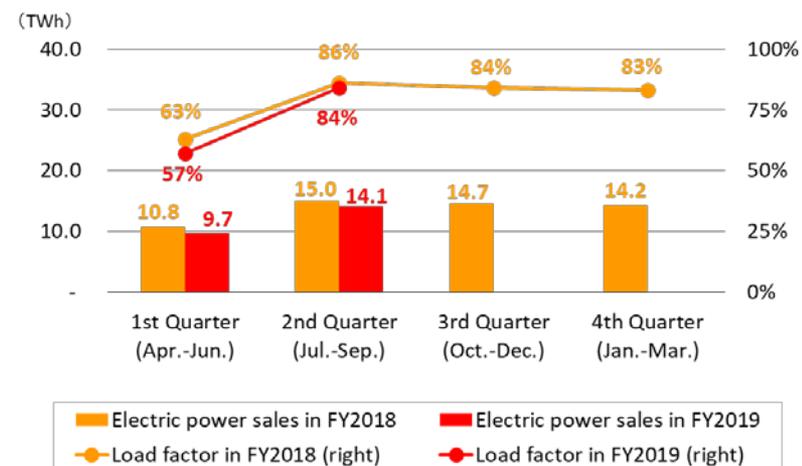
\*3 Load factors of thermal power show the results for non-consolidated only

## Electric Power Sales for each Quarter

### [Domestic Hydroelectric Power]



### [Domestic Thermal Power]



# Key Data (Operating Revenue)



	FY2018 2nd Quarter (Apr.-Sep.)	FY2019 2nd Quarter (Apr.-Sep.)	Year-on-year change	
Operating Revenue (Billion yen)	424.2	461.9	37.6	8.9 %
Electric Power Business	326.8	343.3	16.5	5.1 %
Electric Power Generation Business	301.1	316.8	15.6	5.2 %
Transmission / Transformation Business	24.9	25.0	0.1	0.5 %
Overseas Business <sup>*1</sup>	68.9	93.5	24.6	35.7 %
Other Business <sup>*2</sup>	28.4	24.9	(3.4)	(12.2) %
Foreign exchange rate at the end of June (Yen/US\$)	110.54	107.79		
Foreign exchange rate at the end of June (Yen/THB)	3.33	3.50		
Foreign exchange rate at the end of June (THB/US\$)	33.17	30.74		
Average foreign exchange rate (Yen/US\$)	110.26	108.60		

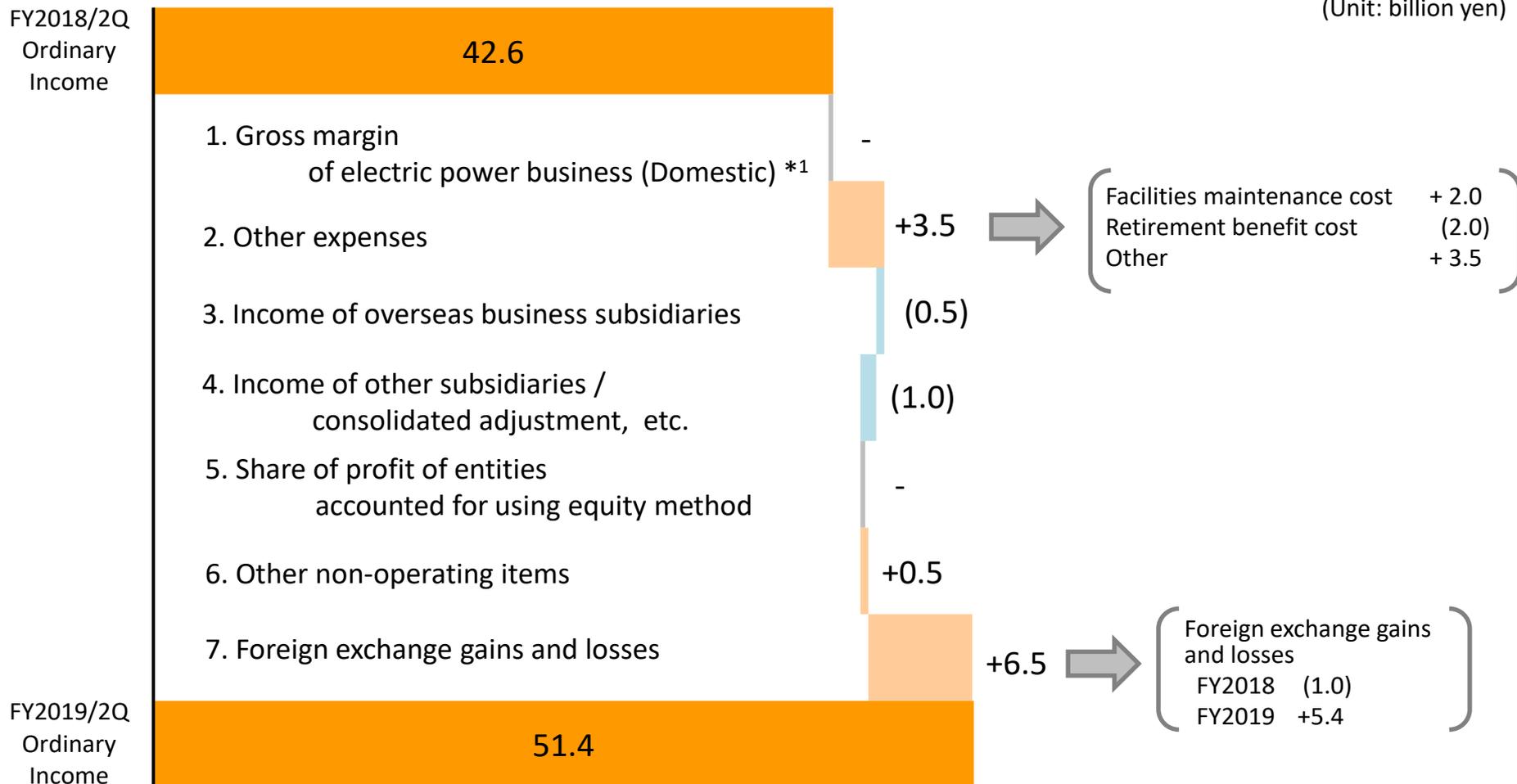
\*1 Sales for the overseas business segment (Sales from overseas consolidated subsidiaries and overseas consulting business, etc.)

\*2 "Other Business" is composed of "Electric Power-Related Business" segment and "Other Business" segment

# FY2019 Second Quarter Earnings Results (Main Factors for Change)



(Unit: billion yen)



➤ In addition to the above factors, (8.9) billion yen which is equivalent to impairment loss of Birchwood project in the US is recorded as an extraordinary loss for the current fiscal year. Combined with the reversal of deferred tax liabilities of 2.4 billion yen associated with the impairment, net impact to profit attributable to owners of parent is (6.5) billion yen

\*1 Gross margin of electric power business (Domestic) : Domestic electric power business revenue (hydro, thermal, wind and other) – fuel costs, etc.

