

# **Financial Summary**

## **FY2017**

**(April 1, 2017 – March 31, 2018)**

**April 26, 2018**



**Tohoku Electric Power Co., Inc.**

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## References

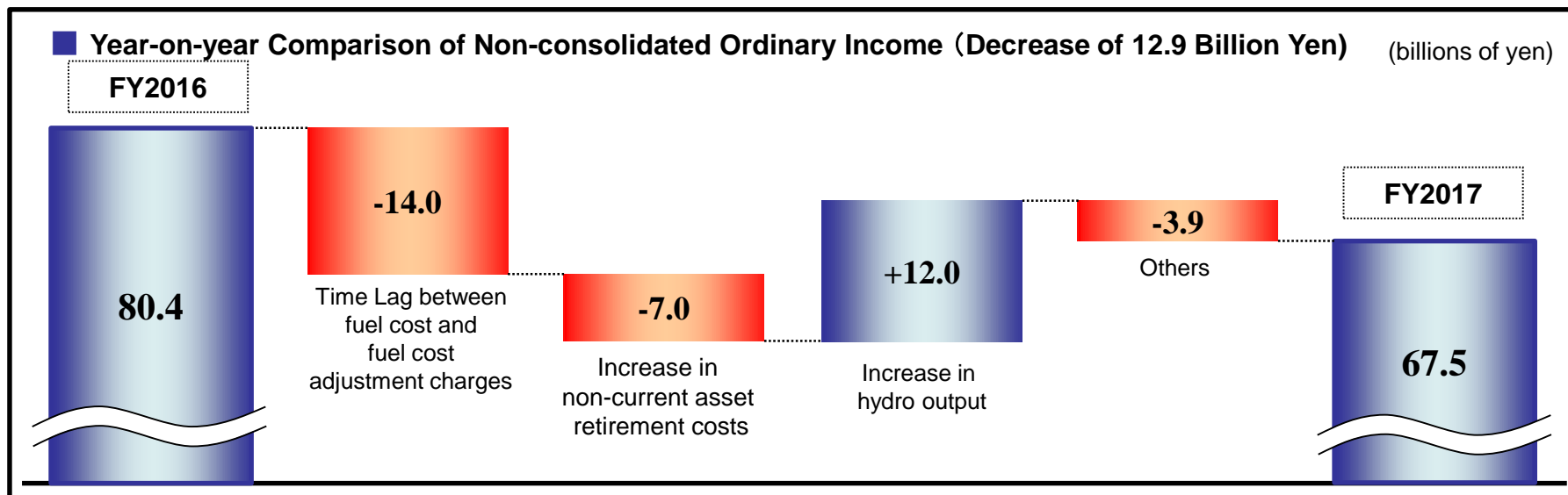
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# FY2017 Financial Results

(billions of yen)

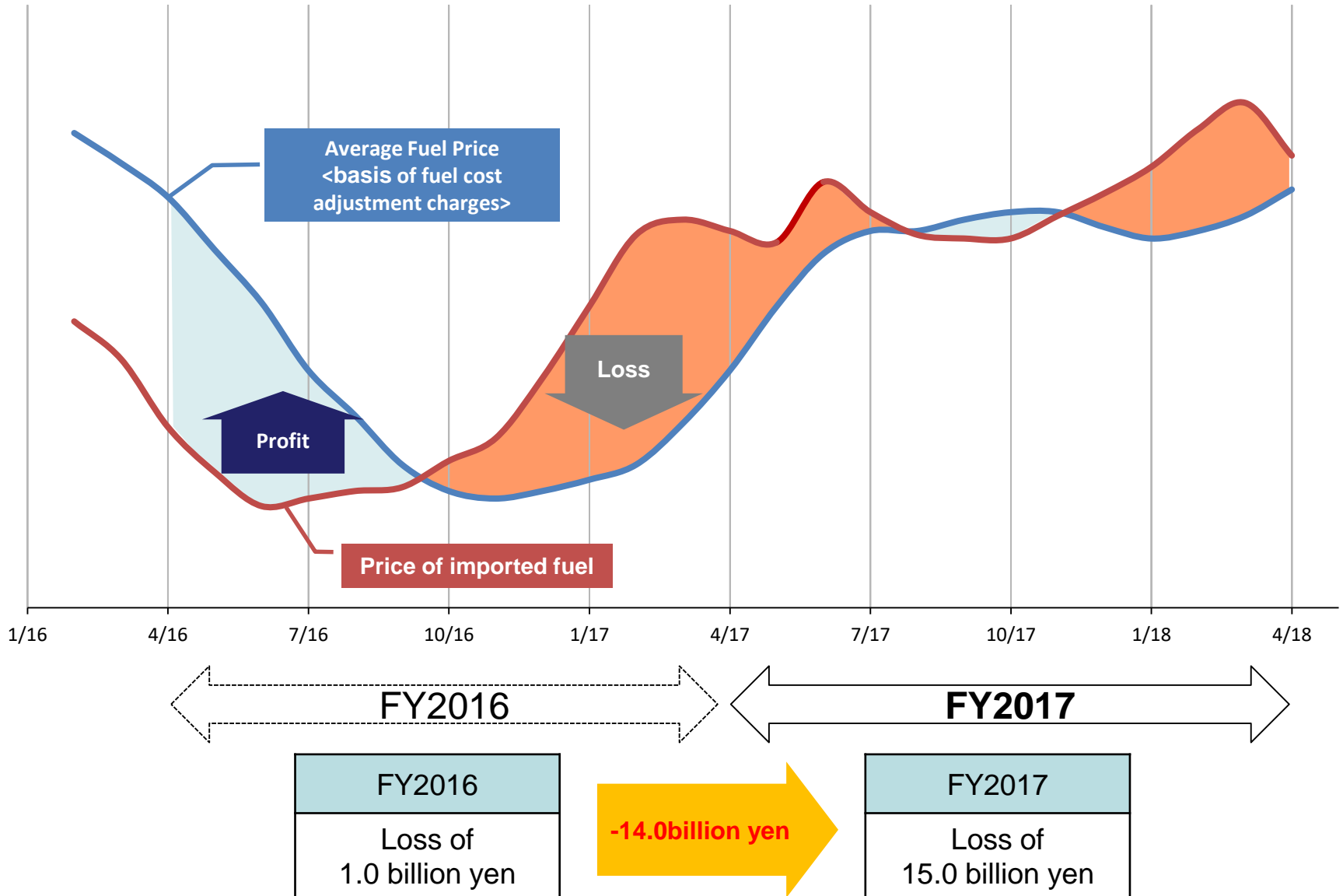
	Consolidated (A)			Non-consolidated (B)			(A) / (B) (times)	
	FY2017	FY2016	Change	FY2017	FY2016	Change	FY2017	FY2016
Operating Revenue	2,071.3	1,949.5	121.7	1,869.3	1,738.6	130.6	1.11	1.12
Operating Income	107.6	130.4	(22.7)	82.3	100.1	(17.7)	1.31	1.30
Ordinary Income	88.4	104.7	(16.2)	67.5	80.4	(12.9)	1.31	1.30
Net Income or Net Income Attributable to Owners of Parent	47.2	69.9	(22.7)	41.8	59.9	(18.0)	1.13	1.17

