

Summary of FY2012 Earnings Results



Electric Power Development Co., Ltd.

April 30, 2013

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 dependency.

※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 FY2012 Earnings Results

Summary of FY2012 Earnings Results



(Unit: billion yen)

Consolidated	FY2011 (Apr.-Mar.)	FY2012 (Apr.-Mar.)	Year-on-year change		FY2012 Prior forecast* (Apr.-Mar.)	Comparison with the forecast*	
Operating Revenues	654.6	656.0	1.4	0.2 %	649.0	7.0	1.1 %
Operating Income	49.8	54.5	4.7	9.6 %	45.0	9.5	21.3 %
Ordinary Income	36.6	44.8	8.2	22.4 %	34.0	10.8	31.8 %
Net Income	16.1	29.8	13.6	85.0 %	23.0	6.8	29.6 %

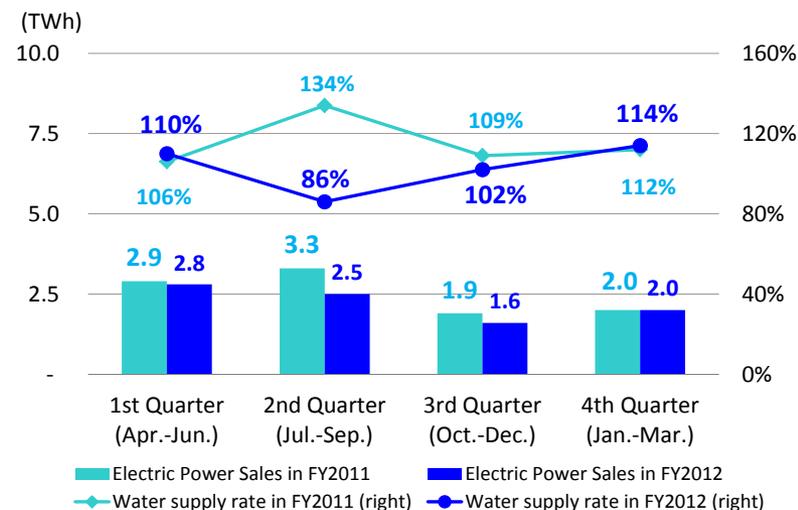
Non-consolidated	FY2011 (Apr.-Mar.)	FY2012 (Apr.-Mar.)	Year-on-year change		FY2012 Prior forecast* (Apr.-Mar.)	Comparison with the forecast*	
Operating Revenues	599.9	586.9	(12.9)	(2.2) %	582.0	4.9	0.9 %
Operating Income	42.3	43.3	0.9	2.3 %	35.0	8.3	23.8 %
Ordinary Income	25.6	28.8	3.1	12.3 %	18.0	10.8	60.2 %
Net Income	9.1	18.5	9.4	102.8 %	12.0	6.5	55.0 %

* The Prior Forecast is the revised earnings forecast released on January 31, 2013.

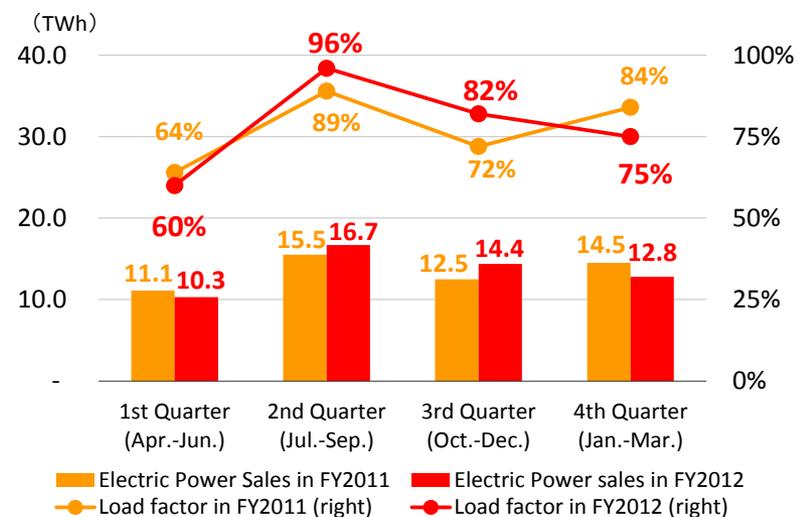
	FY2011 (Apr.-Mar.)	FY2012 (Apr.-Mar.)	Year-on-year change	
Electric Power Sales (TWh)	66.0	65.6	(0.4)	(0.7) %
Hydroelectric (Wholesale Electric Power)	10.3	9.0	(1.2)	(12.5) %
Water supply rate	115%	102%	(13) points	
Thermal (Wholesale Electric Power)	53.7	54.3	0.5	1.1 %
Load factor	77%	78%	1 point	
Other Electric Power Business	2.0	2.2	0.2	11.4 %
Operating Revenues (Billion yen)	654.6	656.0	1.4	0.2 %
Hydroelectric (Wholesale Electric Power)	108.4	106.6	(1.7)	(1.7) %
Thermal (Wholesale Electric Power)	424.4	413.9	(10.4)	(2.5) %
Other Electric Power Business	22.3	30.7	8.3	37.3 %
Transmission	53.0	52.6	(0.4)	(0.8) %
Other Businesses, etc.	46.2	52.0	5.8	12.6 %
Average Foreign Exchange Rate (Yen/US\$)	79.08	82.91		

Electric Power Sales for each Quarter

[Hydroelectric (Wholesale Electric Power)]



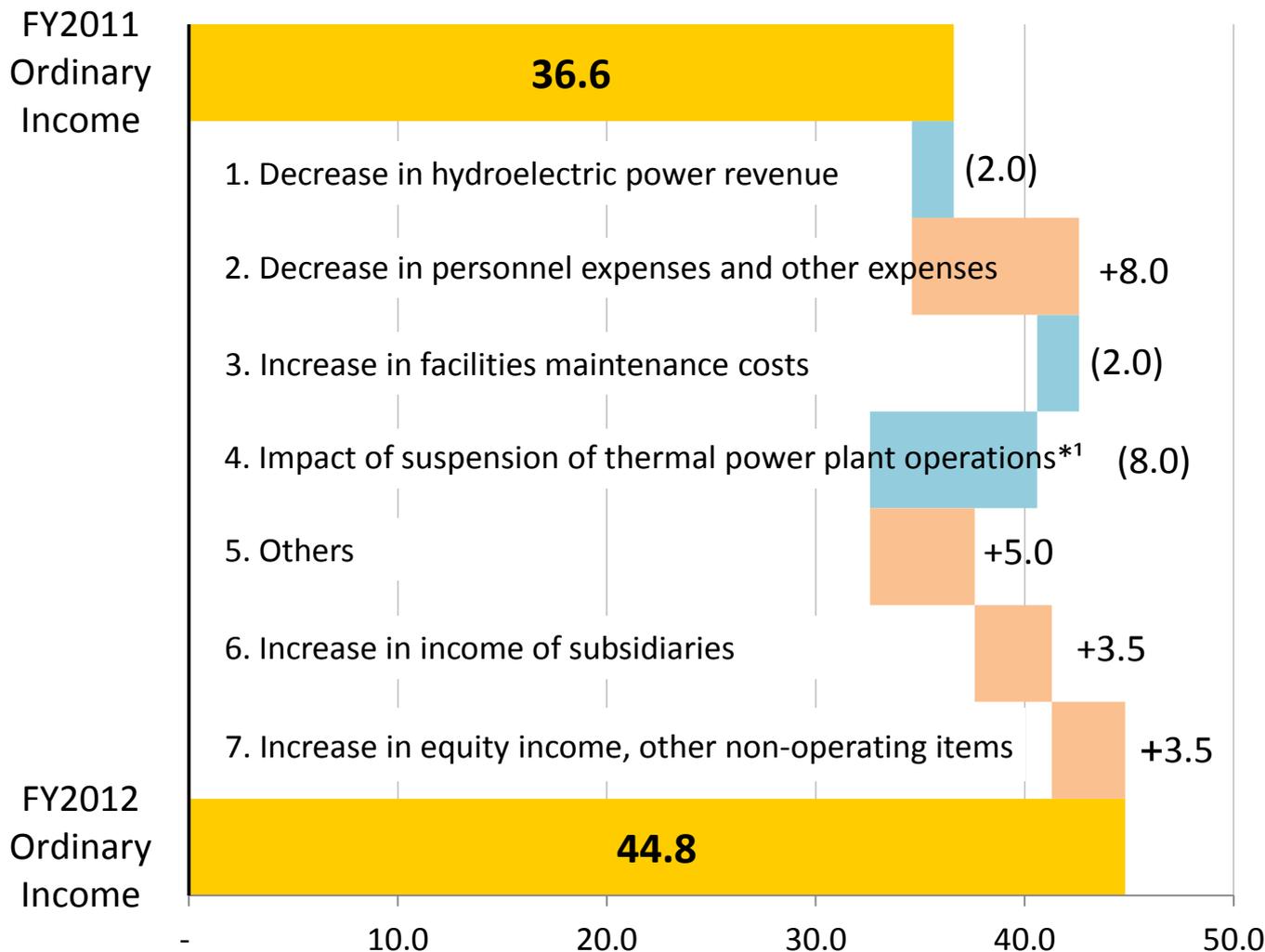
[Thermal (Wholesale Electric Power)]



FY2011 Earnings Results (Main Factors for Change)



(Unit: billion yen)



Previous Breakdown*2	Increase/Decrease
(4.0)	+2.0
+6.0	+2.0
(5.0)	+3.0
(8.5)	+0.5
+4.0	+1.0
+2.5	+1.0
+2.5	+1.0
34.0	+10.8

*1 New No.2 Unit at Isogo Thermal Power Plant and No.2 Unit at Takehara Thermal Power Plant have suspended power generation due to turbine malfunctions on December 4 and 18, respectively. No.2 Unit at Takehara Thermal Power Plant resumed operation on February 4, 2013. New No.2 Unit at Isogo Thermal Power Plant is expected to resume operation in the latter half of May 2013.

*2 Previous breakdown: Main factors for change in the revised earning forecast released on January 31, 2013.

Revenue / Expenditure Comparison



(Unit: billion yen)

	FY2011 (Apr.-Mar.)	FY2012 (Apr.-Mar.)	Year-on-year change	Main factors for change
Operating Revenues	654.6	656.0	1.4	
Electric utility	609.7	605.3	(4.4)	Non-consolidated (13.2), Subsidiaries and others +8.8
Other business	44.8	50.7	5.8	Non-consolidated +0.2, Subsidiaries +5.6
Operating Expenses	604.8	601.4	(3.3)	
Operating Income	49.8	54.5	4.7	Non-consolidated +0.9, Subsidiaries and others +3.7
Non-operating Revenues	15.3	17.5	2.2	
Equity income of affiliates	9.5	11.7	2.1	Overseas business +1.8 from 9.2 in FY2011 to 11.0 in FY2012
Other	5.7	5.8	0.0	
Non-operating Expenses	28.5	27.3	(1.2)	
Interest expenses	22.0	22.3	0.3	
Other	6.5	4.9	(1.5)	Decrease in valuation losses on securities and others
Ordinary Income	36.6	44.8	8.2	
Extraordinary loss	3.3	-	(3.3)	Elimination of disaster recovery expenses (Isogo fire) posted for the previous fiscal year
Net income	16.1	29.8	13.6	

Balance Sheet



(Unit: billion yen)

	FY2011 (End of FY)	FY2012 (End of FY)	Change from prior year end	Main factors for change
Noncurrent Assets	1,849.7	1,975.2	125.4	
Electric utility plant and equipment	1,111.2	1,058.8	(52.4)	Non-consolidated (49.7)
Other noncurrent assets	65.6	118.8	53.1	Subsidiaries +52.8
Construction in progress	380.4	464.6	84.2	Non-consolidated +16.4, Subsidiaries and others +67.7
Nuclear fuel	54.1	59.7	5.6	
Investments and other assets	238.2	273.0	34.7	Long-term investment +21.3, Other investments in power generation projects in Thailand and others +18.7
Current Assets	166.6	194.7	28.0	
Total Assets	2,016.3	2,169.9	153.5	
Interest-bearing debt	1,435.7	1,523.0	87.3	Non-consolidated +8.5, Subsidiaries +78.7 [Corporate bonds +20.0, Long-term loans +76.2]
Others	174.4	192.9	18.4	
Total Liabilities	1,610.2	1,716.0	105.8	
Shareholders' equity	441.3	460.6	19.3	Increase in retained earnings
Accumulated other comprehensive income	(33.9)	(6.7)	27.2	Foreign currency translation adjustment +24.3
Minority interests	(1.1)	(0.0)	1.1	
Total Net Assets	406.1	453.8	47.6	
D/E ratio (x)	3.5	3.4		
Shareholders' equity ratio	20.2%	20.9%		