# Revenue / Expenditure Comparison



(Unit: billion yen)

	FY2018 2nd Quarter (Apr.-Sep.)	FY2019 2nd Quarter (Apr.-Sep.)	Year-on-year change	Main factors for change
<b>Operating Revenue</b>	<b>424.2</b>	<b>461.9</b>	<b>37.6</b>	
Electric power business	326.8	343.3	16.5	Increase in electric power sales volume of electricity procured from wholesale electricity market, etc.
Overseas business	68.9	93.5	24.6	Increase in electric power sales volume at power generating companies in Thailand, etc
Other business	28.4	24.9	(3.4)	
<b>Operating Expenses</b>	<b>376.3</b>	<b>412.4</b>	<b>36.0</b>	Electric power business +13.0, Overseas business +25.5, Other business (2.5)
<b>Operating Income</b>	<b>47.9</b>	<b>49.4</b>	<b>1.5</b>	
<b>Non-operating Revenue</b>	<b>10.2</b>	<b>16.2</b>	<b>6.0</b>	
Share of profit of entities accounted for using equity	4.8	4.7	(0.1)	
Foreign exchange gains	-	5.4	5.4	
Other	5.4	6.0	0.6	
<b>Non-operating Expenses</b>	<b>15.5</b>	<b>14.3</b>	<b>(1.2)</b>	
Interest expenses	12.8	13.1	0.2	
Other	2.6	1.1	(1.4)	
<b>Ordinary Income</b>	<b>42.6</b>	<b>51.4</b>	<b>8.7</b>	Electric power business +1.2, Overseas business +8.8, Other business (1.9)
Extraordinary losses	-	8.9	8.9	Loss equivalent to impairment loss of Birchwood project in the US +8.9
Total income taxes	7.5	7.5	0.0	Reversal of deferred tax liabilities associated with impairment of Birchwood project (2.4)
<b>Profit attributable to owners of parent</b>	<b>31.1</b>	<b>28.2</b>	<b>(2.9)</b>	

# Balance Sheet



(Unit: billion yen)

	FY2018 End of FY	FY2019 End of 2Q	Change from prior year end	Main factors for change
<b>Non-current Assets</b>	<b>2,401.6</b>	<b>2,417.5</b>	<b>15.9</b>	
Electric utility plant and equipment	944.3	934.8	(9.4)	Non-consolidated (6.9), Subsidiaries and others (2.4)
Overseas business facilities	312.1	311.7	(0.3)	
Other non-current assets	94.8	92.8	(1.9)	
Construction in progress	582.0	620.2	38.1	Non-consolidated +15.9, Subsidiaries and others +22.2
Nuclear fuel	74.5	74.6	0.1	
Investments and other assets	393.7	383.1	(10.6)	
<b>Current Assets</b>	<b>364.5</b>	<b>359.7</b>	<b>(4.7)</b>	
<b>Total Assets</b>	<b>2,766.1</b>	<b>2,777.3</b>	<b>11.1</b>	
Interest-bearing debt	1,642.8	1,662.5	19.6	Non-consolidated +11.2, Subsidiaries +8.4 [Corporate bonds +10.0, Long-term loans +7.7]
Other	277.7	264.6	(13.0)	
<b>Total Liabilities</b>	<b>1,920.5</b>	<b>1,927.1</b>	<b>6.5</b>	
Shareholders' equity	777.6	798.5	20.8	Increase in retained earnings
Accumulated other comprehensive income	19.7	1.7	(18.0)	Deferred gains or losses on hedges (12.8)
Non-controlling interests	48.1	49.8	1.7	
<b>Total Net Assets</b>	<b>845.5</b>	<b>850.1</b>	<b>4.5</b>	
D/E ratio (x)	2.1	2.1		
Shareholders' equity ratio	28.8%	28.8%		

# Summary of FY2019 Earnings Forecast



✂ The earnings forecasts released on April 26, 2019 remain unchanged.

(Unit: billion yen)

	Consolidated			
	FY2018 Result	FY2019 Forecast	Comparison with FY2018 result	
Operating Revenue	897.3	940.0	42.6	4.8 %
Operating Income	78.8	73.0	(5.8)	(7.4) %
Ordinary Income	68.5	60.0	(8.5)	(12.5) %
Profit attributable to owners of parent	46.2	42.0	(4.2)	(9.2) %

(Unit: billion yen)

	Non-consolidated			
	FY2018 Result	FY2019 Forecast	Comparison with FY2018 result	
Operating Revenue	646.9	591.0	(55.9)	(8.6) %
Operating Income	18.6	16.0	(2.6)	(14.3) %
Ordinary Income	54.4	53.0	(1.4)	(2.6) %
Profit	52.7	51.0	(1.7)	(3.4) %

(Unit: billion yen)

Growth indicator	FY2018 Result	FY2019 Forecast	Comparison with FY2018 result	
J-POWER EBITDA	168.4	166.0	(2.4)	(1.5) %

	Cash dividends per share		
	Interim	Year end	Annual
FY2018	35 yen	40 yen	75 yen
FY2019 (Forecast)	35 yen	40 yen	75 yen