	Mar. 31, 2018	Mar. 31, 2017	Change	Mar. 31, 2018	Mar. 31, 2017	Change
Equity Ratio	17.3%	16.8%	0.5%	16.3%	16.0%	0.3%



# (Reference) Time Lag between fuel cost and fuel cost adjustment charges

## Image of Time Lag Effect



(GWh)

		FY2017 (A)	FY2016 (B)	Comparison	
				(A) - (B)	(A) / (B)
Electricity Generated and Purchased	Own Generated power	65,776	64,160	1,616	102.5%
	Hydro	8,412	6,914	1,498	121.7%
	Thermal	56,522	56,346	176	100.3%
	Nuclear	-	-	-	-
	Renewables	842	900	(58)	93.5%
	Purchased Power (Net)*	20,393	22,923	(2,530)	89.0%
	Power Interchanges (Net)*	(7,704)	(5,991)	(1,713)	128.6%
	Used at Pumped Storage	(88)	(47)	(41)	189.5%
	Total, Generated and Purchased*	78,377	81,045	(2,668)	96.7%
Electricity Sales [Retail]	Lighting (Residential)	23,889	24,004	(115)	99.5%
	Power	48,114	50,255	(2,141)	95.7%
	Total of electricity sales	72,003	74,258	(2,255)	97.0%

\*: "Purchased Power (Net)", "Power Interchanges (Net)" and "Total, Generated and Purchased" include projected volume.

# Major Factors & Sensitivity to Major Factors (Non-consolidated)

Major Factors	FY2017 (A)	FY2016 (B)	Change (A) - (B)
Crude Oil CIF Price (\$/bbl.)	57.0	47.5	9.5
Exchange Rate (¥/\$)	111	108	3
Hydro Power Flow Rate (%)	108.3	85.6	22.7
Nuclear Power Utilization Rate (%)	-	-	-

(billions of yen)

Sensitivity to Major Factors	FY2017 (A)	FY2016 (B)	Change (A) - (B)
Crude Oil CIF Price (per \$1/bbl.)	3.6	3.9	(0.3)
Exchange Rate (per ¥1/\$)	2.9	2.4	0.5
Hydro Power Flow Rate (per 1%)	0.7	0.6	0.1
Nuclear Power Utilization Rate (per 1%)	1.1	0.9	0.2

# Balance Sheets (Consolidated)

(billions of yen)

	Mar. 31, 2018 (A)	Mar. 31, 2017 (B)	Change (A) - (B)	Major factors for change
Total Assets	4,222.1	4,145.9	76.2	
Non-current Assets	3,502.5	3,475.4	27.1	
Current Assets	719.6	670.5	49.1	Notes and accounts receivable – trade : 14.9
Total Liabilities	3,423.4	3,390.3	33.1	
Non-current Liabilities	2,411.1	2,547.8	(136.6)	Long-term loans payable : (132.2)
Current Liabilities	1,011.1	842.4	168.7	Current portion of non-current liabilities : 111.4 Other advance : 24.0
Reserve for fluctuation in water levels	1.1	-	1.1	
Net Assets	798.7	755.6	43.0	Retained earnings : 27.1

Interest-Bearing Liabilities	2,424.4	2,435.5	(11.0)	Loans : (40.0) CP : (1.0) Bonds : 30.0
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	FY2017 (A)	FY2016 (B)	Change (A) - (B)
Capital Expenditure	303.4	300.9	2.5



(billions of yen)

	FY2017 (A)	FY2016 (B)	Comparison	
			(A) - (B)	(A) / (B)
Operating Revenue	2,071.3	1,949.5	121.7	106.2%
Electric utility	1,854.3	1,727.2	127.1	107.4%
Other business	216.9	222.3	(5.3)	97.6%
Operating Expenses	1,963.7	1,819.1	144.5	107.9%
Electric utility	1,763.7	1,618.7	145.0	109.0%
Other business	199.9	200.4	(0.4)	99.8%
Operating Income	107.6	130.4	(22.7)	82.6%
Non-operating income	6.3	6.2	0.0	101.6%
Non-operating expenses	25.5	31.9	(6.3)	80.0%
Ordinary Income	88.4	104.7	(16.2)	84.5%
Provision or reversal of reserve for fluctuation in water levels	1.1	-	1.1	-
Extraordinary loss	14.9	-	14.9	-
Income taxes	20.2	28.3	(8.1)	71.4%
Net income attributable to non-controlling interests	4.9	6.4	(1.4)	77.0%
Net Income Attributable to Owners of Parent	47.2	69.9	(22.7)	67.5%

(billions of yen)

	FY2017 (A)	FY2016 (B)	Change (A) - (B)	Major factors for change
Cash Flows from Operating Activities	324.0	278.1	45.8	
Cash Flows from Investing Activities	(273.9)	(256.3)	(17.5)	
Cash Flows from Financing Activities	(36.2)	(55.9)	19.6	Bonds : 10.0 Loan: 23.7 CP: (9.0)
Net Cash Flows	13.9	(34.2)	48.1	
Cash and cash equivalents at end of the period	242.1	228.2	13.9	
Free Cash Flows*	71.1	44.5	26.6	

\*: Our definition;

Free Cash Flows = (Cash Flows from Operating Activities) + (Cash Flows from Investing Activities) – (Interest and dividend income) – (Interest expenses)

(billions of yen)

	FY2017 (A)	FY2016 (B)	Change (A) - (B)
<b>Sales*1</b>	2,364.5	2,242.2	122.2
	2,071.3	1,949.5	121.7
Electric Utility	1,857.6	1,730.2	127.3
	1,854.3	1,727.2	127.1
Construction	288.4	296.8	(8.4)
	128.9	138.0	(9.1)
Gas	37.6	32.8	4.8
	30.8	26.0	4.7
IT	47.1	47.7	(0.5)
	19.6	20.0	(0.3)
Others	133.7	134.5	(0.8)
	37.5	38.2	(0.6)

\*1: Lower is net sales to outside customers.