II. Summary of FY2013 Earnings Forecast

Summary of FY2013 Earnings Forecast



(Unit: billion yen)

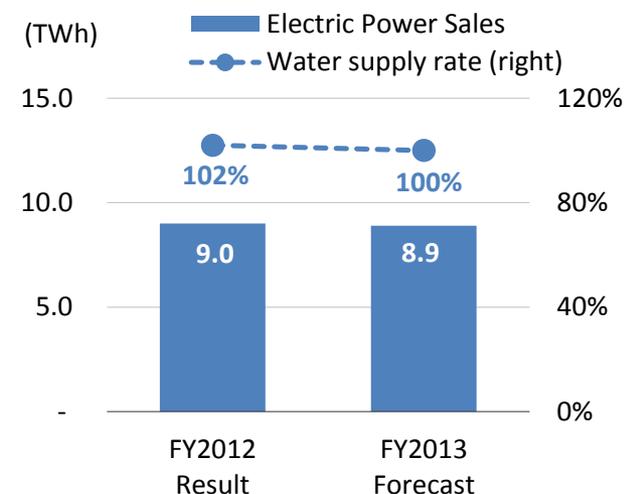
	Consolidated				Non-consolidated			
	FY2012 Result	FY2013 Forecast	Comparison with FY2012 result		FY2012 Result	FY2013 Forecast	Comparison with FY2012 result	
Operating Revenues	656.0	684.0	27.9	4.3%	586.9	574.0	(12.9)	(2.2)%
Operating Income	54.5	59.0	4.4	8.1%	43.3	45.0	1.6	3.8%
Ordinary Income	44.8	47.0	2.1	4.9%	28.8	31.0	2.1	7.5%
Net Income	29.8	35.0	5.1	17.4%	18.5	22.0	3.4	18.3%

	Cash dividends per share		
	Interim	Year end	Annual
FY2012	35 yen	35 yen	70 yen
FY2013 (Forecast)	35 yen	35 yen	70 yen

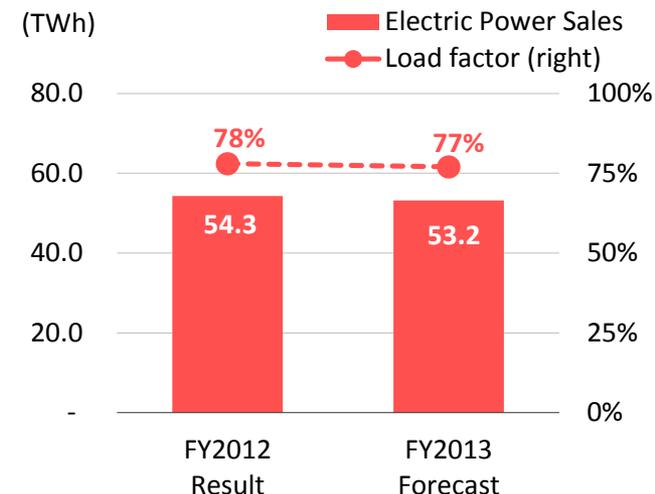
	FY2012 Result (Apr.-Mar.)	FY2013 Forecast (Apr.-Mar.)	Comparison with FY2012 result	
Electric Power Sales (TWh)				
Electric Power Business	65.6	64.2	(1.3)	(2.0)%
Hydroelectric (Wholesale Electric Power)	9.0	8.9	(0.0)	(0.7)%
Water supply rate	102%	100%	(2) points	
Thermal (Wholesale Electric Power)	54.3	53.2	(1.0)	(2.0)%
Load factor	78%	77%	(1) point	
Other Electric Power Business	2.2	2.0	(0.1)	(8.2)%
Other Business*1	-	3.6	3.6	-
Overseas Business*2	-	3.6	3.6	-
Operating Revenues (Billion yen)	656.0	684.0	27.9	4.3%
Electric Power Business	605.3	587.0	(18.3)	(3.0)%
Hydroelectric (Wholesale Electric Power)	106.6	106.0	(0.6)	(0.6)%
Thermal (Wholesale Electric Power)	413.9	401.0	(12.9)	(3.1)%
Other Electric Power Business	30.7	30.0	(0.7)	(2.3)%
Other Business	50.7	97.0	46.2	91.3%
Overseas Business*3	1.6	42.0	40.3	-
Average foreign exchange rate (Yen/US\$)	82.91	approx. 90		
Foreign exchange rate at term end (Yen/THB)	2.82	approx. 3		

Wholesale Electric Power Sales

[Hydroelectric (Wholesale Electric Power)]



[Thermal (Wholesale Electric Power)]



*1 "Other Businesses" is composed of "Electric Power-Related Business", "Overseas Business" and "Other Business"

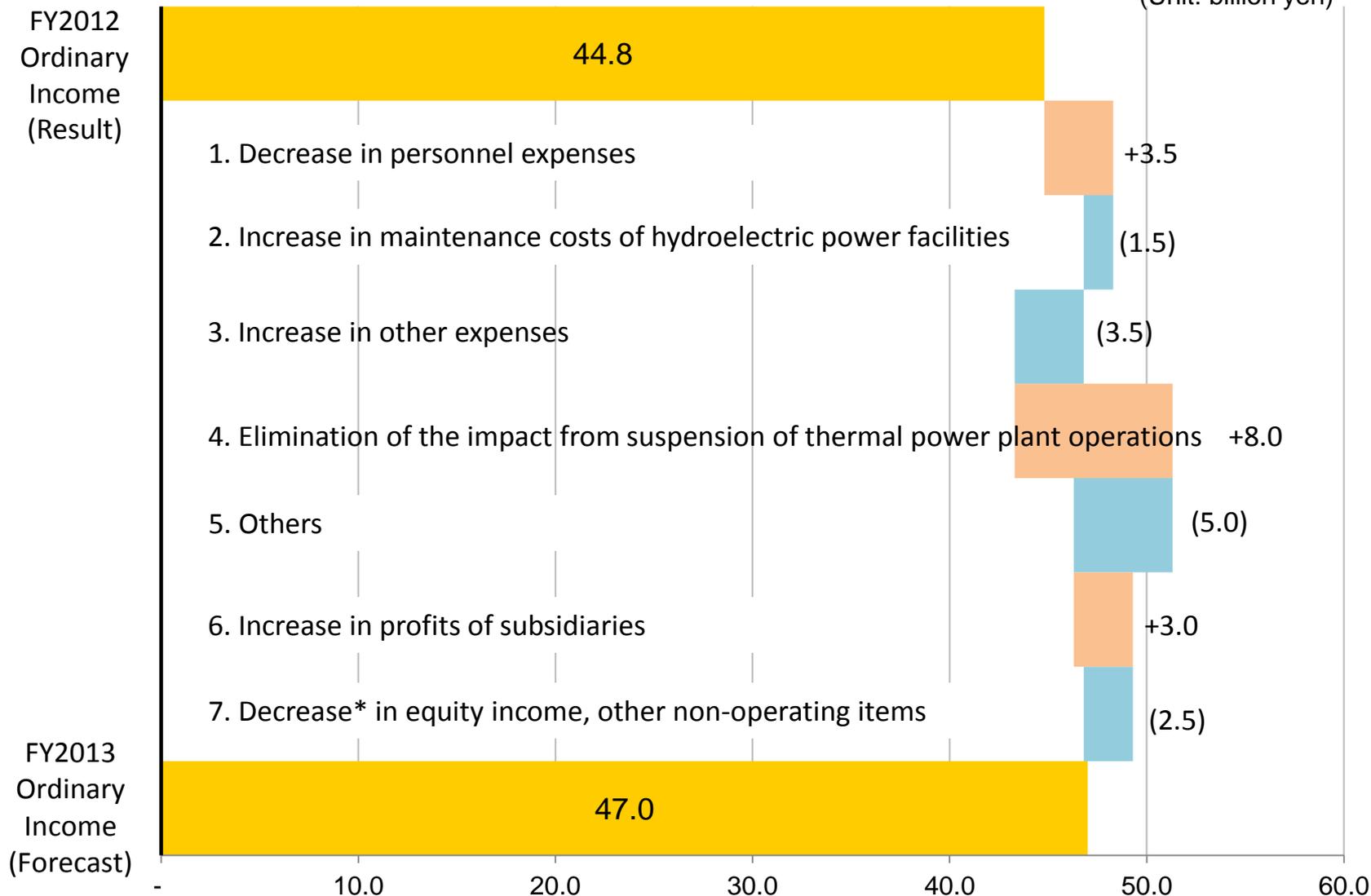
*2 Electric power sales volume of overseas consolidated subsidiaries (Does not include electric power sales volume of affiliated companies accounted for by the equity method)

*3 Sales of Overseas Business (For example, sales of overseas consolidated subsidiaries and overseas consulting business)

FY2013 Earnings Forecast (Main Factors for Change)



(Unit: billion yen)



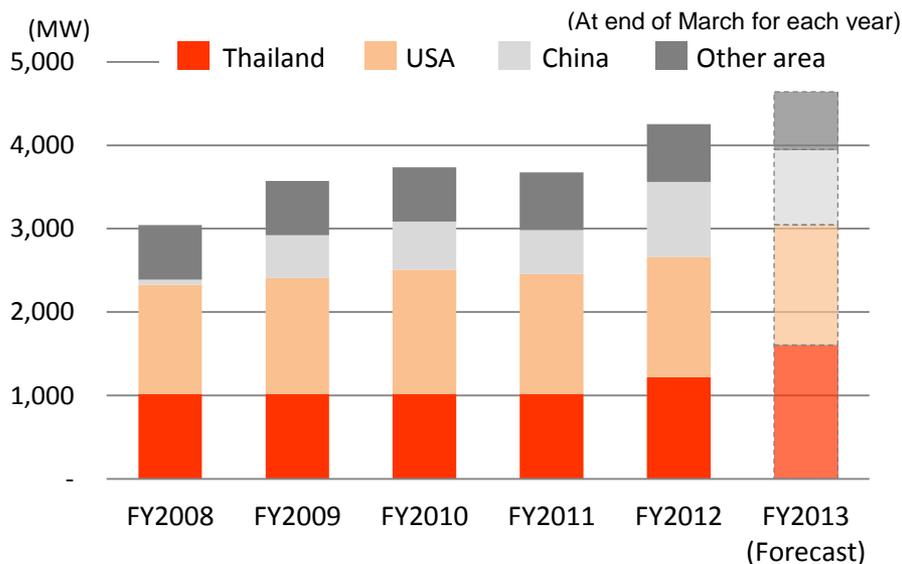
Breakdown : Decrease of equity income of affiliates, (1.0) billion yen, increase in financial expenses, (3.5) billion yen and other non-operating items, +2.0 billion yen

Overseas Power Generation Business: Earnings Contribution Forecast



- ▶ In Thailand, 7 SPP projects are to commence operation one-by-one in 2013
- ▶ Equity equivalent income*³ in FY2013 is expected to be approximately 11.5 billion yen.