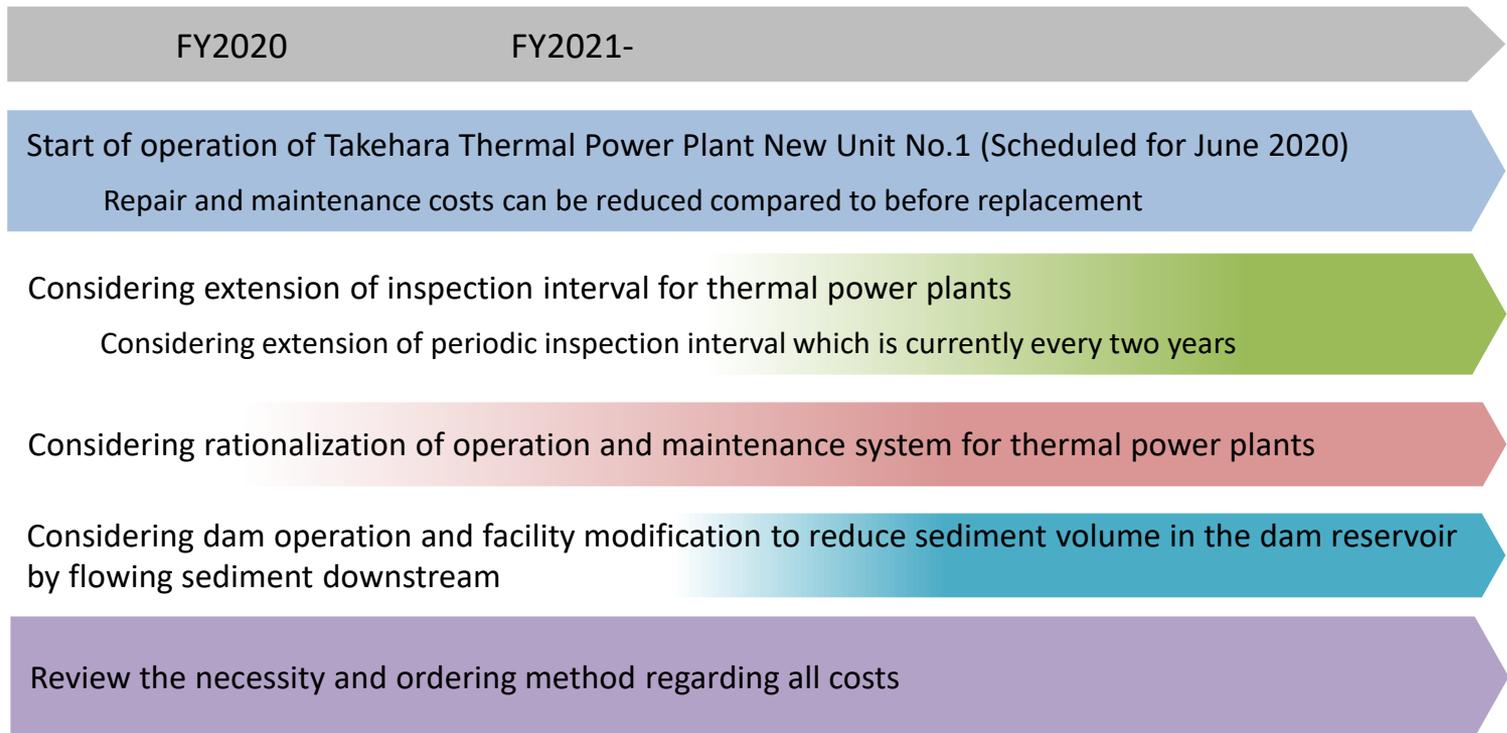
# APPENDIX

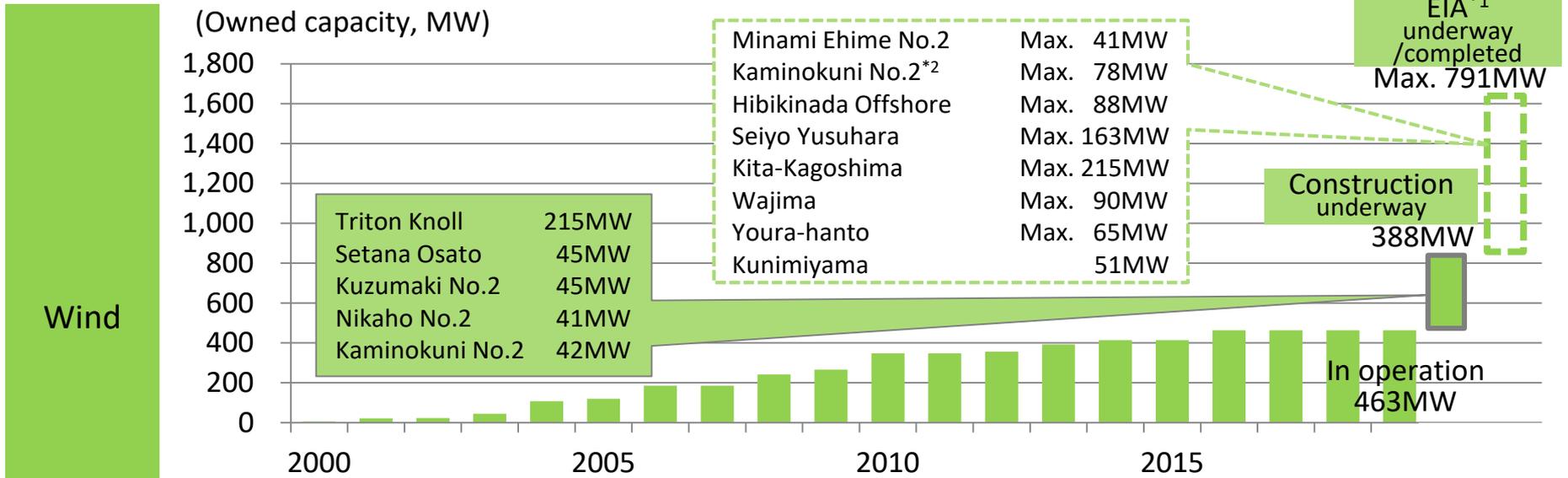
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## Main factors for increase in costs in recent years

- 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





In addition the above, two domestic offshore wind projects outside of port areas are under EIA\*1

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

\*1 EIA: Environmental impact assessment \*2 Expansion of Kaminokuni No.2 is under consideration  
 \*3 Conducted jointly with SUMITOMO CORPORATION

Project	Capacity	Note
Shinkatsurazawa/ Kumaoui	21.9MW	Start of operation : FY2022 (planned)
Ashoro Repowering	40.0→42.3MW	Completion of repowering : FY2022 (planned)

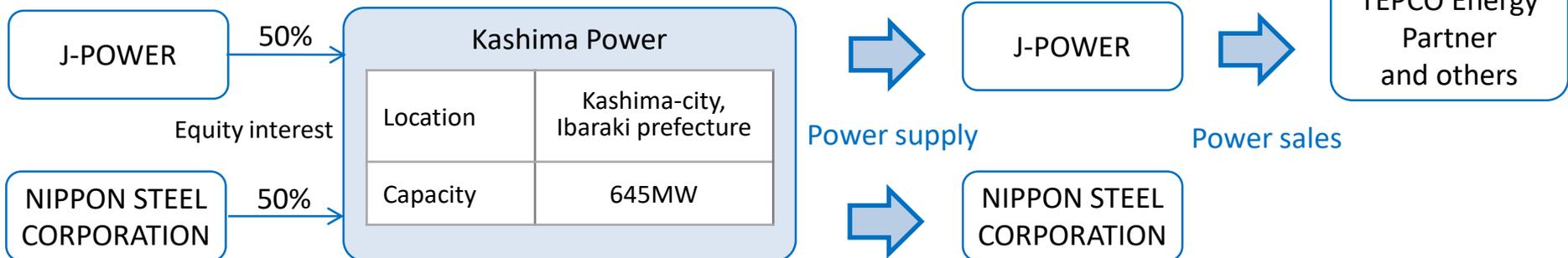
Project	Capacity	Equity ratio	Owned capacity	Start of operation
Wasabizawa	46.2MW	50%	23.1MW	Started operation in May 2019
Onikobe Replacement	14.9MW	100%	14.9MW	April 2023 (planned)
Appi	14.9MW	15%	2.2MW	April 2024 (planned)

## 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



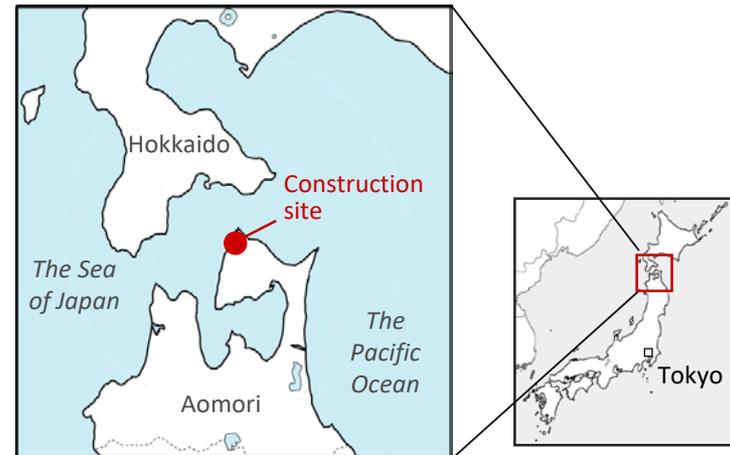
## Yamaguchi Ube Power (New Capacity)

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

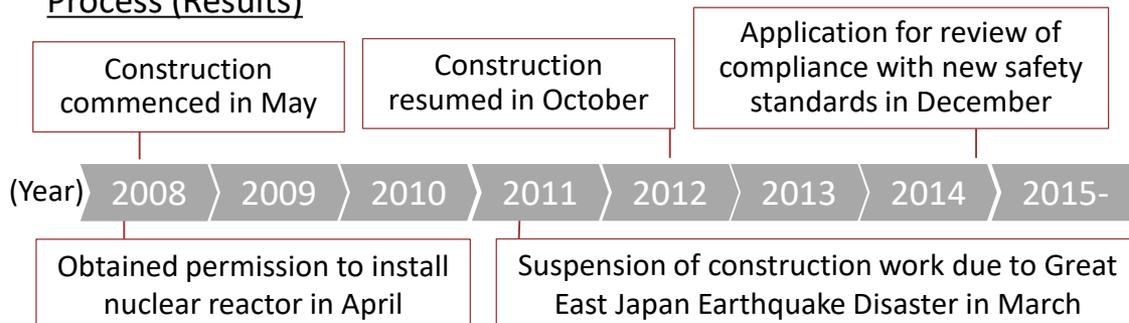
- In December 2014, J-POWER submitted to NRA\* an application for permission for alteration of reactor installment license and an application for construction plan approval in order to undertake review of compliance with the new safety standards
- Pursue further improvements in safety continuously
- 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)