	FY2017 (A)	FY2016 (B)	Change (A) - (B)
<b>Segment Income [Operating Income]</b>	109.9	132.3	(22.3)
Electric Utility	84.0	101.2	(17.1)
Construction	15.1	16.6	(1.5)
Gas	1.8	2.0	(0.1)
IT	1.9	4.6	(2.6)
Others	6.8	7.7	(0.8)

**【 Major Consolidated Subsidiaries 】**<sup>\*2</sup>

(billions of yen)

	FY2017		Year-on-year	
	Sales	Operating Income	Sales	Operating Income
<b>[ Electric Utility ]</b>				
Sakata Kyodo Power Co., Ltd.	38.1	0.3	5.2	0.1
Tohoku Sustainable & Renewable Energy Co., Inc.	10.1	1.5	1.2	0.1
<b>[ Construction ]</b>				
Yurtec Corp.	203.7	9.9	(12.8)	(2.5)
Tohoku Electric Engineering & Construction Co., Inc.	65.5	3.1	1.2	0.4
<b>[ Gas ]</b>				
Nihonkai LNG Co., Ltd.	13.5	0.7	0.6	(0.1)
<b>[ IT ]</b>				
Tohoku Intelligent Telecommunication Co., Inc.	23.0	1.7	(0.6)	(1.0)
Tohoku Information Systems Co., Inc.	25.5	1.4	4.2	0.3
<b>[ Others ]</b>				
Kitanihon Electric cable Co., Ltd.	27.6	0.0	(1.2)	(0.1)

\*2: The amounts before elimination of inter-company transaction

# Balance Sheets (Non-consolidated)

(billions of yen)

	Mar. 31, 2018 (A)	Mar. 31, 2017 (B)	Change (A) - (B)	Major factors for change
Total Assets	3,906.4	3,838.8	67.6	
Non-current Assets	3,370.6	3,340.1	30.5	
Current Assets	535.7	498.7	37.0	Accounts receivable-trade : 15.0
Total Liabilities	3,269.6	3,224.9	44.6	
Non-current Liabilities	2,337.0	2,456.5	(119.4)	Long-term loans payable : (130.4)
Current Liabilities	931.4	768.4	163.0	Current portion of non-current liabilities : 111.9 Other advances : 23.9
Reserve for fluctuation in water levels	1.1	-	1.1	
Net Assets	636.8	613.8	22.9	Retained earnings : 21.7

Interest-Bearing Liabilities	2,402.6	2,413.2	(10.5)	Loans : (39.5) CP : (1.0) Bonds : 30.0
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	FY2017 (A)	FY2016 (B)	Change (A) - (B)
Capital Expenditure	275.9	271.3	4.6

(billions of yen)

		FY2017 (A)	FY2016 (B)	Comparison		Major factors for change
				(A) - (B)	(A) / (B)	
Revenue	Revenue from Electricity Sales	1,426.2	1,387.6	38.5	102.8%	
	Lighting (Residential)	587.3	558.4	28.9	105.2%	
	Power	838.8	829.1	9.6	101.2%	
	Sales of power to other utilities and other companies	209.4	160.7	48.7	130.3%	Increase in sales of power on Japan Electric Power Exchange
	Grant under Act on Purchase of Renewable Energy Sourced Electricity	149.3	131.4	17.9	113.6%	Increase in purchased volume from solar
	Other revenue	93.2	69.5	23.6	134.0%	
	[Operating Revenue]	[ 1,869.3 ]	[ 1,738.6 ]	[ 130.6 ]	[ 107.5% ]	
	Total revenue	1,878.3	1,749.3	128.9	107.4%	
Expenses	Personnel	152.5	146.9	5.5	103.8%	
	[Amortization of actuarial gain or loss]	[ 14.8 ]	[ 11.7 ]	[ 3.0 ]	[ 125.5% ]	
	Fuel	349.9	302.4	47.5	115.7%	Increase in thermal fuel expenses
	Maintenance	189.5	192.2	(2.6)	98.6%	
	Depreciation	203.1	206.5	(3.3)	98.4%	
	Power purchased from other utilities and other companies	450.9	391.3	59.5	115.2%	Increase in purchased volume from solar
	Interest	21.4	23.9	(2.4)	89.8%	
	Taxes, etc.	84.2	81.6	2.6	103.2%	
	Nuclear power back-end cost	7.3	7.7	(0.4)	94.6%	
	Levy under Act on Purchase of Renewable Energy Sourced Electricity	158.7	137.4	21.2	115.5%	Increase by a price revision of renewable energy surcharge
	Other expenses	192.8	178.6	14.1	107.9%	Increase in non-current asset retirement costs
	Total expenses	1,810.7	1,668.9	141.8	108.5%	
	[Operating Income]	[ 82.3 ]	[ 100.1 ]	[ (17.7) ]	[ 82.3% ]	
	Ordinary Income	67.5	80.4	(12.9)	83.9%	
	Provision of reserve for fluctuation in water levels	1.1	-	1.1	-	
	Extraordinary gain	5.5	-	5.5	-	Sales of subsidiaries and affiliates' stocks
	Extraordinary loss	14.6	-	14.6	-	Impairment losses relating to abolitions of emergency power sources
	Income taxes	15.5	20.5	(5.0)	75.6%	
	Net Income	41.8	59.9	(18.0)	69.8%	



## Financial Forecast for FY2018

(billions of yen)

	Consolidated			Non-consolidated		
	FY2018 Forecast (A)	FY2017 Result (B)	Change (A) - (B)	FY2018 Forecast (a)	FY2017 Result (b)	Change (a) - (b)
Operating Revenue	2,140.0	2,071.3	68.7	1,940.0	1,869.3	70.7
Operating Income	98.0	107.6	(9.6)	74.0	82.3	(8.3)
Ordinary Income	80.0	88.4	(8.4)	60.0	67.5	(7.5)
Net Income or Net Income Attributable to Owners of Parent	50.0	47.2	2.8	43.0	41.8	1.2