Overseas Power Generation Business Owned Capacity (In Commercial Operation)

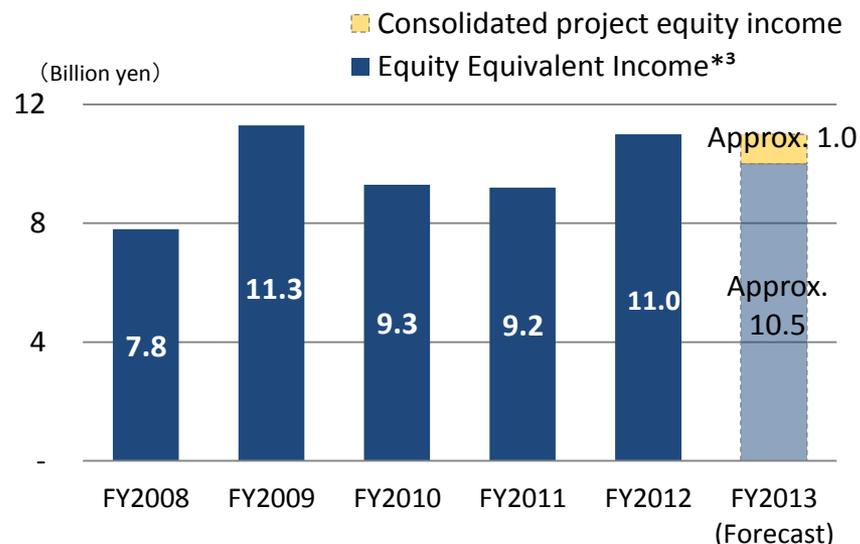


[Owned capacity (As of March 2013)]

(Unit: MW)

Countries/ Regions	In operation	Under development	Total
Thailand	1,221	3,267* ¹	4,488
USA	1,438	-	1,438
China	902	-	902
Other areas	692	680* ²	1,372
Total	4,245	3,947	8,200

Equity Equivalent Income*³ of Overseas Power Generation Business



Foreign exchange rate	FY2011	FY2012	FY2013(Forecast)
Yen/US\$	77.74	86.58	Approx.90
Yen/THB	2.45	2.82	Approx. 3

*³ Equity equivalent income: The total of equity income of affiliates and consolidated project income. Out of which consolidated project income are the total of income after tax for each consolidated project company in commercial operation multiplied by capital investment ratio of the company. The sum of equity income of affiliates and consolidated project income do not correspond to segment data.

*¹ Breakdown: SPP Project x 4 (387MW), Nong Saeng IPP Project (1,440MW), U-Thai IPP Project (1,440MW)

*² Indonesia, Central Java IPP Project (680MW)

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(1)-1. Consolidated: Revenues and Expenses



(Unit: 100 million yen)

	FY2008	FY2009	FY2010	FY2011	FY2012
Operating revenues	7,049	5,844	6,359	6,546	6,560
Electric power operating revenues	6,483	5,302	5,844	6,097	6,053
Other operating revenues	565	541	515	448	507
Operating expenses	6,478	5,355	5,653	6,048	6,014
Operating income	571	489	705	498	545
Non-operating revenues	132	187	149	153	175
Equity income of affiliates	74	117	90	95	117
Others	58	70	58	57	58
Non-operating expenses	307	259	292	285	273
Interest expenses	226	230	223	220	223
Others	81	28	68	65	49
Ordinary income	395	416	563	366	448
Extraordinary income	121	-	16	-	-
Extraordinary loss	196	-	191	33	-
Net income	194	291	195	161	298

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



(Unit: 100 million yen)

	FY2008	FY2009	FY2010	FY2011	FY2012	YOY change
Operating revenues	6,458	5,304	5,832	5,999	5,869	(129)
Electric power operating revenues	6,314	5,186	5,738	5,905	5,772	(132)
Hydroelectric	1,109	1,089	1,081	1,084	1,066	(17)
Thermal	4,603	3,496	4,064	4,244	4,139	(104)
Transmission and others	601	599	592	576	566	(9)
Incidental business	143	117	93	94	97	2
Operating expenses	6,011	4,895	5,205	5,576	5,436	(139)
Electric power operating expenses	5,882	4,790	5,133	5,490	5,347	(142)
Personnel costs	435	361	312	344	340	(3)
Fuel costs	2,551	1,739	2,099	2,384	2,384	(0)
Repair and maintenance costs	554	453	506	542	564	21
Depreciation and amortization costs	1,097	1,155	1,060	1,004	894	(109)
Others	1,243	1,079	1,154	1,213	1,162	(50)
Incidental business	128	104	71	86	88	2
Operating income	447	409	626	423	433	9

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

	FY2008	FY2009	FY2010	FY2011	FY2012
Electricity sales (million kWh)	57,532	55,760	64,353	64,074	63,366
Hydroelectric	8,384	9,214	10,267	10,318	9,032
Thermal	49,147	46,546	54,086	53,756	54,333
Water supply rate (%)	88	96	106	115	102
Load factor of coal-fired thermal power plants (%)	76	68	78	77	78

【 Personnel costs 】

(Unit: 100 million yen)

	FY2008	FY2009	FY2010	FY2011	FY2012
Amortization of the actuarial difference in retirement benefits	107	34	(22)	17	5
Other personnel costs	327	327	334	326	335
Total	435	361	312	344	340

(Amortization of the actuarial difference)

(Unit: 100 million yen)

	FY2008	FY2009	FY2010	FY2011	FY2012
The remainder in the previous year (c)	29	49	15	(10)	8
Actual difference in the present year	128	-	-	-	-
Actual difference in the previous year	-	-	(48)	35	(0)
Subtotal (a)	157	49	(32)	25	7
Amortization *(b)	107	34	(22)	17	5
The remainder in the present year (c=a-b)	49	15	(10)	8	2

* Up to 2008: Actuarial difference are amortized by the declining-balance method over two years from the year in which they occurred.

From FY2009 onward: Actuarial differences are amortized by the declining-balance method over two years from the year following the year in which they occurred.

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

	FY2008	FY2009	FY2010	FY2011	FY2012
Fuel costs (¥ 100 million)	2,551	1,739	2,099	2,384	2,384
Coal consumption (10 thousand ton)	1,941	1,814	2,115	2,079	2,103
Australian coal FOB price* (US\$)	125	71	97~98	130	115
Average exchange rate (¥ /US\$)	100.75	92.89	85.74	79.08	82.91

* Reference Price

【 Repair expenses 】

(Unit: ¥ 100 million)

	FY2008	FY2009	FY2010	FY2011	FY2012
Hydroelectric	145	80	81	130	113
Thermal	361	332	387	357	404
Transmission	25	23	22	37	31
Others	21	18	14	17	15
Total	554	453	506	542	564

【 Depreciation and amortization costs 】

(Unit: 100 million yen)

	FY2008	FY2009	FY2010	FY2011	FY2012
Hydroelectric	249	240	235	234	218
Thermal	619	693	613	567	484
Transmission	184	177	168	160	153
Others	43	44	43	42	39
Total	1,097	1,155	1,060	1,004	894

(1)-3. Consolidated: Segment Information



(Unit: 100 million yen)

		Electric power	Electric power -related	Overseas power generation	Others	Subtotal	Elimination*	Consolidated
FY2012	Sales	6,080	3,458	16	247	9,802	(3,242)	6,560
	Sales to customers	6,053	265	16	224	6,560	-	6,560
	Ordinary income	310	90	39	9	450	(2)	448
FY2011	Sales	6,129	3,413	20	223	9,786	(3,240)	6,546
	Sales to customers	6,097	231	20	196	6,546	-	6,546
	Ordinary income	222	83	34	(0)	341	24	366
year-on-year change	Sales	(48)	44	(3)	23	16	(1)	14
	Sales to customers	(44)	34	(3)	27	14	-	14
	Ordinary income	87	7	4	9	109	(27)	82

“Electric Power Business”

Wholesale power business: J-POWER’s hydroelectric, thermal power and transmission business. The majority of consolidated revenue is derived from this segment.

Other electric power businesses: Subsidiaries’ thermal power (IPP, for PPSs) and wind power

“Electric Power-Related Businesses”

These focus on peripheral businesses 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 Businesses”

Overseas power generation businesses, overseas engineering and consulting businesses

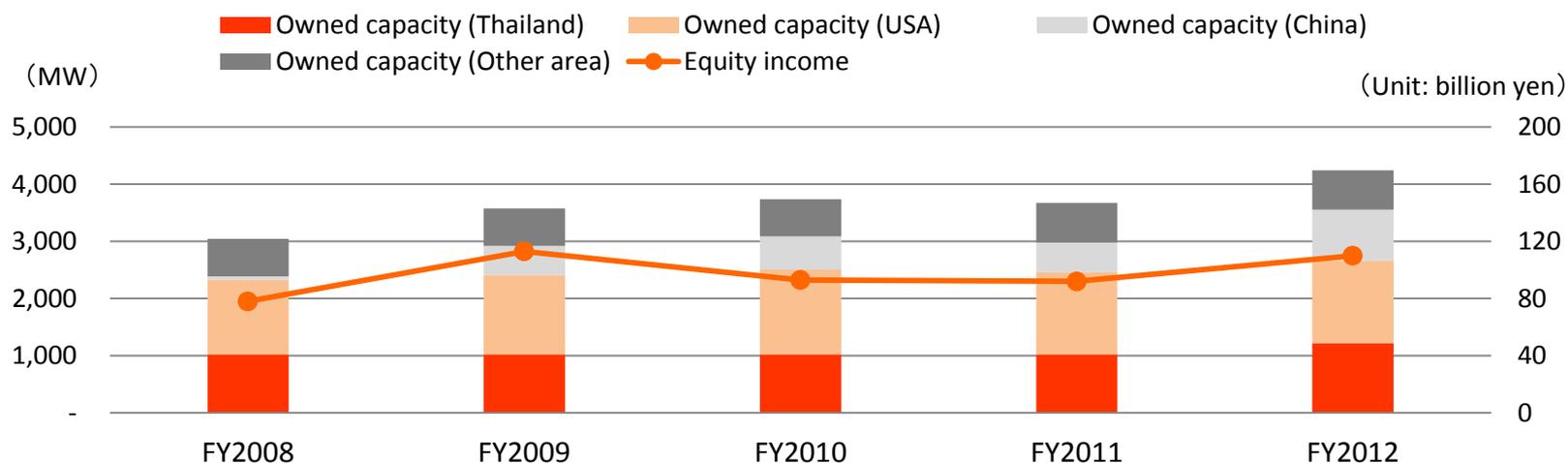
“Other Businesses”

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

* Elimination includes elimination of intersegment sales

(1)-4. Consolidated: Overseas Business

	FY2008	FY2009	FY2010	FY2011	FY2012
Major equity acquisition projects (in operation) (Output capacity stands for J-POWER's owned capacity)	[USA] Birchwood 120MW [USA]3 Eastern US gas-fired power plants 197MW	[China] Gemeng 306MW	[USA] Orange Grove 96MW		[China] Hezhou 355MW [Thai] 3SPP Total 297MW
Overseas owned capacity (in operation) (MW) (as of the end of March)	3,043	3,574	3,738	3,673	4,253
Thailand	1,020	1,020	1,020	1,020	1,221
China	61	511	578	523	902
USA	1,309	1,390	1,486	1,438	1,438
Others	653	653	653	692	692
Overseas equity income	78	113	93	92	110
Foregin Exchange Rate (as of the end of December)					
Yen / US\$	91.03	92.10	81.49	77.74	86.58
Yen / THB	2.60	2.76	2.70	2.45	2.82

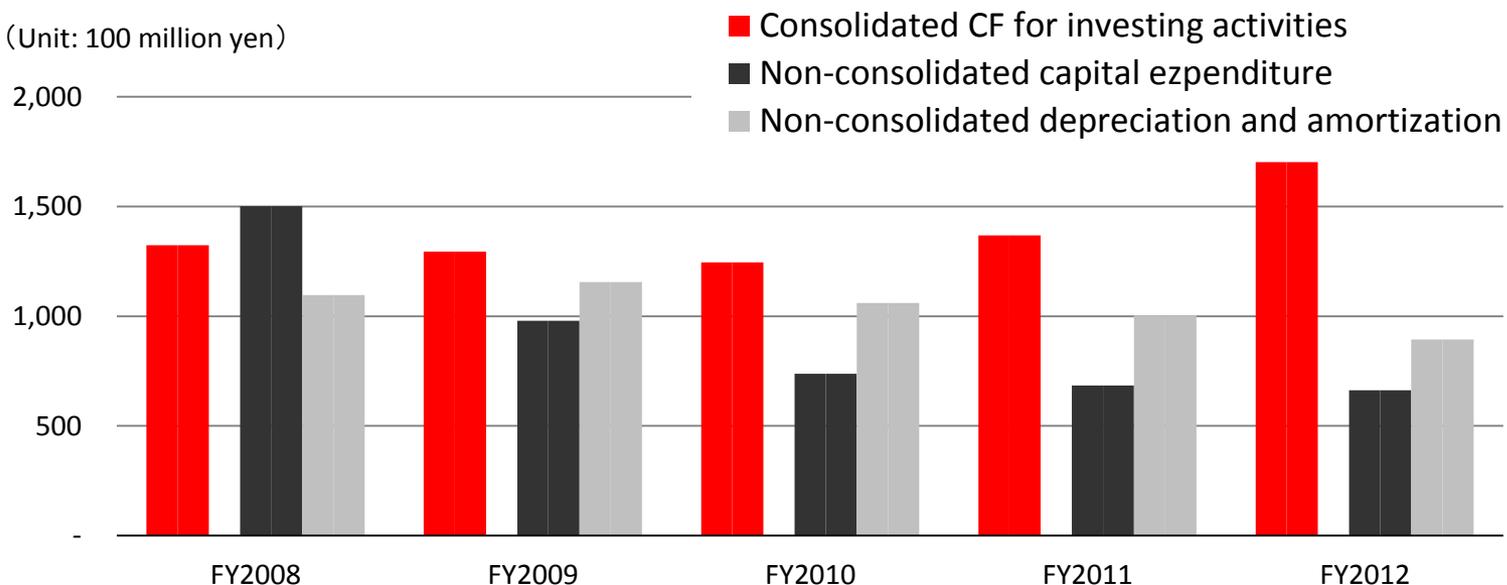


(1)-4. Consolidated: Cash Flow

(Unit: 100 million yen)