\* Nuclear Regulatory Authority

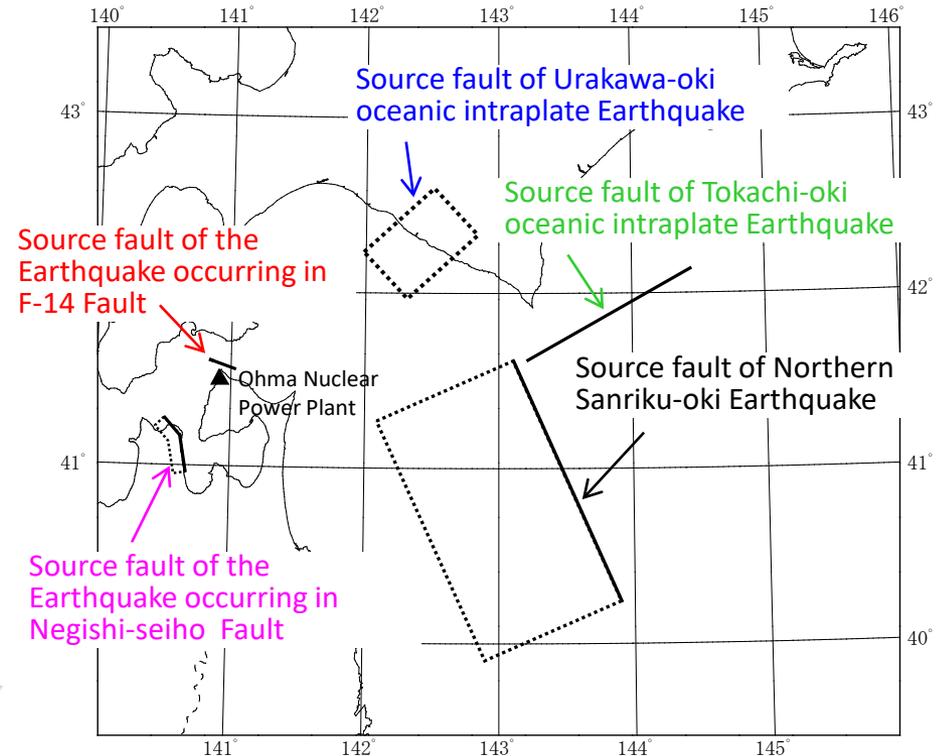


## Earthquakes for Investigation

✓ Earthquakes listed below by earthquake type have been investigated

Earthquake type	Earthquake for investigation	Magnitude
Interplate earthquakes	Northern Sanriku-oki Earthquake*	Mw8.3
Oceanic intraplate earthquakes	Urakawa-oki oceanic intraplate Earthquake	M7.5
	Tokachi-oki oceanic intraplate Earthquake	M8.2
Inland crustal earthquakes	Earthquake occurring in Negishi-seiho Fault	M7.5
	Earthquake occurring in F-14 Fault	M6.7

\* Evaluation considering uncertainty of simultaneous rupture of north-off Sanriku area and off Tokachi and off Nemuro areas along Kuril trench (Mw9.0), based on experience of the 2011 off the Pacific coast of Tohoku Earthquake



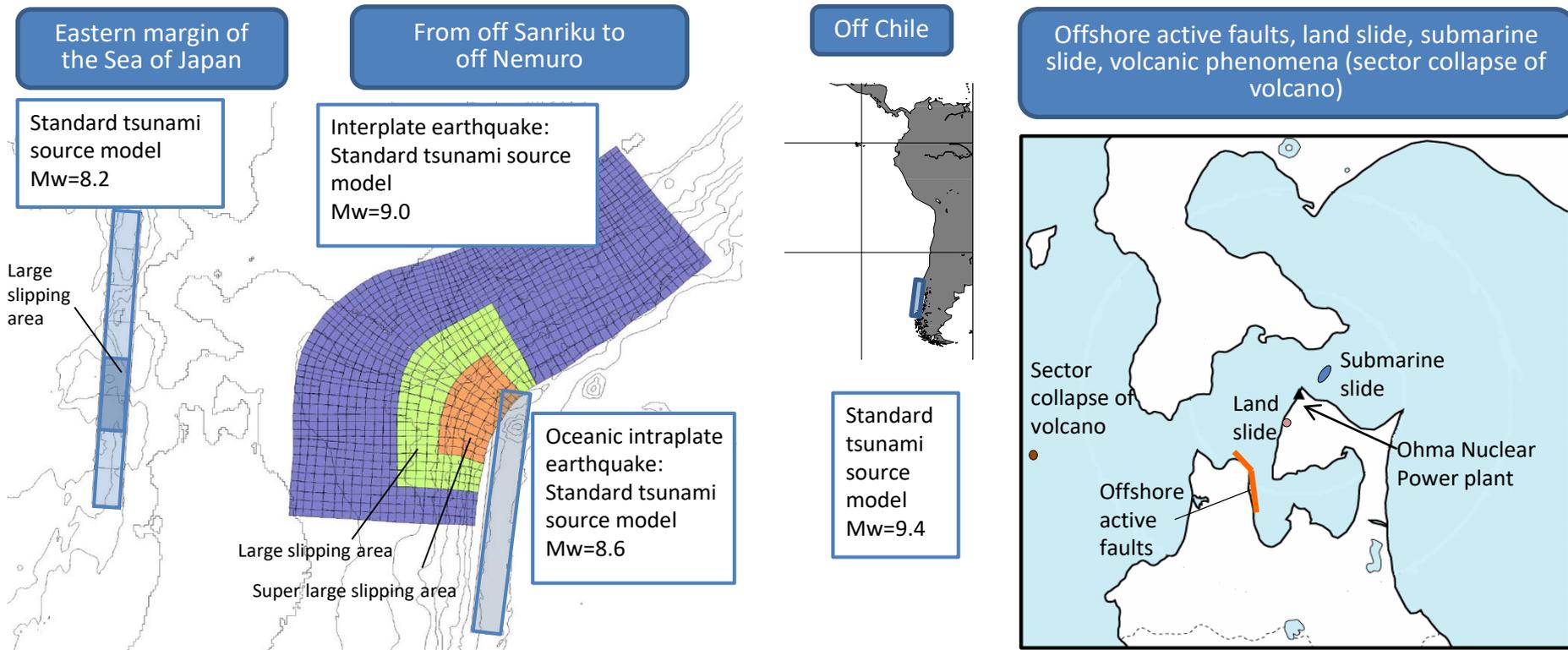
Source faults of earthquakes for investigation



**Standard seismic motion:** Horizontal 650 cm/s<sup>2</sup>  
(Maximum acceleration) Vertical 435 cm/s<sup>2</sup>

## ■ Design Basis Tsunamis

- ✓ Tsunami source models based on the latest knowledge such as the 2011 off the Pacific coast of Tohoku Earthquake Tsunami
- ✓ Estimated earthquakes larger than ever considered as tsunami sources at the eastern margin of the Sea of Japan, from off Sanriku to off Nemuro, off Chile and offshore active faults
- ✓ Taking into consideration of non-earthquake-oriented tsunamis (caused by land slide, submarine slide, sector collapse of volcano)



**The highest sea water level by design basis tsunami: approx. T.P.+6.3m**  
**The lowest sea water level by design basis tsunami: approx. T.P.-4.1m**