## 【 Major Factors and Sensitivity Analysis】

【Major Factors】	FY2018 Forecast	FY2017 Result
Electricity Sales [Retail] (TWh)	Approx. 69.5	72.0
Crude Oil CIF (\$/bbl.)	Approx. 65	57.0
FX Rate (¥/\$)	Approx. 110	111

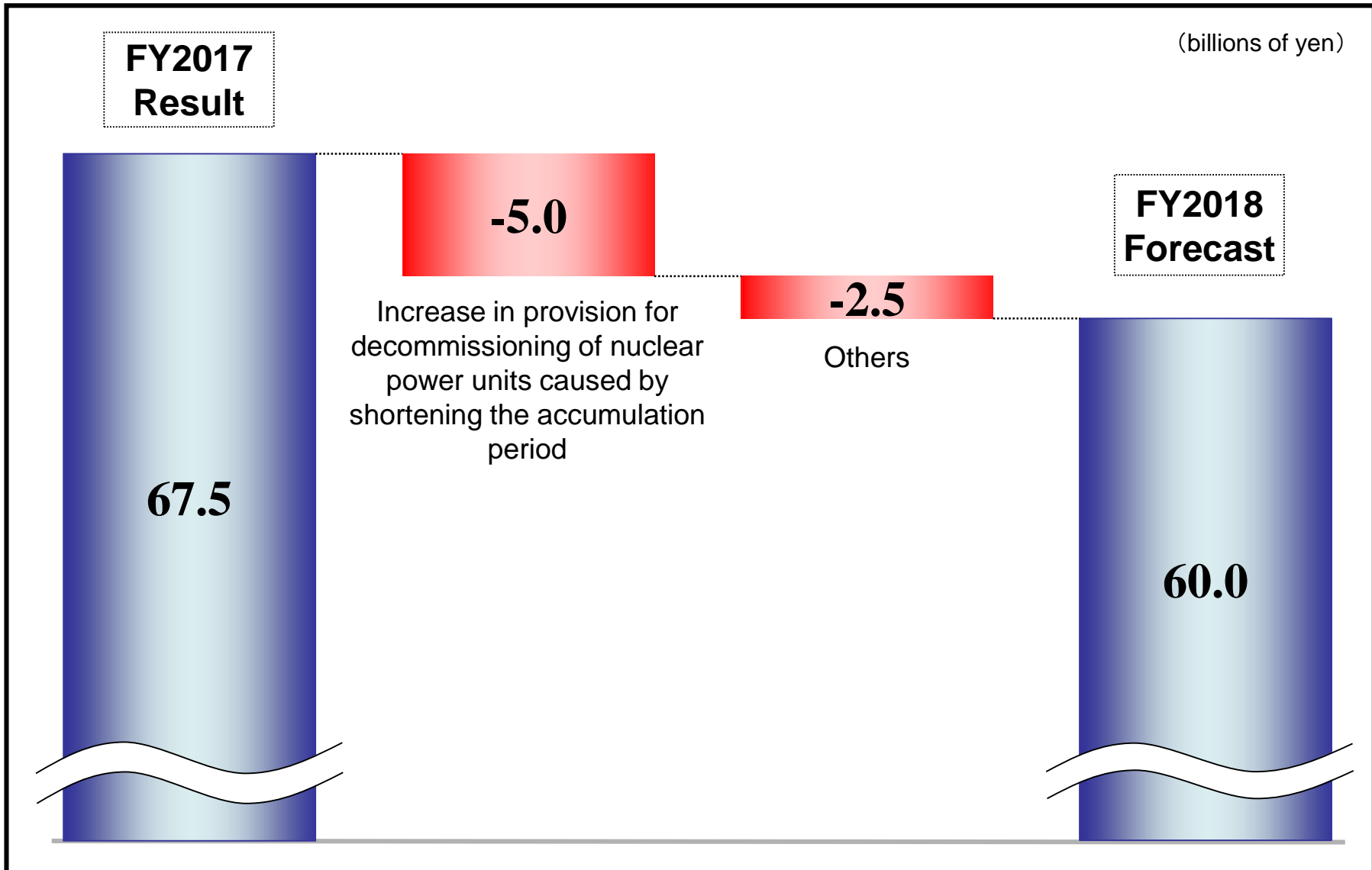
【Sensitivity Analysis】	
Crude Oil CIF Price (per \$1/bbl.)	Approx. 3.7 billion yen
FX Rate (per ¥1/\$)	Approx. 3.2 billion yen

## Dividend Per Share

	Interim	Year-end	Annual
FY2017	20 yen	20 yen	40 yen
FY2018 (forecast)	20 yen	20 yen	40 yen



■ Factors for Change in Non-consolidated Ordinary Income



# Topics



## ■ Focal Points for 2018

- In 2017, we steadily implemented the measures stated in the Tohoku EPCO Group Mid-Term Management Policies (FY2017 to FY2020) formulated in January 2017.
- Meanwhile, the business environment is becoming increasingly harsh, including intensifying competition resulting from full liberalization of retail market and changing power supply and demand structure due to depopulation and expansion of the use of renewables.
- In 2018, in light of such situations we will expedite our initiatives to expand our business focusing on the following:
  - i. Further enhancing the competitiveness in power sales
  - ii. Making steady efforts to restart nuclear power reactors
  - iii. Cultivating new business opportunities for future growth
  - iv. Changing corporate structure to prevail against competition

### Mid-Term Management Policies (FY2017 to FY2020)

#### [Basic Stance]

We see new opportunities ahead to meet challenges and seek further growth

- Focal point 1 Solutions to satisfy the needs of the customers and communities we serve
- Focal point 2 Seeking new business opportunities for growth
- Focal point 3 Establishing solid business foundations with renovation

#### [Financial Target]

Consolidated Equity Ratio of 25% or greater (30% in the future)

#### [Quantitative Target]

	FY2020	FY2030
Power Sales (Increment including sales beyond our franchise area and wholesale)	+3.5 TWh	+15 TWh
Overseas Power Generating Business Net Capacity	600 MW	1,200 MW
Gas Sales	450 kt	600 kt