	FY2008	FY2009	FY2010	FY2011	FY2012
Operating activities	1,586	1,691	1,512	1,258	1,197
Income before income taxes and minority interests	325	421	387	332	451
(reference) Non-consolidated depreciation and amortization	1,097	1,155	1,060	1,004	894
Investing activities	(1,323)	(1,295)	(1,246)	(1,368)	(1,703)
Capital expenditure for subsidiaries	(156)	(135)	(302)	(642)	(1,002)
(reference) Non-consolidated CAPEX*	(1,502)	(979)	(737)	(684)	(662)
Free cash flow	262	396	265	(109)	(505)

(Unit: 100 million yen)



* Non-consolidated capital expenditure: Increase in tangible and intangible noncurrent assets

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



(Unit: 100 million yen)

	FY2008	FY2009	FY2010	FY2011	FY2012
(PL) Operating revenues	7,049	5,844	6,359	6,546	6,560
Operating income	571	489	705	498	545
Ordinary income	395	416	563	366	448
Net income	194	291	195	161	298
(BS) Total assets	20,054	20,240	20,123	20,163	21,699
Construction in progress	3,218	3,097	3,016	3,804	4,646
Shareholders' equity	3,801	4,126	4,157	4,073	4,539
Net assets	3,821	4,149	4,148	4,061	4,538
Interest-bearing debts	14,707	14,525	14,290	14,357	15,230
(CF) Investing activities	(1,323)	(1,295)	(1,246)	(1,368)	(1,703)
Free cash flow	262	396	265	(109)	(505)
(Ref) Non-consolidated CAPEX*1	(1,502)	(979)	(737)	(684)	(662)
(Ref) Non-consolidated depreciation	1,097	1,155	1,060	1,004	894
ROA (%)	2.0	2.1	2.8	1.8	2.1
ROA (ROA excl. Construction in progress) (%)	2.4	2.5	3.3	2.2	2.7
ROE (%)	4.6	7.4	4.7	3.9	6.9
EPS (¥)	121.65	194.26	130.51	107.39	198.65
BPS (¥)	2,533.28	2,750.20	2,770.77	2,714.94	3,024.98
Shareholders' equity ratio (%)	19.0	20.4	20.7	20.2	20.9
D/E ratio	3.9	3.5	3.4	3.5	3.4
Number of shares issued*2 (thousand)	150,054	150,053	150,053	150,052	150,052

*1 Non-consolidated capital expenditure: Increase in tangible and intangible noncurrent assets

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

(1)-6. Monthly Electricity Sales:

Wholesale Electric Power Business (Thermal Power)



▶ Apr. 2011 – Mar. 2012 Results (Cumulative)

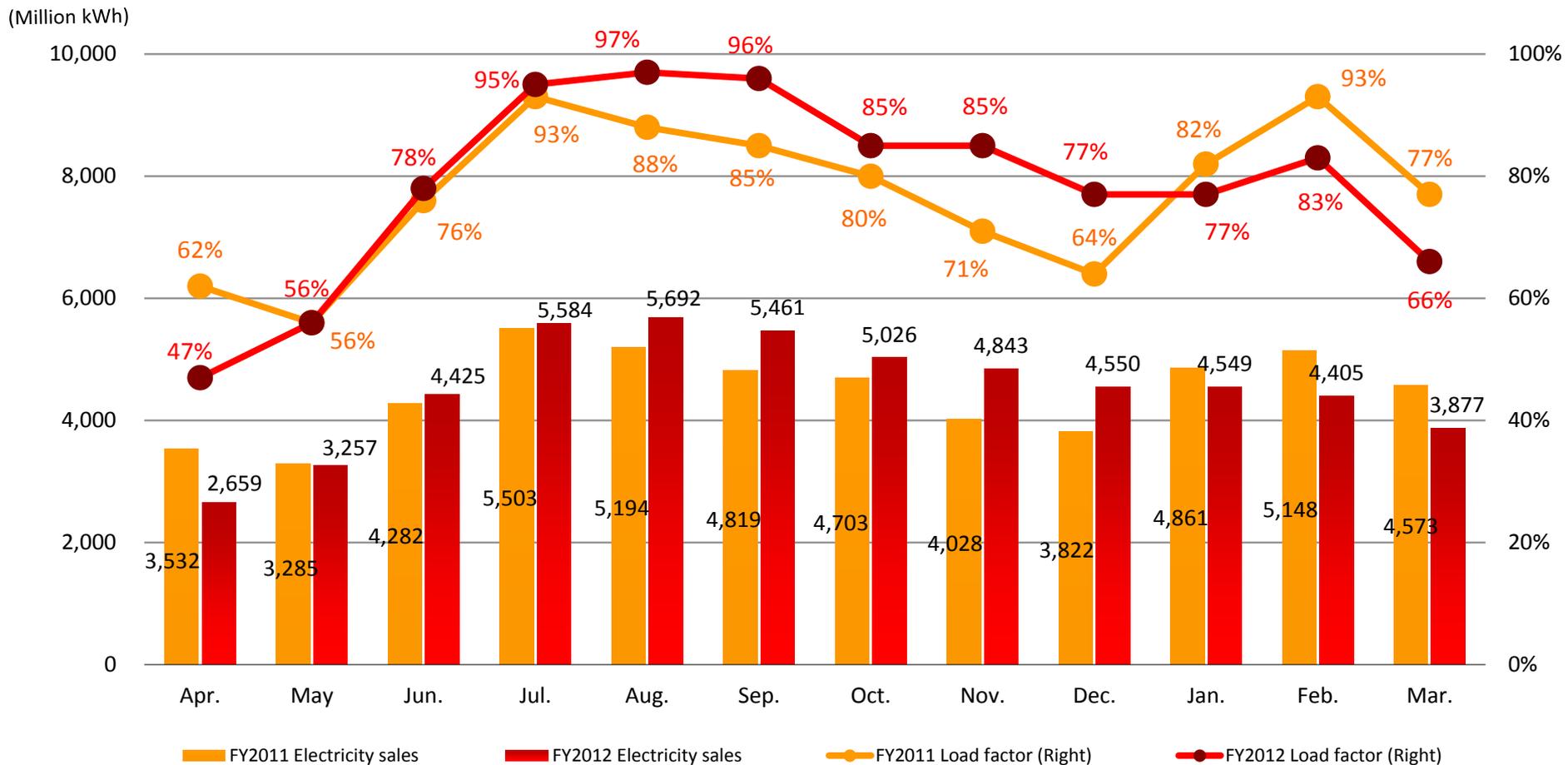
Load factor ⇒ 77%

Electricity sales ⇒ 53.7B kWh

▶ Apr. 2012 – Mar. 2013 Results (Cumulative)

Load factor ⇒ 78%

Electricity sales ⇒ 54.3B kWh

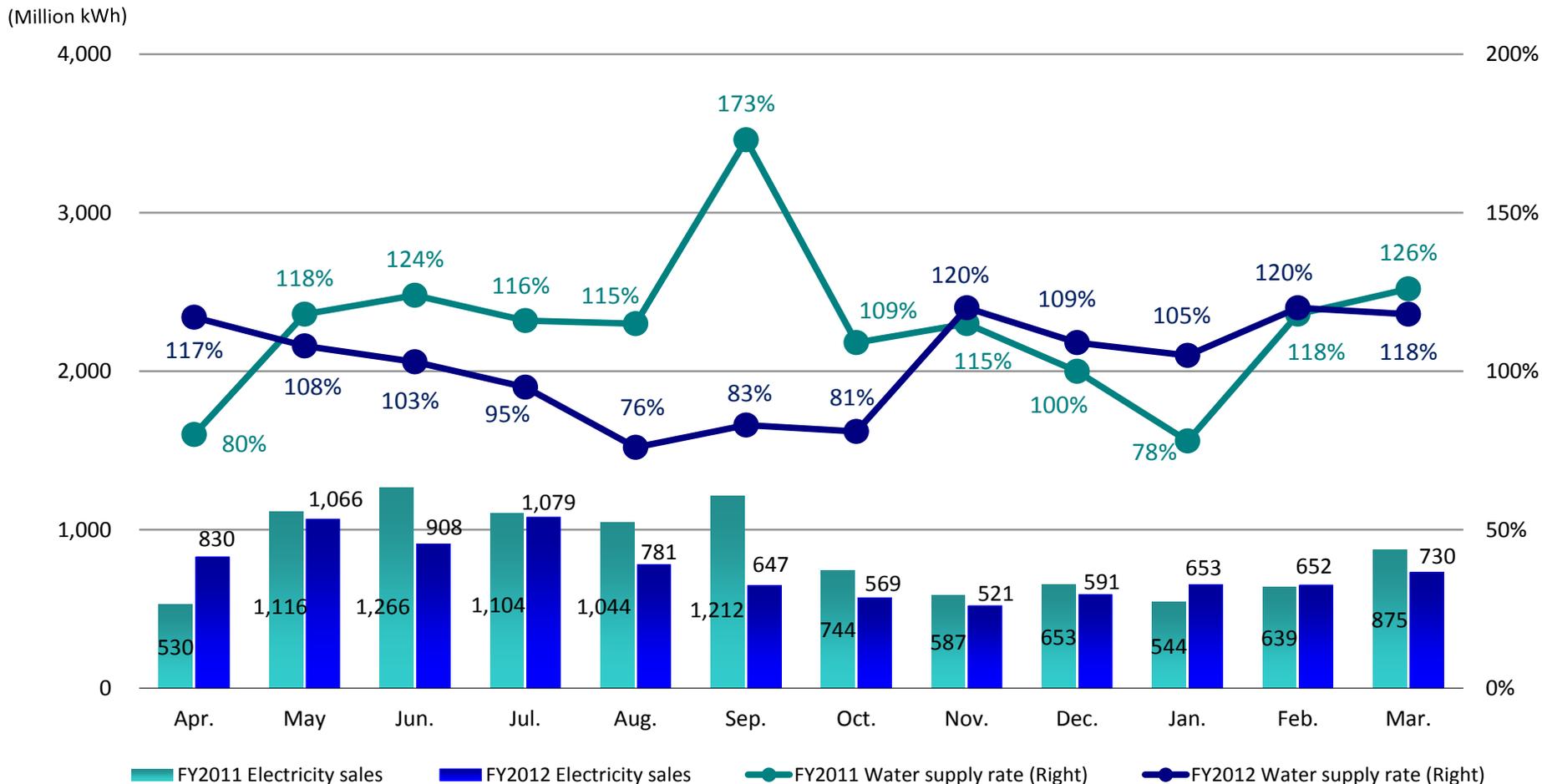


(1) -6. Monthly Electricity Sales:

Wholesale Electric Power Business (Hydroelectric Power)