# Overseas Projects under Development (As of September 30, 2019)

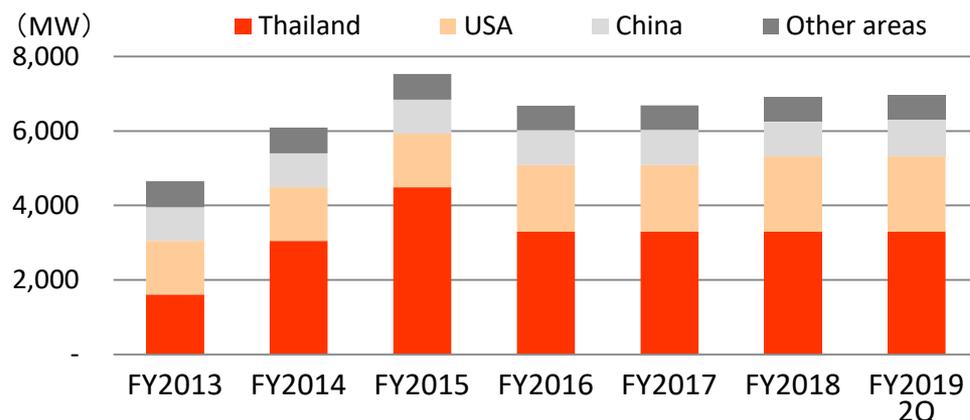


## [Overseas projects under Development]

Project	Type	Output capacity (MW)	Ownership	Owned capacity (MW)	Power purchaser	Purchase agreement valid for	Scheduled start of operation	Status
<b>Indonesia</b>		<b>2,000</b>		<b>680</b>				
Central Java	Coal	2,000	34%	680	PT Perusahaan Listrik Negara* <sup>1</sup>	25 years	2020* <sup>2</sup>	Under construction
<b>UK</b>		<b>860</b>		<b>215</b>				
Triton Knoll	Offshore wind	860	25%	215	A fixed price is guaranteed for 15 years under UK CfD regime* <sup>3</sup>		2021	Under construction
<b>USA</b>		<b>1,200</b>		<b>1,200</b>				
Jackson	CCGT* <sup>4</sup>	1,200	100%	1,200	Sales at PJM* <sup>5</sup> market	-	2022	Under construction

## [Owned capacity of overseas projects (in operation)]

(MW)



Countries/Regions	In operation	Under development	Total
Thailand	3,300	-	3,300
USA	2,016	1,200	3,216
China	984	-	984
Other areas	656	895	1,551
<b>Total</b>	<b>6,955</b>	<b>2,095</b>	<b>9,050</b>

\*1 PT Perusahaan Listrik Negara: State-owned electric power utility in Indonesia

\*2 Start of operation could possibly delay by a few months from the originally planned schedule, which is unit No.1 in Jun. 2020 and unit No.2 in Dec.2020.

\*3 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.

\*4 CCGT: Combined Cycle Gas Turbine

\*5 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.

Project	Overview	Location of the project
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## Central Java (Indonesia)

Capacity: 2,000MW  
(1,000MW x 2)  
Type: Coal-fired (USC)  
Ownership: 34%  
Status: Under construction  
Start of operation\*  
No.1: Jun. 2020  
No.2: Dec. 2020  
\* Possibly delayed by a few months

- 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: 860MW  
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 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  
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 market



➤ Large-scale demonstration test on oxygen-blown IGCC, IGFC and CO<sub>2</sub> 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°C class)	



## Demonstration Test Schedule

Fiscal year	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022
Phase 1 : Demonstration of Oxygen-blown IGCC demonstration	Design/manufacture/installation					Demonstration tests					
Phase 2 : Demonstration of Oxygen-blown IGCC with CO <sub>2</sub> separation and capture					Design/manufacture/installation			Demonstration tests			
Phase 3 : Demonstration of IGFC with CO <sub>2</sub> separation and capture								Design/manufacture/installation		Demonstration tests	

### Phase 1 demonstration tests completed in February 2019, achieving targets in all testing items

- ◆ Net efficiency reached 40.8% (HHV) (gross efficiency 48.1%), which stands at world top level as 170 MW-class demonstration plant  
⇒ Gaining perspective for approx. 46% of net efficiency (approx. 53% of gross efficiency) at an oxygen-blown IGCC commercial plant with 1500°C-class gas turbine, which enables CO<sub>2</sub> emission reduction by around 15% compared with USC (USC is currently the most efficient commercialized coal-fired thermal power)
- ◆ Results of load change rate approx. 16%/minute\*<sup>1</sup> and stable operation at 0MW net output\*<sup>2</sup> prove quick output control ability  
⇒ Demonstrating high flexibility in operation, which enables supplement for sudden output changes in renewables

- IGCC (Integrated Coal Gasification Combined Cycle): An integrated power generation system with a twin-turbine configuration; the gas produced from coal is used as fuel to drive a gas turbine, the exhaust gas from which and others is used to drive a steam turbine. There are oxygen-blown type and air-blown type depending on kind of gas supplied to gasifier when coal is gasified. Oxygen-blown IGCC is said to be more efficient when operated with CO<sub>2</sub> separation and capture facilities
- IGFC (Integrated Coal Gasification Fuel Cell Combined Cycle): Power generation system combining fuel cells with gas and steam turbines in a triply integrated configuration, which will be able to achieve the highest efficiency as a coal-fired generation technology

\*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.

# Consolidated: Revenues and Expenses



(Unit: 100 million yen)

	FY2015	FY2016	FY2017	FY2018	FY2018 2Q	FY2019 2Q
<b>Operating revenue</b>	<b>7,800</b>	<b>7,444</b>	<b>8,562</b>	<b>8,973</b>	<b>4,242</b>	<b>4,619</b>
Electric utility operating revenue	5,708	5,385	6,319	6,937	3,268	3,433
Overseas business operating revenue	1,559	1,498	1,630	1,410	689	935
Other business operating revenue	532	559	612	625	284	249
<b>Operating expenses</b>	<b>6,921</b>	<b>6,626</b>	<b>7,519</b>	<b>8,185</b>	<b>3,763</b>	<b>4,124</b>
<b>Operating income</b>	<b>879</b>	<b>817</b>	<b>1,043</b>	<b>788</b>	<b>479</b>	<b>494</b>
<b>Non-operating revenue</b>	<b>178</b>	<b>205</b>	<b>291</b>	<b>188</b>	<b>102</b>	<b>162</b>
Share of profit of entities accounted for using equity method	108	132	97	96	48	47
Other	69	72	193	92	54	115
<b>Non-operating expenses</b>	<b>472</b>	<b>351</b>	<b>309</b>	<b>292</b>	<b>155</b>	<b>143</b>
Interest expenses	304	297	283	263	128	131
Other	167	53	25	28	26	11
<b>Ordinary income</b>	<b>585</b>	<b>671</b>	<b>1,024</b>	<b>685</b>	<b>426</b>	<b>514</b>
Extraordinary income	-	-	-	-	-	-
Extraordinary losses	-	-	33	-	-	89
<b>Profit attributable to owners of parent</b>	<b>400</b>	<b>414</b>	<b>684</b>	<b>462</b>	<b>311</b>	<b>282</b>

# Non-consolidated: Revenues and Expenses



(Unit: 100 million yen)