### Focused Initiatives for 2018

Further enhancing the competitiveness in power sales

Making steady efforts to restart nuclear power reactors

Cultivating new business opportunities for future growth

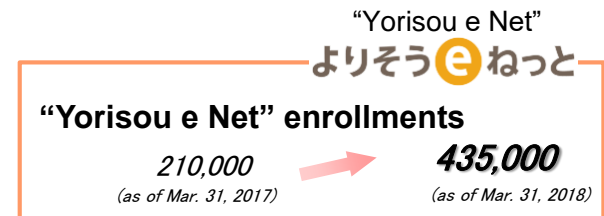
Changing corporate structure to prevail against competition

**We have been developing our rate plans and services to be the first choice of power company.**

## ■ Major Efforts in Our Franchise Area

### < Services for Residential Customers >

- Newly providing “Yorisou plus family value plan” and package deal combining our electricity with LPG supply, Internet service, and security services
- Enhancing our members-only website “Yorisou e Net”



### < Services for Business Customers >

- Further driving total energy solutions, such as acquiring 100% ownership of Tohoku Energy Service Co., Inc. in April 2017
- Promoting the widespread use of environmentally-friendly and energy-saving heat pump devices to satisfy customers’ needs



HEATEDGE\* jointly developed with Toshiba Carrier Corp., air-cooled heat pump heat source with excellent heating performance

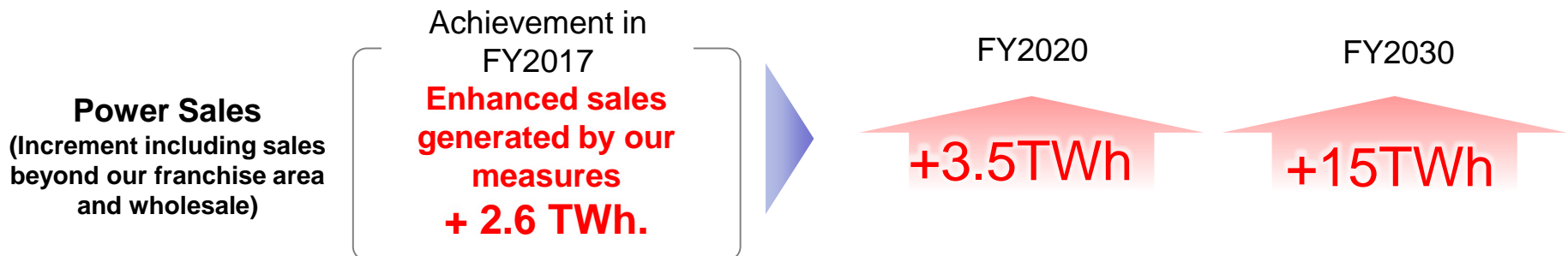
\*: It has won both “FY2017 Environment Minister’s Award for Global Warming Prevention Activity” and “FY2017 Grand Prize for Excellence in Energy Efficiency and Conservation in Product Category & Business Model Category, Director General’s Prize, the Agency for Natural Resources and Energy. “

## ■ Major Efforts beyond Our Franchise Area

- Actively deploying our sales strategy for high-voltage and extra high-voltage customers in the Kanto area centering on Northern Kanto through [Synergia Power Co., Ltd.](#), a joint company of Tohoku EPCO and TOKYO GAS Co., Ltd.
- [Investing in Tokyu Power Supply Co., Ltd.](#) which sells electricity in the metropolitan area in March 2018. With cooperative deployment, we are expanding our sales beyond our franchise area.
- [Updated our rate plan for Tokyo metropolitan residents, “Yorisou Denki”](#) in January 2018.

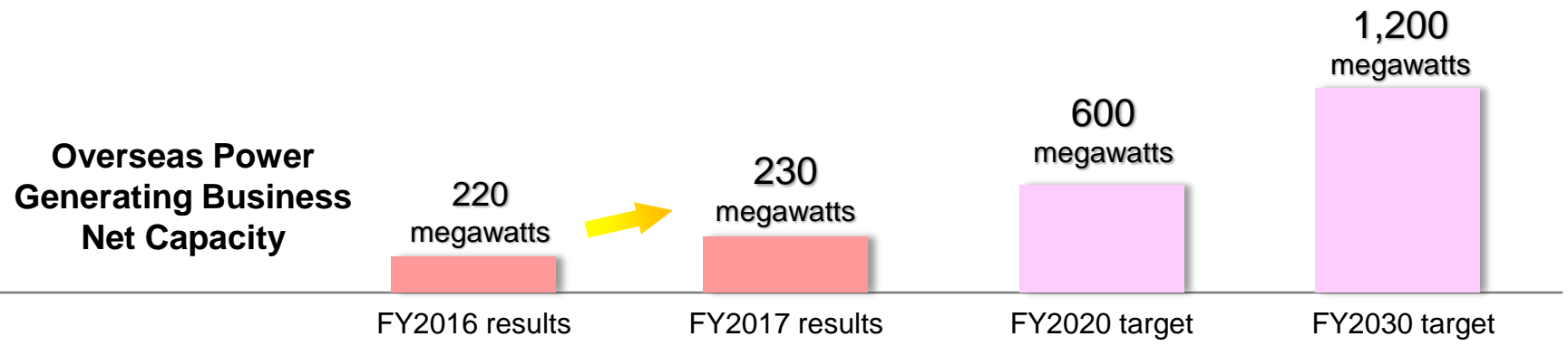
## ■ Progress of Our Quantitative Target Set in Our Mid-Term Management Policies

- While electric power sales grow at a sluggish pace since the full retail market liberalization, we endeavor to expand our sales beyond our service area and wholesale supply.