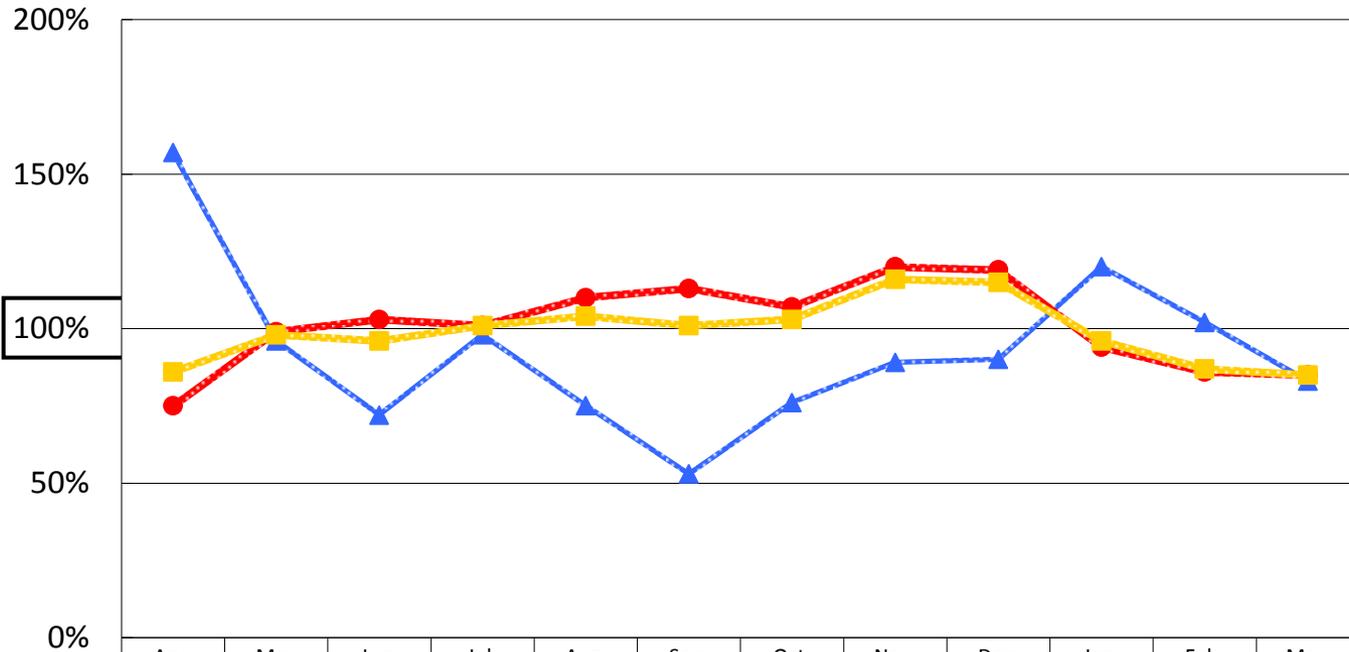


<p>▶ Apr. 2011 – Mar. 2012 Results (Cumulative)</p> <p>Water supply rate ⇒ 115%</p> <p>Electricity sales ⇒ 10.3B kWh</p>	<p>▶ Apr. 2012 – Mar. 2013 Results (Cumulative)</p> <p>Water supply rate ⇒ 102%</p> <p>Electricity sales ⇒ 9.0B kWh</p>
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(1)-6. Monthly Electric Power Business:

Change in Monthly Electricity Sales



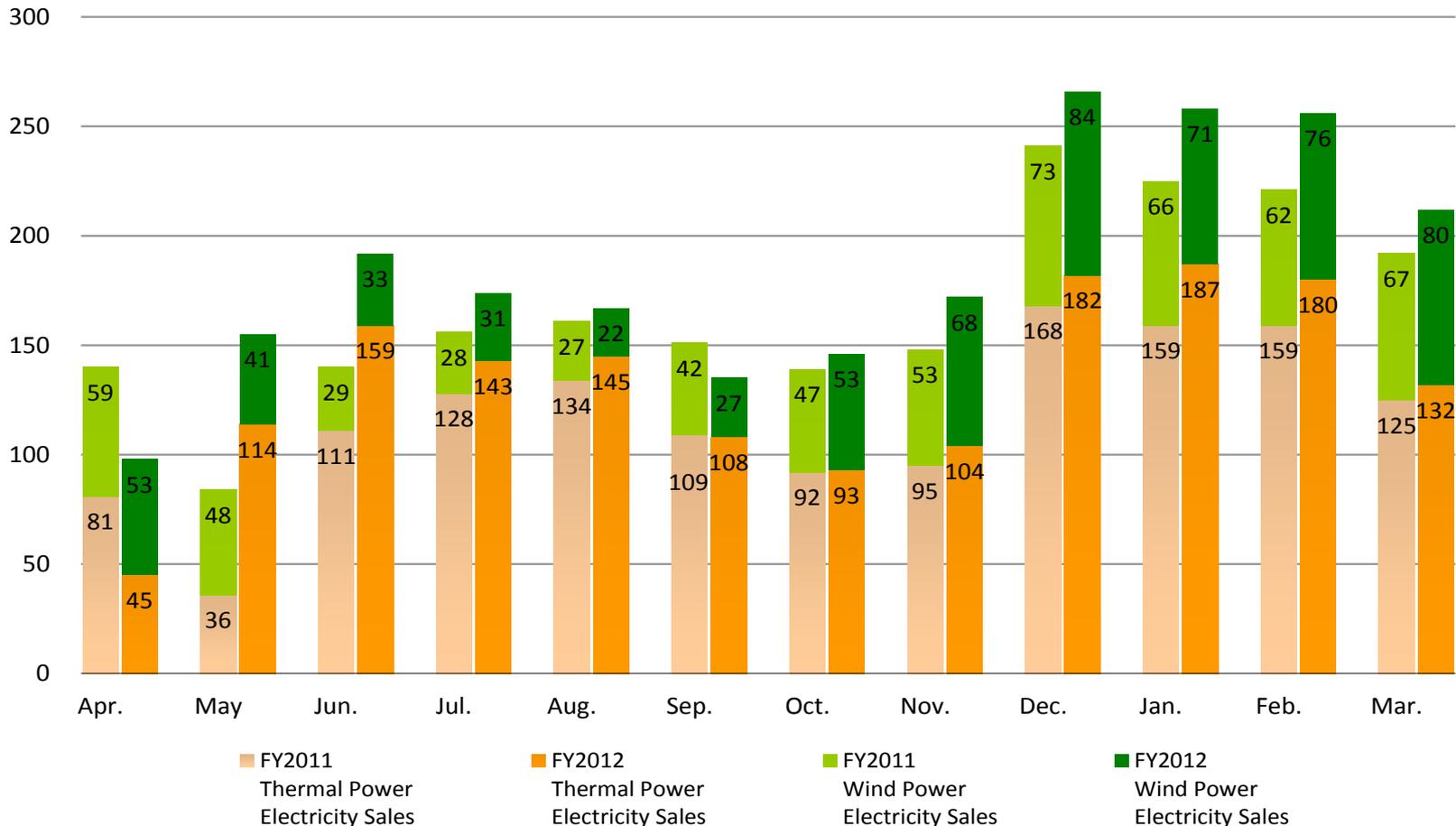
	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.-Mar.
Year-on-year (Hydro)	157%	96%	72%	98%	75%	53%	76%	89%	90%	120%	102%	83%	88%
Year-on-year (Thermal Power)	75%	99%	103%	101%	110%	113%	107%	120%	119%	94%	86%	85%	101%
Year-on-year Total	86%	98%	96%	101%	104%	101%	103%	116%	115%	96%	87%	85%	99%

(1)-6. Monthly Electricity Sales: Other Electric Power Business



- ▶ Apr. 2011 – Mar. 2012 Results (Cumulative) ⇒ 2.0B kWh
- ▶ Apr. 2012 – Mar. 2013 Results (Cumulative) ⇒ 2.2B kWh

(Million kWh)



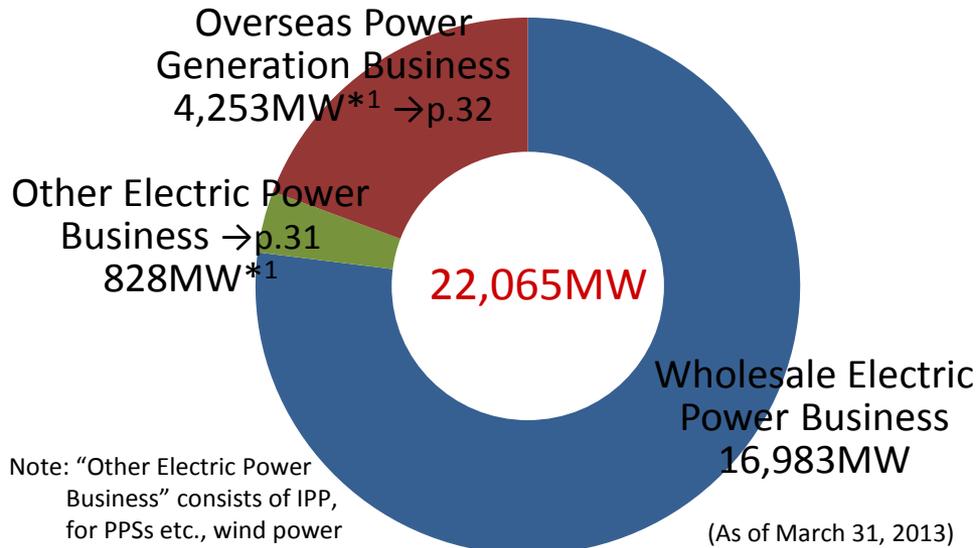
* Does not take proportion of equity holdings into account

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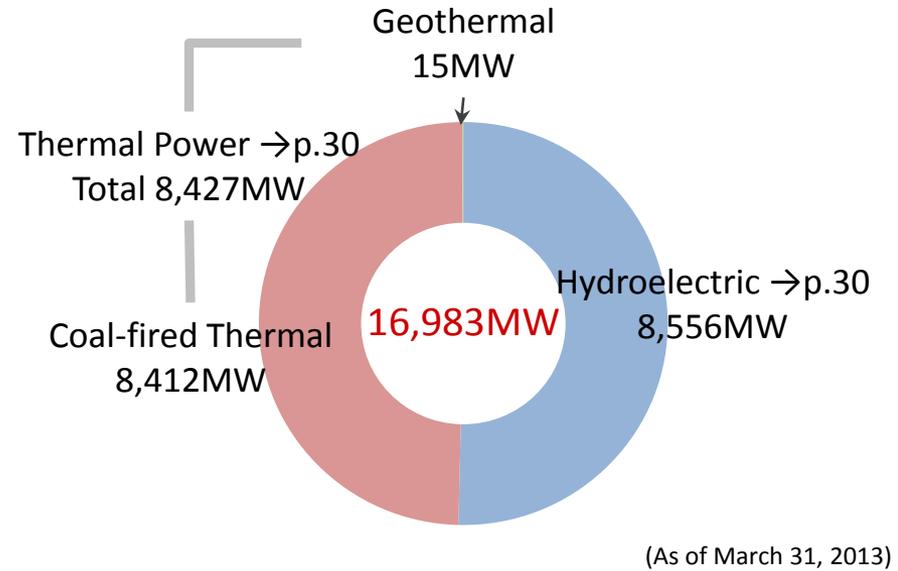
(2)-1. Overview of J-POWER Group Power Generation Facilities



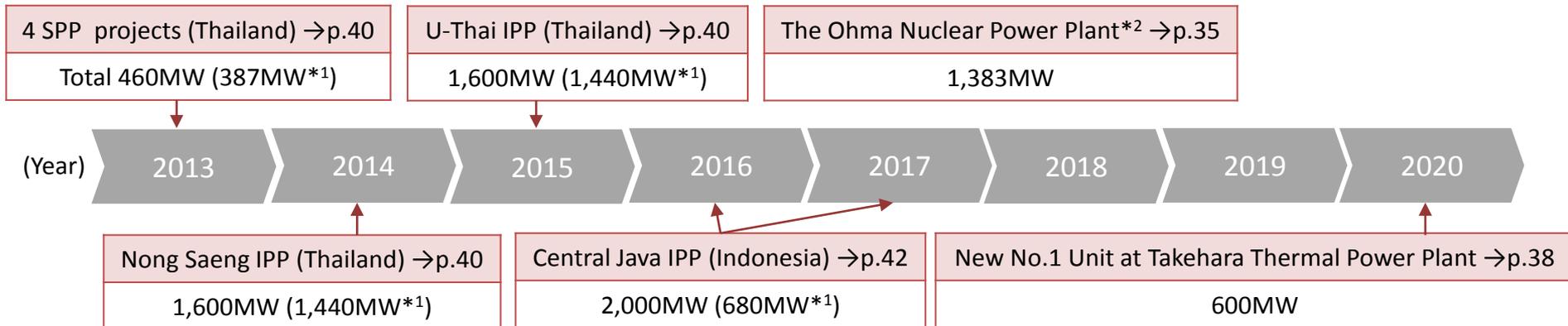
Consolidated Power Generation Capacity



Breakdown of Wholesale Electric Power Business



Major Large-scale Projects under Development



*1 Owned capacity: Capacity of each facilities is multiplied by J-POWER's Investment ratio (equity ratio).