	FY2015	FY2016	FY2017	FY2018	FY2018 2Q	FY2019 2Q
<b>Operating revenue</b>	<b>5,523</b>	<b>5,224</b>	<b>6,145</b>	<b>6,469</b>	<b>3,152</b>	<b>2,861</b>
<b>Electric power business</b>	<b>5,430</b>	<b>5,109</b>	<b>6,014</b>	<b>6,336</b>	<b>3,074</b>	<b>2,820</b>
Sold power to other suppliers	4,902	4,579	5,456	5,806	2,808	2,554
Transmission and other	527	529	558	529	265	266
<b>Incidental business</b>	<b>93</b>	<b>115</b>	<b>131</b>	<b>133</b>	<b>78</b>	<b>40</b>
<b>Operating expenses</b>	<b>5,107</b>	<b>4,948</b>	<b>5,715</b>	<b>6,282</b>	<b>2,923</b>	<b>2,640</b>
<b>Electric power business</b>	<b>5,023</b>	<b>4,842</b>	<b>5,593</b>	<b>6,157</b>	<b>2,849</b>	<b>2,603</b>
Personnel expense	318	436	342	324	160	175
Amortization of the actuarial difference in retirement benefits	(23)	107	(1)	(14)	(7)	12
Fuel cost	2,184	1,968	2,573	2,890	1,335	1,147
Repair and maintenance cost	583	683	634	697	369	350
Depreciation and amortization cost	734	496	534	510	252	260
Other	1,202	1,257	1,508	1,734	731	670
<b>Incidental business</b>	<b>84</b>	<b>105</b>	<b>122</b>	<b>125</b>	<b>73</b>	<b>36</b>
<b>Operating income</b>	<b>415</b>	<b>276</b>	<b>430</b>	<b>186</b>	<b>229</b>	<b>220</b>

# Consolidated: Segment Information



(Unit: 100 million yen)

		Electric power	Electric power -related	Overseas	Other	Subtotal	Elimination*	Consolidated
FY2019 2Q	Sales	3,442	1,688	935	103	6,170	(1,551)	4,619
	Sales to customers	3,433	163	935	86	4,619	-	4,619
	Ordinary income	210	68	226	2	508	5	514
FY2018 2Q	Sales	3,277	1,973	689	142	6,082	(1,839)	4,242
	Sales to customers	3,268	157	689	127	4,242	-	4,242
	Ordinary income	198	85	138	6	428	(1)	426
year-on-year change	Sales	164	(284)	246	(38)	87	288	376
	Sales to customers	165	5	246	(40)	376	-	376
	Ordinary income	12	(16)	88	(3)	80	7	87

## “Electric Power Business”

Mainly J-POWER group’s electric power generation business and transmission/ transformation business. The majority of consolidated revenue is derived from this segment.

## “Electric Power-Related business”

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

## “Overseas business”

Overseas power generation business, overseas engineering and consulting business

## “Other business”

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

\* Elimination includes elimination of intersegment sales

# Consolidated: Cash Flow



(Unit: 100 million yen)

	FY2015	FY2016	FY2017	FY2018	FY2018 2Q	FY2019 2Q
<b>Operating activities</b>	<b>1,461</b>	<b>1,154</b>	<b>1,603</b>	<b>1,484</b>	<b>486</b>	<b>554</b>
Profit before income taxes	584	671	990	685	426	424
Depreciation and amortization	945	756	822	799	392	404
Share of (profit) loss of entities accounted for using equity method	(108)	(132)	(97)	(96)	(48)	(47)
<b>Investing activities</b>	<b>(1,315)</b>	<b>(1,376)</b>	<b>(1,096)</b>	<b>(1,704)</b>	<b>(925)</b>	<b>(813)</b>
Purchase of non-current assets	(1,408)	(1,081)	(988)	(1,060)	(445)	(700)
Payments of investment and loans receivable	(25)	(180)	(81)	(744)	(571)	(95)
<b>Free cash flow</b>	<b>145</b>	<b>(222)</b>	<b>506</b>	<b>(220)</b>	<b>(439)</b>	<b>(259)</b>

# Consolidated: Key Ratios and Key Data



(Unit: 100 million yen)

		FY2015	FY2016	FY2017	FY2018	FY2018 2Q	FY2019 2Q
<b>(PL)</b>	Operating revenue	7,800	7,444	8,562	8,973	4,242	4,619
	Operating income	879	817	1,043	788	479	494
	Ordinary income	585	671	1,024	685	426	514
	Profit attributable to owners of parent	400	414	684	462	311	282
<b>(BS)</b>	Total assets	25,407	26,062	26,470	27,661	27,314	27,773
	Construction in progress	4,410	4,761	5,257	5,820	5,338	6,202
	Shareholders' equity	6,665	7,238	7,872	7,974	8,055	8,002
	Net assets	6,754	7,640	8,361	8,455	8,525	8,501
	Interest-bearing debt	16,287	16,200	15,613	16,428	16,376	16,625
<b>(CF)</b>	Investing activities	(1,315)	(1,376)	(1,096)	(1,704)	(925)	(813)
	Free cash flow	145	(222)	506	(220)	(439)	(259)
	(Ref) Non-consolidated CAPEX* <sup>1</sup>	(1,063)	(998)	(941)	(889)	(366)	(355)
	(Ref) Non-consolidated depreciation	734	496	534	510	252	260
ROA (%)	2.3	2.6	3.9	2.5	-	-	
ROA (ROA excl. Construction in progress) (%)	2.8	3.2	4.8	3.2	-	-	
ROE (%)	5.9	6.0	9.1	5.8	-	-	
EPS ( ¥ )	218.97	226.33	373.93	252.68	169.98	154.07	
BPS ( ¥ )	3,641.59	3,954.22	4,300.98	4,356.54	4,400.72	4,372.03	
Shareholders' equity ratio (%)	26.2	27.8	29.7	28.8	29.5	28.8	
D/E ratio (x)	2.4	2.2	2.0	2.1	2.0	2.1	
Number of shares issued* <sup>2</sup> (thousand)	183,049	183,049	183,049	183,048	183,049	183,048	

\*<sup>1</sup> Non-consolidated capital expenditure: Increase in tangible and intangible noncurrent assets

\*<sup>2</sup> Number of shares issued at the end of the fiscal year (excluding treasury stock)

# Monthly Electricity Sales:

## Domestic Power Generation Business (Thermal Power)



▶ Apr. 2018 - Sep. 2018 Results (Cumulative)