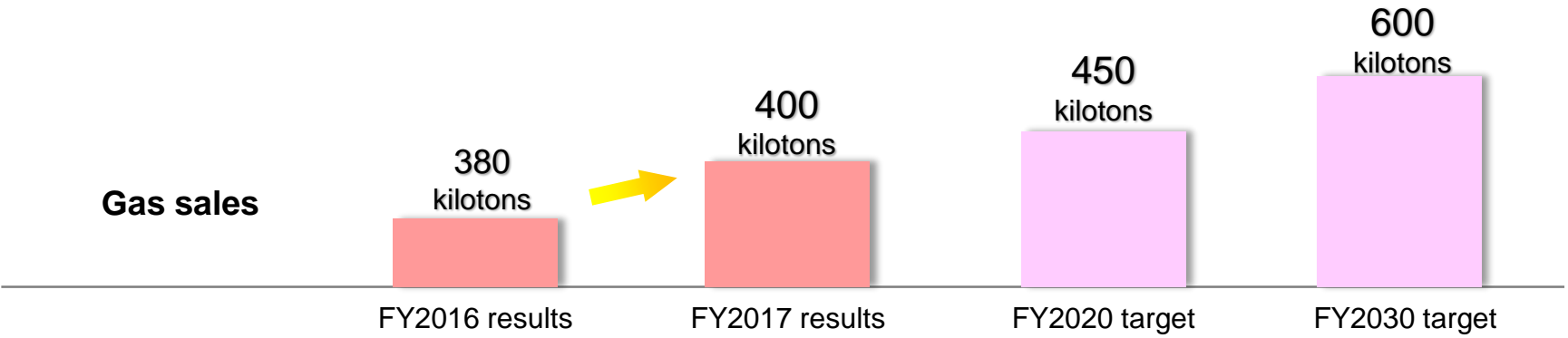
## Major Efforts in Overseas Business

- [Participating in the Rantau Dedap Geothermal Power Project in South Sumatra, Indonesia](#), from March 2018. With a specific focus on North and Central America and South East Asia, we will continue expanding our overseas power generating businesses to increase profitability.



## Major Efforts in Gas Supply Business

- [Supplying LNG to Toyota Motor East Japan, Inc. and Denso Iwate Corp. in an industrial complex in Iwate Prefecture](#) from FY2017. We will also start operation of our LNG shipping facilities at Shin-Sendai Thermal Power Station in the latter half of FY2018 to expand our gas sales volume.



# Making Steady Efforts to Restart Nuclear Power Reactors (1/3)

## ■ Current Status of Nuclear Power Reactors

- We submitted applications for conformity assessments for Onagawa Nuclear Power Station Unit 2 (Onagawa Unit 2) and Higashidori Nuclear Power Station Unit 1 (Higashidori Unit 1). We, based on the comments stated in conformity assessment meetings, have been implementing construction work on safety measures with design modification considered to be important to enhance safety.
- Concerning Onagawa Unit 2, we aimed to complete construction work on safety measures by the latter half of FY2018. However, given the progress of conformity assessments and construction work, we reassessed the construction schedule and intend to complete construction work in FY2020.
- Concerning Higashidori Unit 1, given the progress of conformity assessments, we expect it will take a certain period of time before completion, considering estimated completion date.

## <Current Status of Conformity Assessments>



Onagawa Unit 2	Higashidori Unit 1
<p>[Earthquake/Tsunami-related assessment ]</p> <ul style="list-style-type: none"> <li>(1) The design-basis earthquake ground motions (Ss) , conceivable maximum tsunami, faults within and around the premises, and effects of volcanoes were judged appropriate.</li> <li>(2) Next agenda will be the stability evaluations of foundation and slope.</li> </ul> <p>[Plant-related assessment ]</p> <ul style="list-style-type: none"> <li>(1) Our explanation that the reactor building does not have any issues with its seismic safety based on inspections and analysis results has gained us a certain degree of understanding.</li> <li>(2) We are explaining that we design to prevent subsidence through conducting soil improvement under the seawall.</li> <li>(3) We present the NRA with our available dates for explanation of controversial issues to expedite the assessment process.</li> </ul>	<p>[ Earthquake/Tsunami-related assessment ]</p> <ul style="list-style-type: none"> <li>(1) The activity of the faults on the premises is under assessment.</li> <li>(2) f-2 fault just below the reactor building was judged to be inactive for the foreseeable future.</li> <li>(3) Our explanation about f-1 fault has obtained us a certain degree of understanding.</li> <li>(4) Our plan to install an intake facility for reactor building closed cooling water system not on m-a fault were approved.</li> <li>(5) We have been explaining the activity of faults in the premises, including f-1 fault just below the seismic critical facilities.</li> <li>(6) The conceivable maximum tsunami is under assessment.</li> </ul> <p>[ Plant-related assessment ]</p> <p>We are in preparation for assessment incorporating the findings obtained from other plants that are in a more advance stage of assessment and from Onagawa Unit 2 in our work.</p>

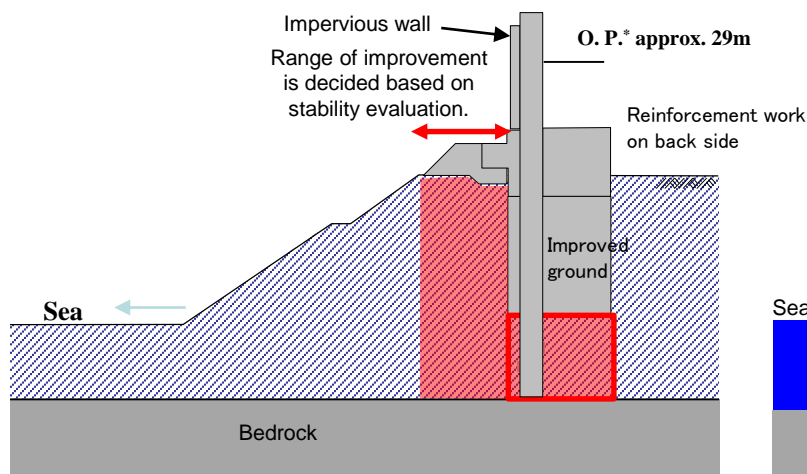
## Safety Measures at Onagawa

- We have been conducting construction work on safety measures appropriately incorporating lessons learned from conformity assessment meetings. (See the Sample Image below.)
- Concerning the seawall, we have been explaining at conformity assessment meetings that there is no possibility of ground liquefaction at Onagawa based on the result of our survey.
- And, we will conduct ground improvement work of the peripheral ground of seawall with an aim to reinforce resistance to earthquake and tsunami to secure further safety.
- We have changed our design from “considering subsidence of seawall” to “preventing subsidence of seawall.”
- We will construct a floodwall (under design) around the seawater pump room to avoid being prevented us from cooling reactors in case that tsunami exceeds the seawall.