*2 Schedule of commencement of commercial operation is to be determined.

(2)-2. Wholesale Electric Power Business Facilities (As of March 31, 2013)

Thermal: 8 power plants, 8,427MW

	Power plants (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* ¹ (Hiroshima)	No.1	1967	250
		No.2	1974	350
		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* ¹ (Nagasaki)	No.1	1990	1,000
		No.2	1997	1,000
	Ishikawa Coal (Okinawa)	No.1	1986	156
		No.2	1987	156
	Total			8,412
Geo-thermal	Onikobe (Miyagi)		1975	15

Hydroelectric: 58 power plants, 8,556MW

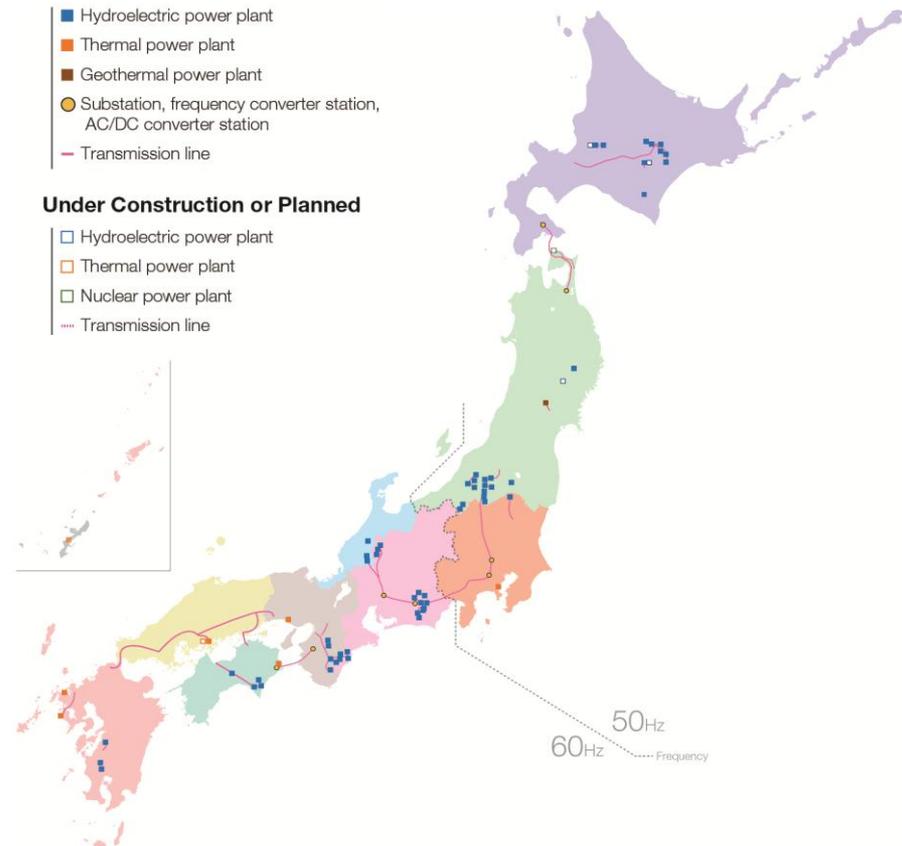
Types	Number of power plants	Capacity (MW)
Conventional	51	3,586
Pumped storage	7	4,970

Facilities

- Hydroelectric power plant
- Thermal power plant
- Geothermal power plant
- Substation, frequency converter station, AC/DC converter station
- Transmission line

Under Construction or Planned

- Hydroelectric power plant
- Thermal power plant
- Nuclear power plant
- Transmission line



* Biomass fuels (sewage sludge, etc.) ,supplied by J-POWER's affiliated companies, are burned as an admixture to coal.

(2)-3. Other Electric Power Business Facilities (As Of March 31, 2013)

IPP, for PPS etc.: 6 power plants, 496MW*

(Capacity unit: MW)

Power plants	Location	Fuel	Ownership	Output capacity
IPP				
Itoigawa	Niigata	Coal	80%	134
Tosa	Kochi	Coal	45%	150
Genex Mizue	Kanagawa	Gas oil Residue	40%	238
Subtotal				522

Power plants	Location	Fuel	Ownership	Output capacity
For PPSs etc.				
Bayside Energy Ichihara	Chiba	Gas	100%	108
Ichihara Power	Chiba	Gas	60%	110
Mihama Seaside Power Shinminato	Chiba	Gas	50%	105
Subtotal				322

Wind Power: 18 power plants, 332MW*

Wind farms	Location	Ownership	Output capacity
Sarakitomanai	Hokkaido	49%	14.9
Tomamae Winvilla	Hokkaido	100%	30.6
Shimamaki	Hokkaido	100%	4.5
Setana Seaside	Hokkaido	100%	12.0
Green Power Kuzumaki	Iwate	100%	21.0
Nikaho Kogen	Akita	67%	24.8
Hiyama Kogen	Fukushima	100%	28.0
Koriyama-Nunobiki	Fukushima	100%	66.0
Tokyo Bayside	Tokyo	100%	1.7

Wind farms	Location	Ownership	Output capacity
Irouzaki	Shizuoka	100%	34.0
Tahara Bayside	Aichi	100%	22.0
Tahara	Aichi	100%	1.98
Awara-Kitagata	Fukui	100%	20.0
Yokihi-no Sato	Yamaguchi	100%	4.5
Aso-Nishihara	Kumamoto	100%	17.5
Aso-Oguni	Kumamoto	100%	8.5
Nagasaki-Shikamachi	Nagasaki	70%	15.0
Minami Oosumi	Kagoshima	98.8%	26.0
Total			352.86

* Owned capacity: Capacity of each facilities is multiplied by J-POWER's Investment ratio (equity ratio).

(2)- 4. Overseas Power Generation Projects (As of March 31, 2013)



Projects	Type	Output capacity (MW)	Ownership	Owned capacity (MW)	Power purchaser	Validity of purchase agreement
Thailand (10 projects)		2,287		1,221		
Roi-Et	Biomass (Chaff)	10	24.7%	2	EGAT*1	21 years
Rayong	CCGT*2	112	20%	22	EGAT*1/ Companies in the industrial park	21 years
Gulf Cogeneration	CCGT*2	110	49%	54	EGAT*1/ Companies in the industrial park	21 years
Samutprakarn	CCGT*2	117	49%	57	EGAT*1/ Companies in the industrial park	21 years
Nong Khae	CCGT*2	120	49%	59	EGAT*1/ Companies in the industrial park	21 years
Yala	Biomass (Rubber Wood Waste)	20	49%	10	EGAT*1	25 years
Kaeng Khoi 2	CCGT*2	1,468	49%	719	EGAT*1	25 years
KP1	CCGT*2	110	90%	99	EGAT*1/ Companies in the industrial park	25 years
KP2	CCGT*2	110	90%	99	EGAT*1/ Companies in the industrial park	25 years
TLC	CCGT*2	110	90%	99	EGAT*1/ Companies in the industrial park	25 years
United States (10 projects)		4,486		1,438		
Tenaska Frontier	CCGT*2	830	31%	257	Exelon Generation Company, LLC	20 years
Elwood Energy	SCGT*3	1,350	25%	338	Exelon Generation Company, LLC / Constellation	Valid to 2012/2016/2017
Green Country	CCGT*2	795	50%	398	Exelon Generation Company, LLC	20 years
Birchwood	Coal	242	50%	121	Virginia Electric and Power Company	25 years
Pinelawn	CCGT*2	80	50%	40	Long Island Power Authority	Valid to 2025
Equus	SCGT*3	48	50%	24	Long Island Power Authority	Valid to 2017
Fluvanna	CCGT*2	885	15%	133	Shell Energy North America	Valid to 2024
Edgewood	SCGT*3	80	50%	40	Long Island Power Authority	Valid to 2018
Shoreham	Jet Fuel (Simple Cycle)	80	50%	40	Long Island Power Authority	Valid to 2017
Orange Grove	SCGT*3	96	50%	48	San Diego Gas & Electric	25 years

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

*2 CCGT: Combined Cycle Gas Turbine *3 SCGT: Simple Cycle Gas Turbine

(2)- 4. Overseas Power Generation Projects (As of March 31, 2013)



Projects	Type	Output capacity (MW)	Ownership	Owned capacity (MW)	Power purchaser	Validity of purchase agreement
China (5 projects)		8,475		902		
Tianshi	Coal Waste	50	24%	12	Shanxi Province Power Corporation	Renewed every year*1
Hanjiang (Xihe/Shuhe)	Hydroelectric	450	27%	122	Shaanxi Electric Power Company	Renewed*1 every year
Gemeng*2	Mainly Coal	5,885	7%	414	Shanxi Province Power Corporation	-
Hezhou	Coal	2,090	17%	355	Guanxi Power Grid Co.	Renewed*1 every year
Other country/region (6 projects)		2,196		692		
CBK (3 projects) (Philippines)	Hydroelectric	728	50%	364	National Power Corporation	25 years
Chiahui (Taiwan)	CCGT*3	670	40%	268	Taiwan Power Company	25 years
Zajaczkowo (Poland)	Wind Power	48	46.8%	22	ENERGA OBROT S.A.	15 years
Nhon Trach 2 (Vietnam)	CCGT*3	750	5%	38	Vietnam Electricity	*4

*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 15 power generation companies.

*3 CCGT: Combined Cycle Gas Turbine

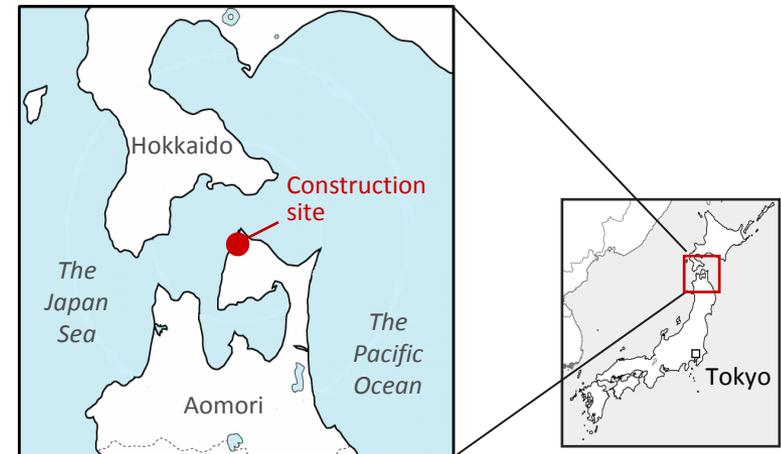
*4 The agreement is under negotiation.

(2)-5. The Ohma Nuclear Power Project

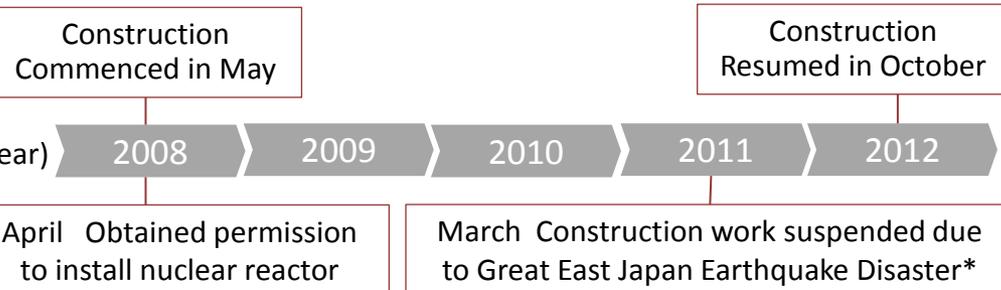
- ▶ In October 2012, we resumed construction of the Ohma Nuclear Power Plant that had been suspended after the Great East Japan Earthquake of March 2011.
- ▶ We are determined to do whatever we can to establish a safe electric power plant through ensuring that we appropriately reflect new safety standards, which will be established by the Nuclear Regulation Authority, and steadily implement safety enhancement measures where necessary.