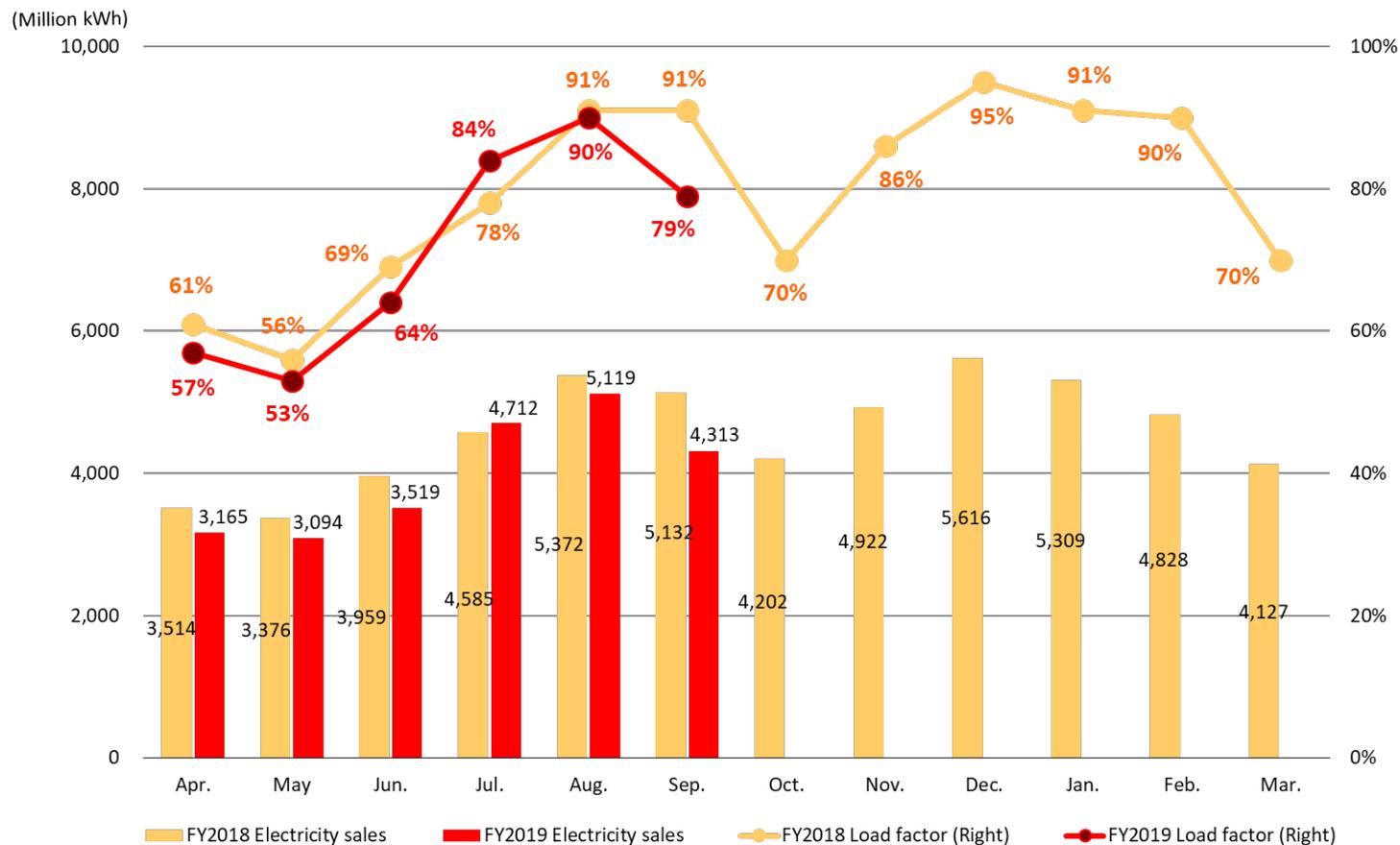
Load factor ⇒ 75%

Electricity sales ⇒ 25.9 TWh

▶ Apr. 2019 - Sep. 2019 Results (Cumulative)

Load factor ⇒ 71%

Electricity sales ⇒ 23.9 TWh



\* Load factors of thermal power show the results for non-consolidated only.

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

# Monthly Electricity Sales:



## Domestic Power Generation Business (Hydroelectric Power)

▶ Apr. 2018 - Sep. 2018 Results (Cumulative)

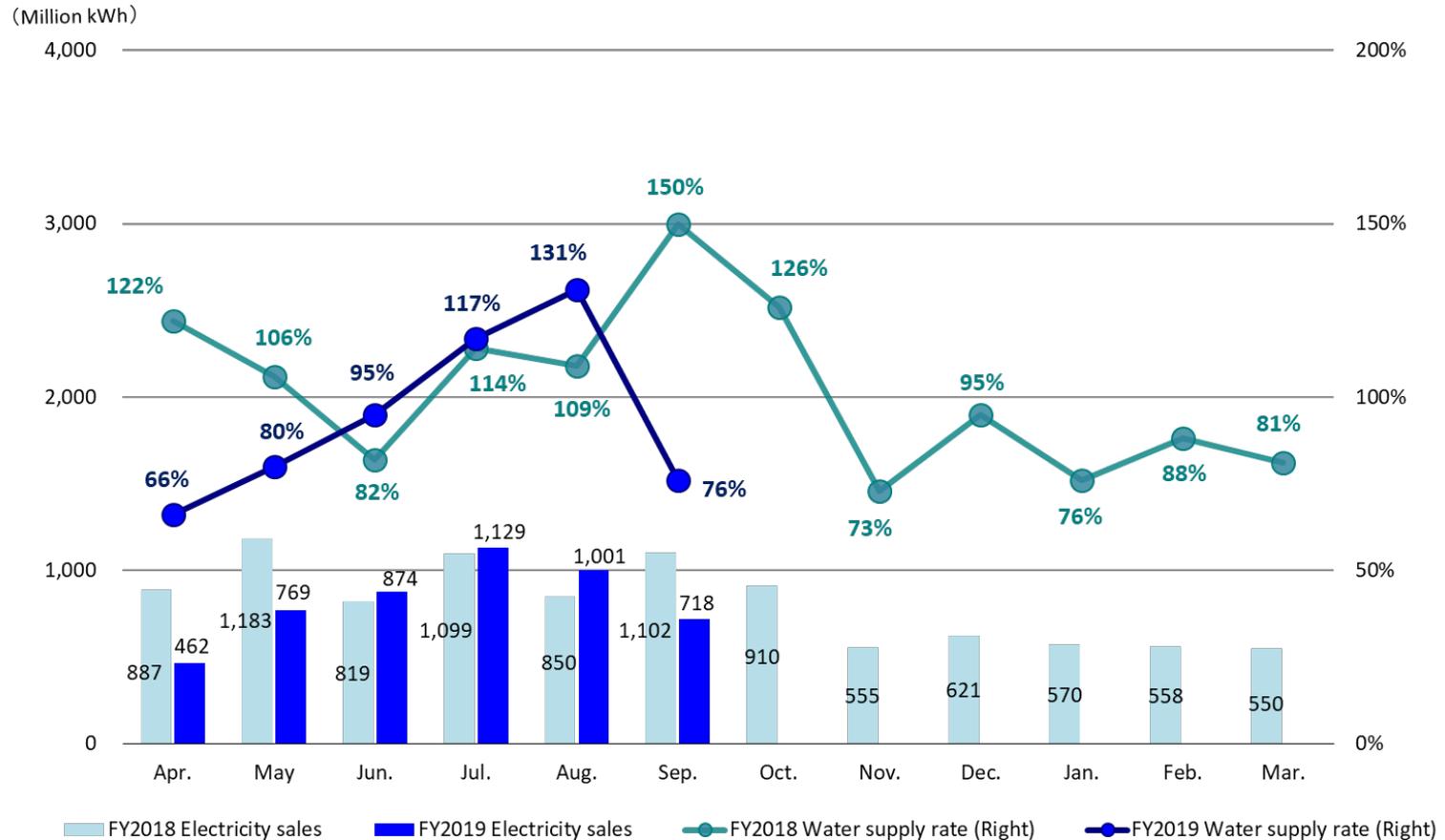
Water supply rate ⇒ 113%

Electricity sales ⇒ 5.9 TWh

▶ Apr. 2019 - Sep. 2019 Results (Cumulative)