### < Sample Image of Additional/Changed Construction Work on Safety Measures >

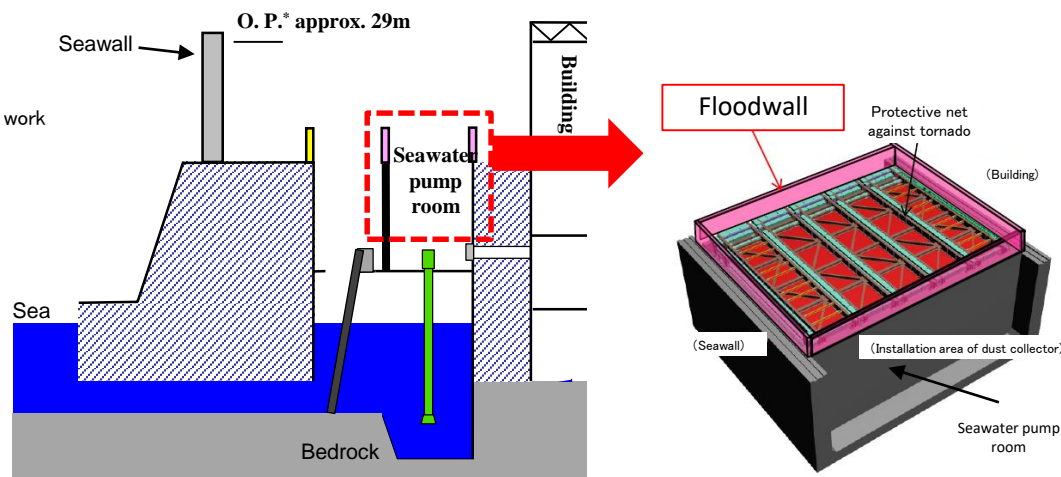
#### Ground Improvement Work (cross-sectional drawing)

 : Additional improved range (to prevent subsidence)  
 : Additional improved range (to secure stability)



\* : Onagawa Peil

#### Construction of Floodwall around seawater pump room

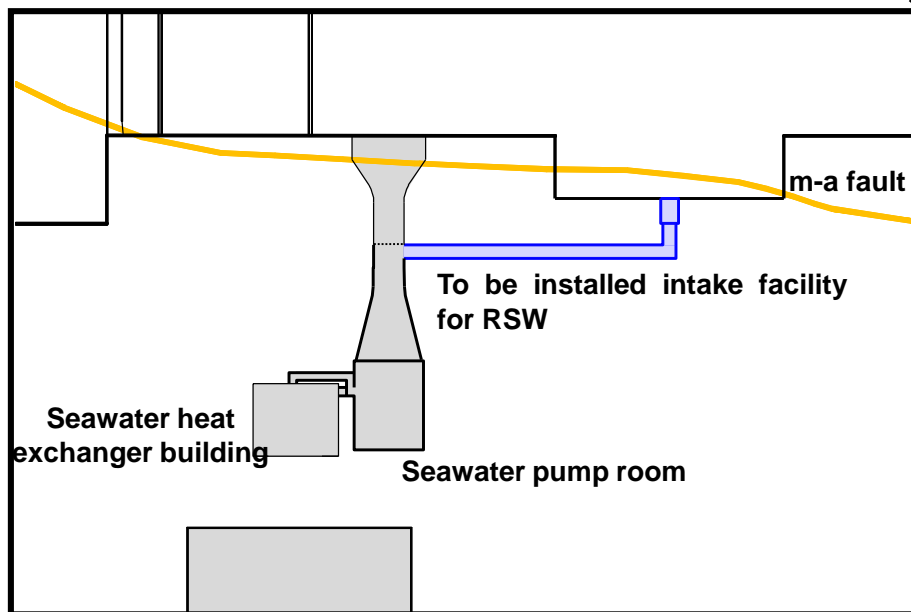


Cross-sectional image

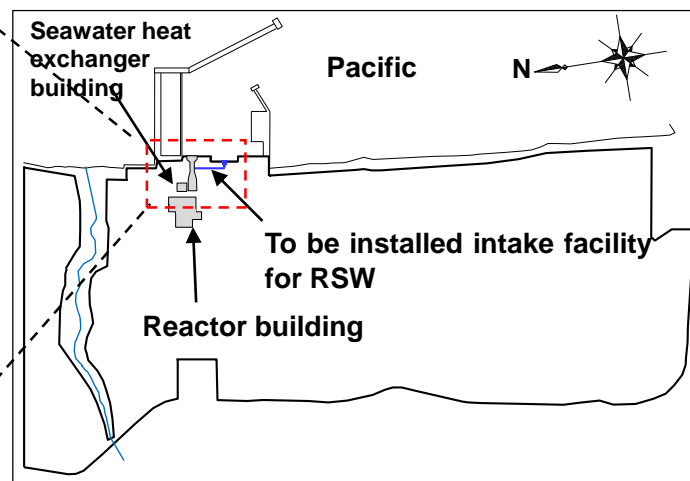
## ■ Work on Facility Measures at Higashidori

- We explained at conformity assessment meetings that we judge f-1 fault and m-a fault just below the seismic critical facilities to be inactive for the foreseeable future.
- Concerning f-1 fault, the Nuclear Regulation Authority (NRA) shows some understanding of our explanation.
- Concerning m-a fault just, the NRA said that they were unable to accept our explanation because it is impossible to strictly determine the relation between m-a fault and its upper stratum. We maintain the view that m-a fault is inactive for the foreseeable future. However, since even additional survey is difficult to identify the relation, we have decided to install another intake facility for RSW (reactor building closed cooling seawater system) not on just above m-a fault. This idea was approved to a certain degree by the NRA.