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 progress rate (March 2011): Approx. 38%

- ▶ In light of the Fukushima Daiichi Nuclear Power Station Incident, in order to further improve power plant safety, we are ensuring implementation of measures for reinforcing safety during the construction process.
- ▶ In the future, we will further review measures for reinforcing safety (enhancement of fire protection and special safety facilities such as an emergency control room) reflective of new safety standards.

Measures for Reinforcing Safety that are being Planned*

Anti-tsunami Measures	<ul style="list-style-type: none"> ✓ Installation of seawall around major structures ✓ Creation of waterproof structures for doors in exterior walls 	<ul style="list-style-type: none"> ✓ Improvement in the watertightness of rooms housing important equipment for safety purposes ✓ Height extension of oil fences around the oil tanks
Ensuring Emergency Power Supplies	<ul style="list-style-type: none"> ✓ Installation of emergency power generators and fuel tanks on elevated ground that will not be affected by impact of tsunami ✓ Proper installation of power source cables from the emergency power generators 	<ul style="list-style-type: none"> ✓ Deployment of power supply vehicles ✓ Increase in capacity of storage batteries ✓ Additional installation of power panel on upper floor
Ensuring Ultimate Heat Removal Function in Emergencies	<ul style="list-style-type: none"> ✓ Ensure alternative water source (reinforcement of water tanks, new installation of water storage tanks, etc.) ✓ Reinforcement of alternative water infusion equipment 	<ul style="list-style-type: none"> ✓ Deployment of portable power pumps and fire engines ✓ Deployment of alternative seawater pumps ✓ Preparation of spare parts for seawater pump electric motors, etc.
Measures related to Responses to Managing Severe Accidents	<ul style="list-style-type: none"> ✓ Installation of filtered containment venting system ✓ Reinforcement of cooling of containment vessel ✓ Installation of nuclear reactor building hydrogen venting units and interior hydrogen detection units ✓ Ensure operating environment for central control room ✓ Installation of major seismic isolation building 	<ul style="list-style-type: none"> ✓ Installation of materials and equipment warehouse ✓ Reinforcement of communications systems ✓ Provision of supplies of such materials and equipment as protective clothing designed to cope with high level of radiation and creation of a radiation management system ✓ Deployment of heavy equipment for debris removal

* Already announced on August 2, 2012

(2)-6. Measures for Reinforcing Safety at the Ohma Nuclear Power Plant

Overview Diagram Measures for Reinforcing Safety that are being Planned*

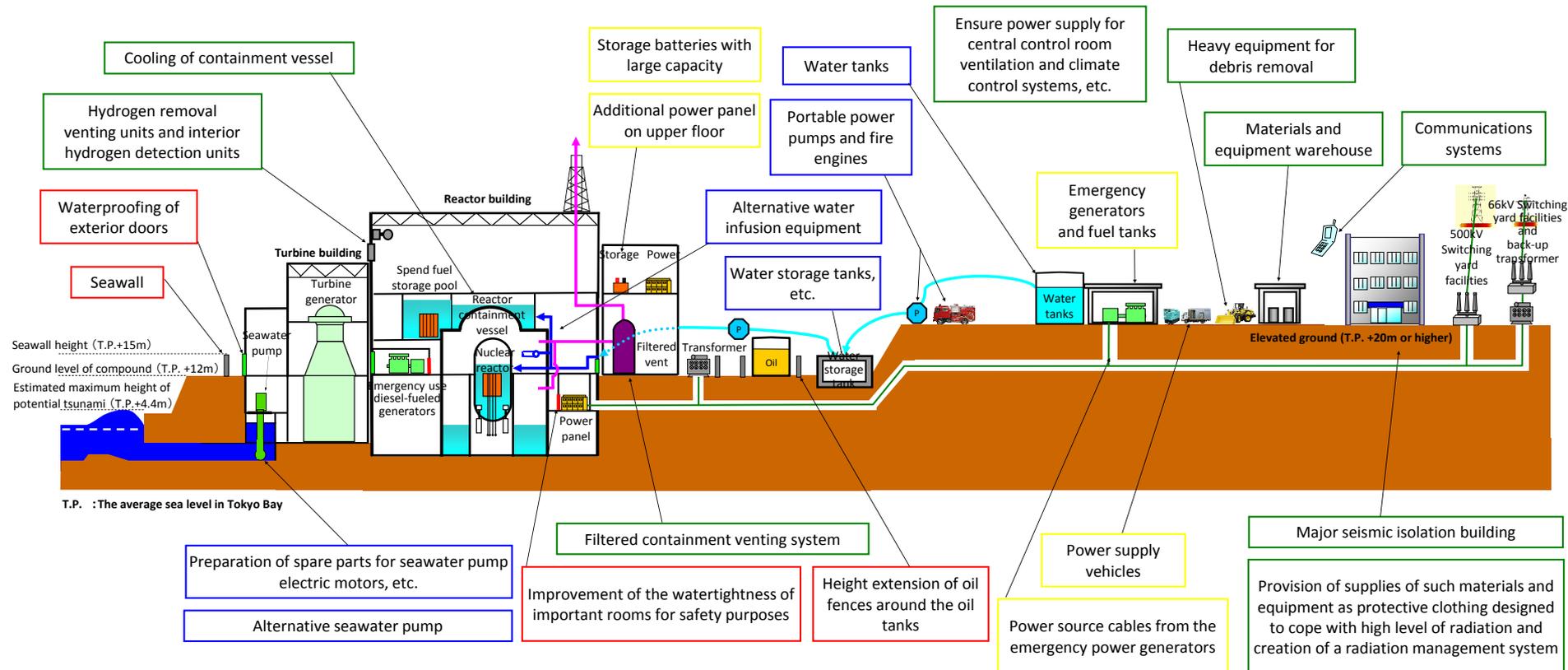
In the future, we will further review measures for reinforcing safety (enhancement of fire protection and special safety facilities such as an emergency control room) reflective of new safety standards.

Anti-tsunami Measures

Ensuring Ultimate Heat Removal Function in Emergencies

Ensuring Emergency Power Supplies

Measures related to Responses to Managing Severe Accidents



* Already announced on August 2, 2012

(2)-7. Earthquake and Tsunami Evaluation at the Ohma Nuclear Power Plant

- ▶ Ohma Nuclear Power Plant has undergone detailed geological surveys based on the earthquake-proof design guidelines that were revised in September 2006*1 and have obtained a nuclear reactor installation permit in April 2008. Construction work commenced in May of that year.

■ Earthquake

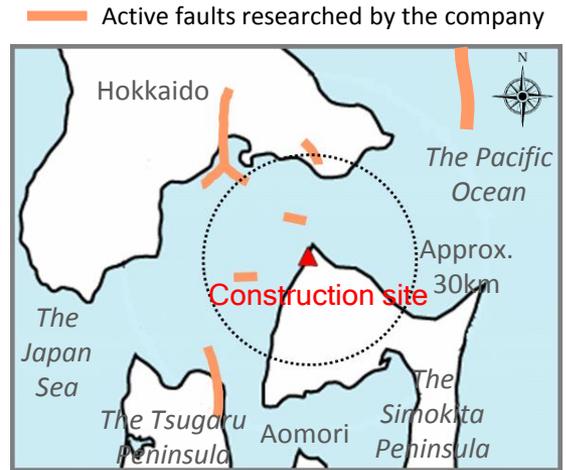
- ✓ Researched impacting earthquakes in the past within a 250km radius from the site.
- ✓ 30km radius range from the site: Implemented detailed geological surveys centered on the active faults since the late Pleistocene period (after ca. 120 to 130 thousand years ago)
- ✓ Based on research results, designed nuclear reactor facilities that considers safety margins against datum design basis earthquake Ss, which is set with consideration to uncertainty.

■ Tsunami

- ✓ Site elevation is 12m above sea level

Estimated maximum height of potential tsunami	+4.4m above sea level*2
Tsunami from the Tohoku Pacific Ocean Earthquake (Ohma Port)	+0.9m above sea level

[After the Great East Japan Earthquake] As part of measures for reinforcing safety, implemented further Tsunami countermeasures such as seawalls that is 3m in height, and waterproofing of doors in exterior walls in main buildings



*2 A value based on numerical analysis of a tsunami assumption with the gravest impact to a power plant (with its wave source in the eastern fringes of the Japan Sea). This assumption was derived by reviewing tsunamis that are assumed to have occurred in the Eastern fringes of the Japan sea, along the Japan Trench or off the coast of Chile. This value also includes uncertainty factors.

- ▶ After obtaining the permit, we are continuing independently engage in obtaining exhaustive data from research and analysis using the latest technologies and methods to further improve reliability related to earthquake and tsunami evaluations.

[Research that is in progress or completed]

- Microtopography surveys, marine terrace surface surveys, airborne gravity surveys, marine sonic prospecting of western Shimokita Peninsula
- Tsunami sediment investigation of the northwestern coast of western Shimokita Peninsula and the western coast of Tsugaru Peninsula
- Geological surveys within the site and near the site (seismic exploration, core drilling, trenching, etc.)

- ▶ In the future, we will pay close attention to trends in new safety standards and deliberations by the Nuclear Regulation Authority and carry out appropriate reviews, investigations, analysis and evaluations.

*1 The earthquake in Southern Hyogo prefecture in 1995 was the impetus for revision of the Earthquake-proof Design Inspection Guidelines related to Nuclear Reactor Facilities for Power Plants (Earthquake-proof Design Guidelines) and safety standards were enhanced as of September 2006.

(2)-8. Takehara Thermal Power Plant New Unit No.1 (Replacement) Project

▶ Units No.1 and No. 2 at the Takehara Thermal Power Plant are to be replaced by new Unit No.1, introducing cutting-edge technology.

Project Background and Targets

- ✓ Responding proactively to the issue of global warming
- ✓ Addressing the problems associated with aging facilities



- ✓ Being a step closer to a low-carbon society by improving energy utilization
- ✓ Reducing the environmental impact of SOx, NOx and particulate matter
- ➔ Contributing to stable supply by strengthening base supply capacity



Project Overview

Location	Takehara-city, Hiroshima prefecture		
Units	No.1	No.2*	No.3
Start of operation	1967	1974	1983
Capacity	250MW	350MW	700MW
Steam condition	Sub-critical		Supercritical



Unit	New No.1
Capacity	600MW
Steam condition	Ultra-supercritical

Schedule

Commenced environmental assessment on December 2010



* Converted from heavy oil-fueled boiler to coal-fired fluidized boiler in 1975

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

EAGLE* Project: Technology Development on Oxygen-blown IGCC and CO₂ Capture

Location	Wakamatsu Research Institute (Fukuoka)	Test period	Since 1995
Research results	<ul style="list-style-type: none"> ✓ Developed an oxygen-blown gasifier, and achieved the world's highest cold gas efficiency ✓ Established techniques of CO₂ capture (a chemical absorption method) with approximately 30% reduction of energy consumption 		

* EAGLE: Coal Energy Application for Gas Liquid & Electricity



Osaki CoolGen Project: Large-scale Demonstration Test on Oxygen-blown IGCC and IGFC, CO₂ Capture to Verify Total System Performance Before Commercialization

Organization	Osaki CoolGen Corporation (Ownership: J-POWER 50%, The Chugoku Electric Company Co., Ltd. 50%)
Location	The Chugoku Electric Power Company Co., Ltd. Osaki Power Station premises (Hiroshima)
Scale	166MW (Coal consumption: 1,180t/day-class)



Demonstration Tests Schedule



- Integrated Coal Gasification Combined Cycle (IGCC):
An integrated power generation system with a twin-turbine configuration; the gas produced from burning coal is used as fuel to drive a gas turbine, the exhaust gases from which are used in a steam turbine
- Integrated Coal Gasification Fuel Cell Combined Cycle (IGFC):
A coal-fired power generation highly efficient system combining fuel cells with gas and steam turbines in a triply integrated power generation configuration

(2)-10. SPP, IPP Projects under Development in Thailand

Overview

Development

7 SPP*1

Capacity: 790MW
(110MW x 5)
(120MW x 2)
Type: CCGT*2

- Projects based on the SPP Program*1 of the Thai Government
- Development of seven 100MW-class cogeneration power plants
- Sale of electricity to EGAT*3 and customers in the vicinity for a period of 25 years (steam and cold water also provided to nearby customers)
- J-POWER holds a 90% stake in 6 plants and a 67.5% stake *4 in a plant.