Water supply rate ⇒ 91%

Electricity sales ⇒ 4.9 TWh

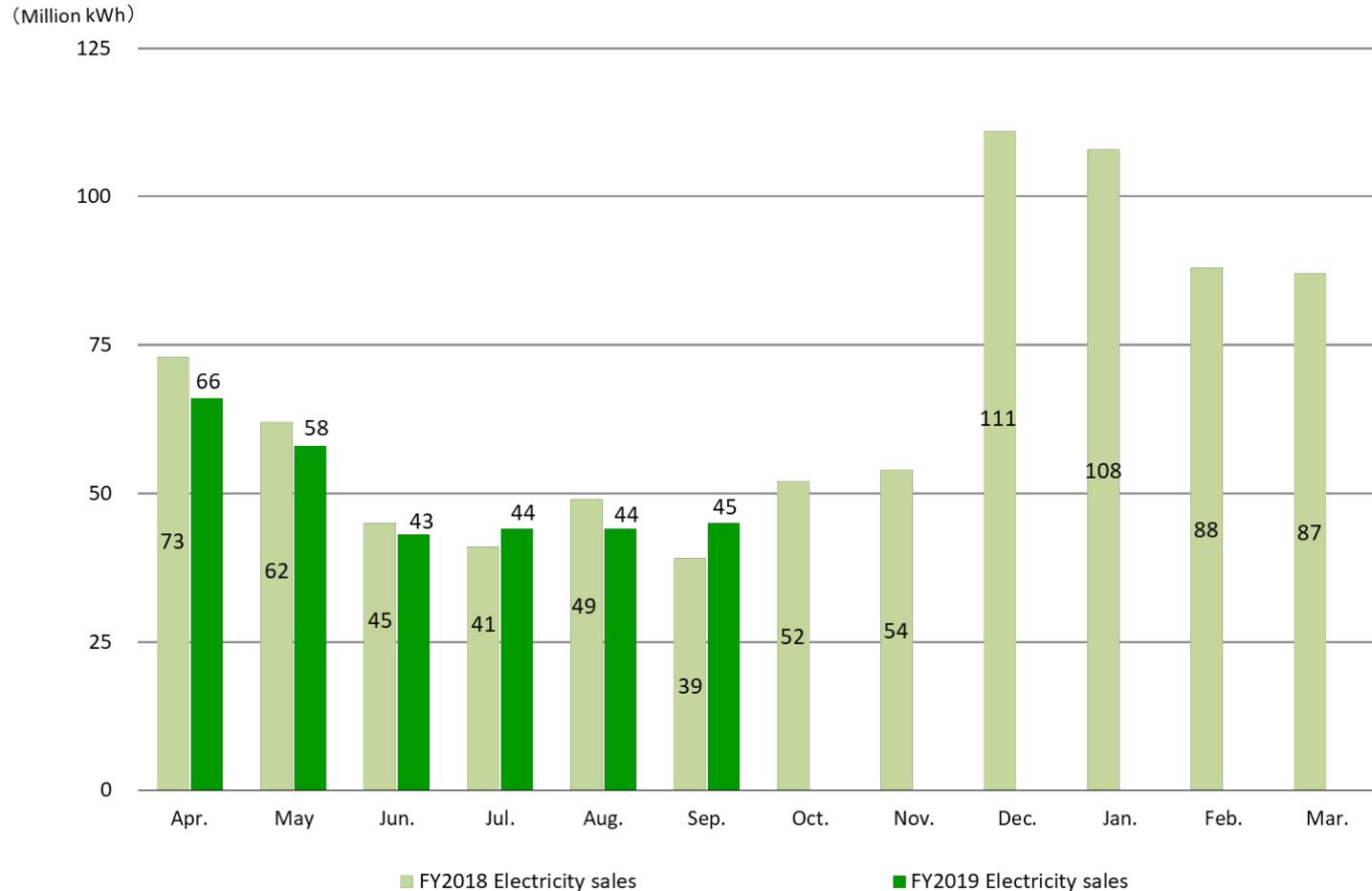


# Monthly Electricity Sales:

## Domestic Power Generation Business (Wind Power)



- ▶ Apr. 2018 - Sep. 2018 Results (Cumulative) ⇒ 0.31TWh
- ▶ Apr. 2019 - Sep. 2019 Results (Cumulative) ⇒ 0.30TWh



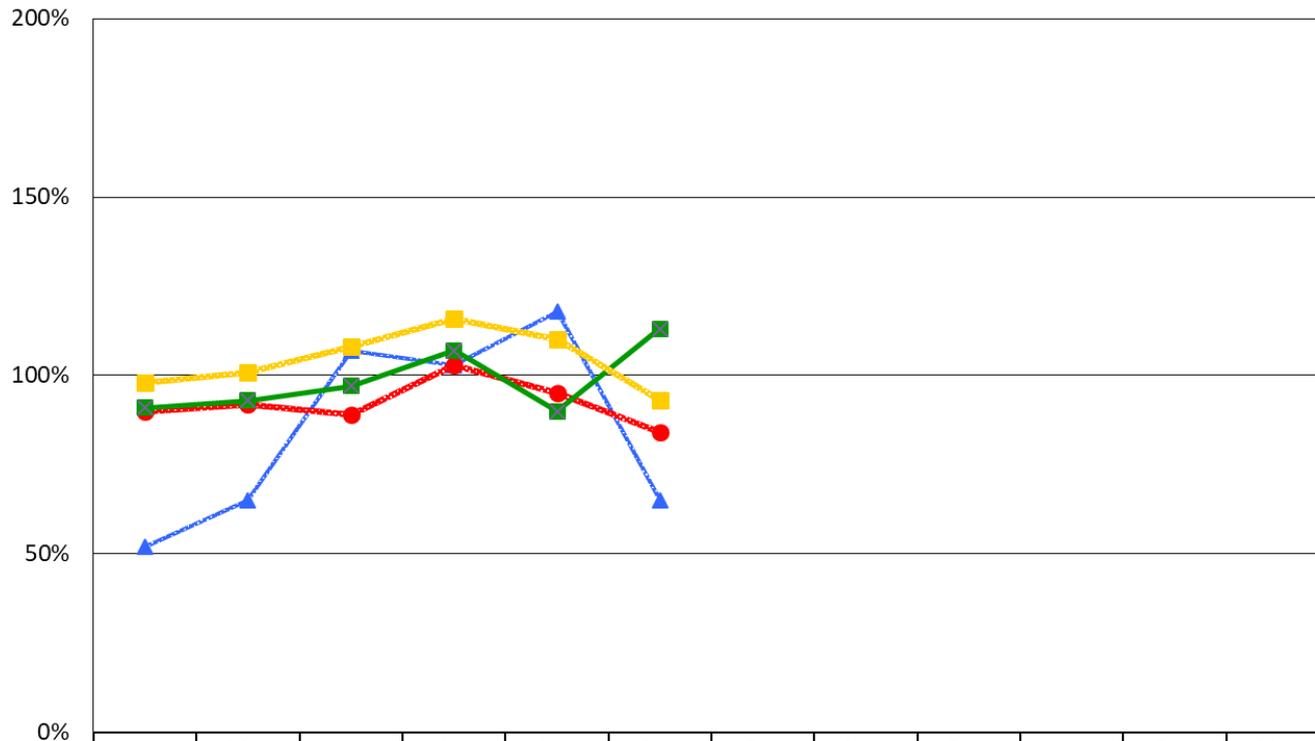
\* Proportion of equity holding is not taken into account.

# Change in Monthly Electricity Sales:

## Domestic Power Generation Business



- ▶ Apr. 2018 - Sep. 2018 Total Results (Cumulative) ⇒ 33.3 TWh
- ▶ Apr. 2019 - Sep. 2019 Total Results (Cumulative) ⇒ 34.8 TWh



	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr. - Sep.
Year-on-year (Hydro)	52%	65%	107%	103%	118%	65%							83%
Year-on-year (Thermal)	90%	92%	89%	103%	95%	84%							92%
Year-on-year (Wind)	91%	93%	97%	107%	90%	113%							97%
Year-on-year Total	98%	101%	108%	116%	110%	93%							104%

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



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