11/2009 Signed the PPAs
10/2010 Signed the loan agreements
01/2013 COD*5 of the first of the seven projects
10/2013 COD*5 of the last of the seven projects

Nong Seang IPP

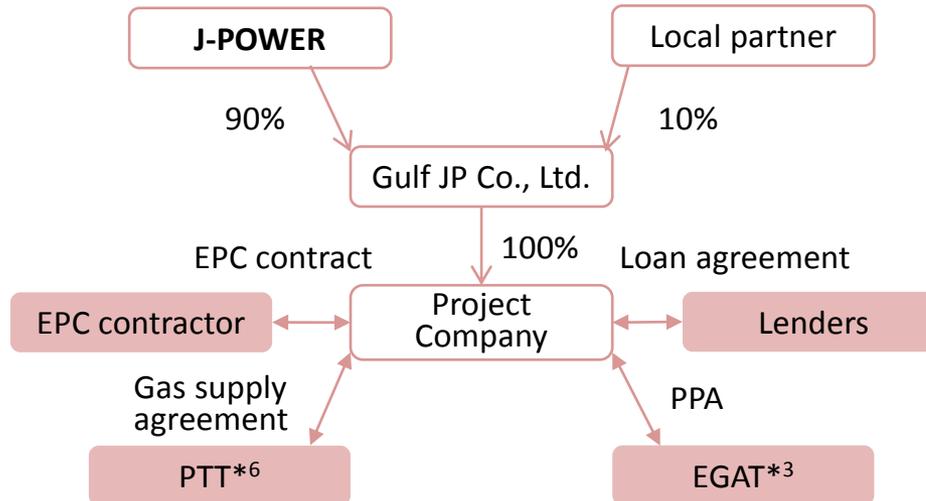
Capacity: 1,600MW
(800MW x 2 units)
Type: CCGT*2

- After startup of operations, the plants will sell electricity to EGAT*3 for a period of 25 years.

12/2007 Awarded in an international tender
10/2008 Signed the PPA
11/2011 Signed the loan agreements
06/2014 COD*5 of the 1st block
12/2014 COD*5 of the 2nd block

U-Thai IPP

Capacity: 1,600MW
(800MW x 2 units)
Type: CCGT*2



12/2007 Awarded in an international tender
10/2008 Signed the PPA
11/2012 Signed the loan agreements
06/2015 COD*5 of the 1st block
12/2015 COD*5 of the 2nd block

*1 SPP (Small Power Producers) program: The long-term power purchase scheme established by the Thai Government. This scheme promotes cogeneration systems, renewable energy, and so forth, and aims at reducing the import and use of fuel oil. EGAT guarantees the purchase of electricity generated from eligible suppliers up to 90MW of capacity.

*2 CCGT: Combined Cycle Gas Turbine

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

*4 As for NLL project of 7 SPP Projects, a part of its stake was sold to a operating company of its industrial park on January 2013.

*5 COD: Commercial operation date

*6 PTT: State-owned gas and oil company in Thailand

(2)-10. SPP, IPP Projects under Development in Thailand

Nong Saeng IPP (2014, 70%)



NK2 (Oct. 2013, 90%)



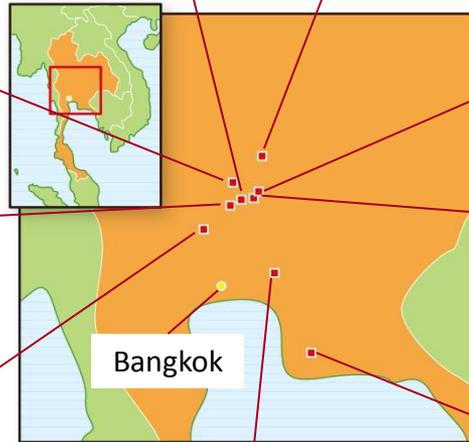
TLC (Mar. 2013, in operation)



KP2 (Feb. 2013, in operation)



U-Thai IPP (2015, 20%)



KP1 (Jan. 2013, in operation)



CRN (Jul. 2013, 90%)



NNK (Apr. 2013, in operation)



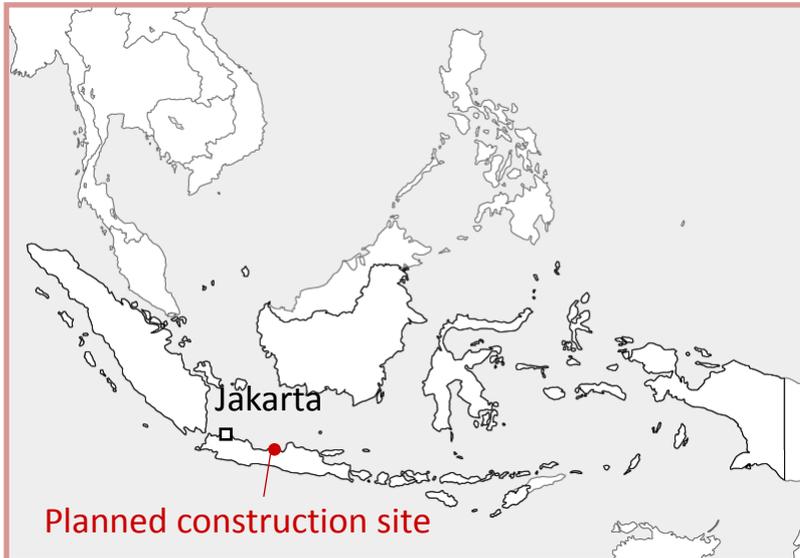
NLL (May 2013, 90%)



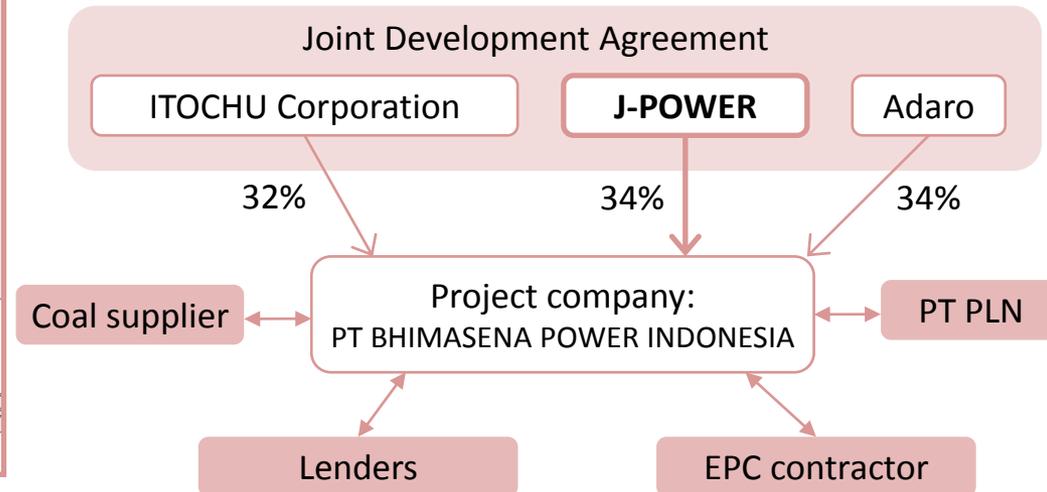
(2)-11. Central Java IPP Project in Indonesia

Type and output	Overview	Current status
Type: Coal-fired (USC*) Output: 2,000 MW (1,000MW x 2 units)	<ul style="list-style-type: none"> • 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 on the island of Java. • After startup of operation, the plant will sell electricity to Indonesia's state-owned power utility (PT PLN(Persero)) for a period of 25 years. 	✓ The start of construction has been delayed since acquisition of the power plant site is still pending.

*USC: Ultra -Supercritical



Outline of the scheme



(2)-12. Renewable Power Projects under Development

Hydroelectric: 3 power plants, 31.47MW

Power plants	Location	Output Capacity(MW)	Start of operation	Status
Isawa No.1	Iwate	14.2	Jul. 2014	Under construction
Kuttari	Hokkaido	0.47	Apr. 2015	Under preparation of construction
Shinkatsurazawa	Hokkaido	16.8	Jun. 2019	Under preparation of construction

Wind Power: 2 wind farms, 48.0MW

Wind farms	Location	Ownership	Output Capacity(MW)	Start of operation	Status
Kaminokuni	Hokkaido	100%	28.0	Mar. 2014	Under construction
Minami Ehime (Tentative name)	Ehime	100%	20.0	Sep. 2014	Under construction

Geo-thermal: 1 power plant, 42MW-class

Power plant	Location	Ownership	Output Capacity(MW)	Start of operation	Status
Wasabizawa (Tentative name)	Akita	50%	42.0-class	2020	In the process of environmental impact assessment

(2)-13. Coal Mine Projects in Australia

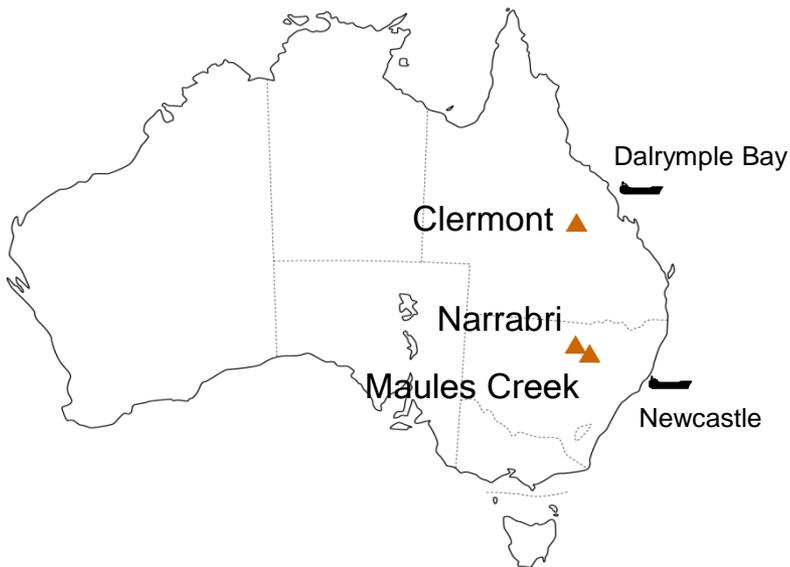
Coal Mine Projects

Coal mine	Location	Loading port	Production volume in 2012* ¹	Ownership* ²	Start of commercial production
Clermont	Queensland	Dalrymple Bay	8.27 Million t (Approx. 12 million t/yr)	15%	2010
Narrabri	New South Wales	Newcastle	1.43 Million t (Approx. 6 million t/yr)	7.5%	2010
Maules Cleek	New South Wales	Newcastle	— (Approx. 10.7 million t/yr)	10%	2014 (scheduled)

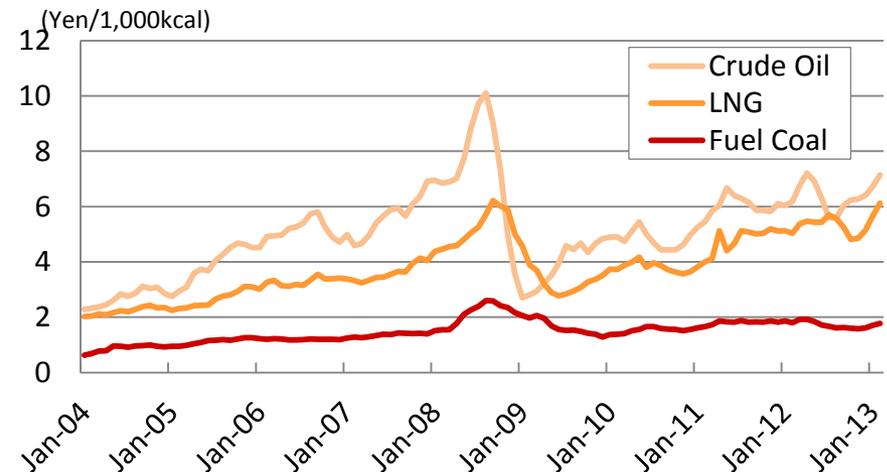
*1 The production volumes in parentheses represent figures for anticipated peak production.

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

Note: Blair Athol Coal Mine in which J-POWER Group holds a 10% stake finished production on November 2012.



Calorific Unit Price by Fossil Fuel (Imports) in Japan



Data charted up to February 2013
Source: The Institute of Energy Economics, Japan



電源開発株式会社

<http://www.jpowers.co.jp/>