Layout Sketch of Intake Facility for RSW



Ground Plan of Higashidori



## ■ Major Efforts in Power and Fuel Trading Business

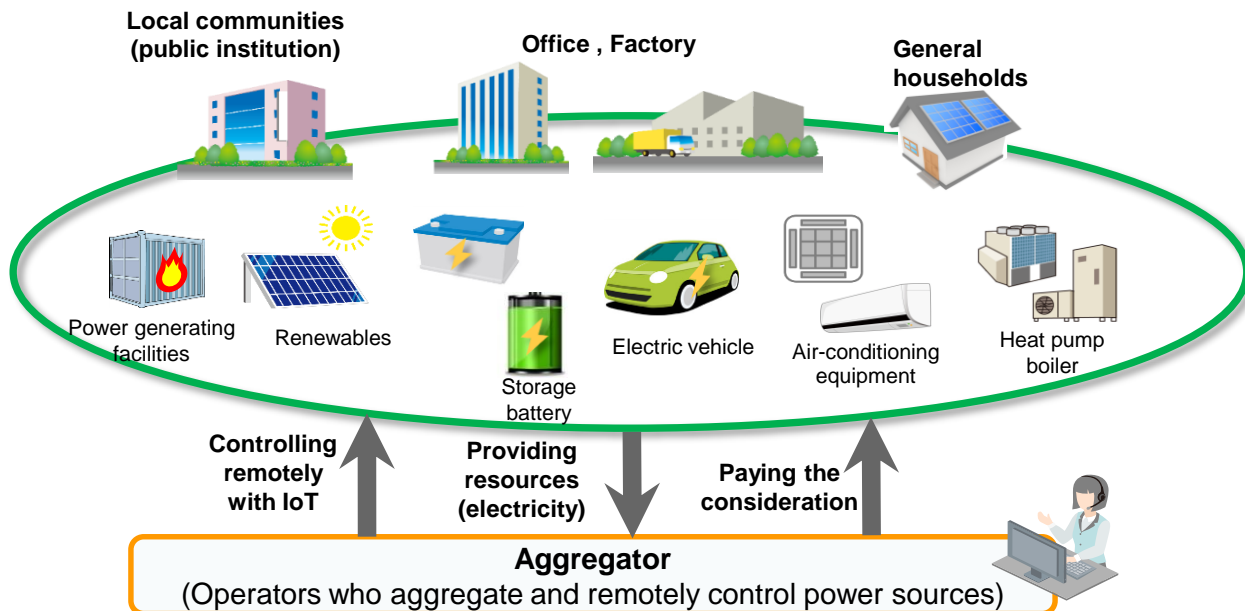
➤ We established Tohoku Energy Trading Co., Inc., which has commenced operation in April 2018 to drive future growth. With an integrated power and fuel trading, we promptly control business risks and proactively respond to new business domains. This enables us to increase profitability.

## ■ Commencing “Virtual Power Plant Verification Project”

➤ We has just commenced a “Virtual Power Plant (VPP) Verification Project” with an aim to take an anticipatory approach to changes in the business environment resulting from the advancement of new information technology, such as Internet of Things (IoT) and artificial intelligence (AI), improve further our customer services, and develop new business models which lead to the expansion of our business domains in the future.

➤ We are involved in this project in cooperation with business partners, including companies, colleges, and local governments, which is designed to last for three years from 2018 to 2020. We will harness findings and know-how learned from this project to offer new services.

### 【Sample Image of VPP】



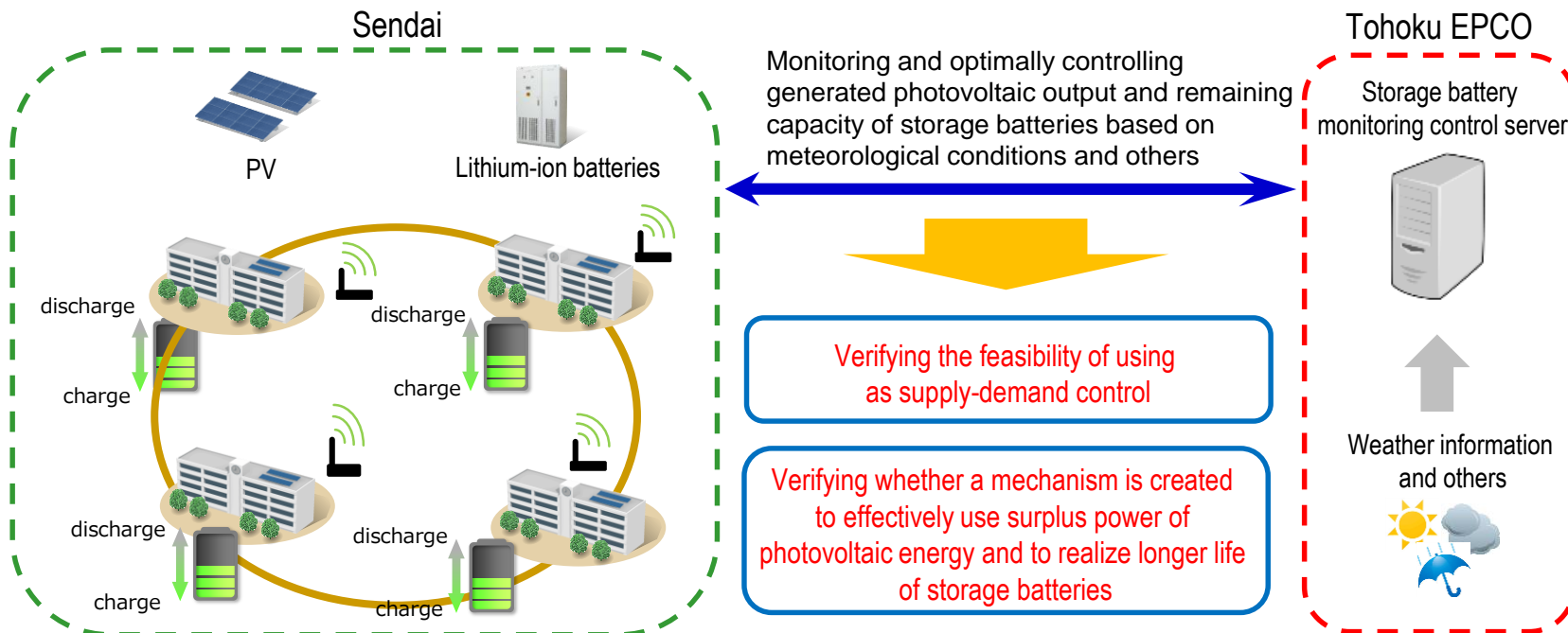
Virtual Power Plant (VPP) :  
 A VPP is a system that aggregates several types of power sources to function as a power station. It integrates distributed energy resources (DER) including power generating facilities, storage batteries, and electric vehicles, whose owners are local communities, companies and general households, and controls remotely those DER with new information technology.



## Enhancing Disaster Preparedness, Reducing Environment Burden with VPP Technology

- The city of Sendai and we are jointly engaged in the virtual power plant (VPP) verification project, in which we use VPP technology to enhance disaster preparedness and reduce the environmental burden in local communities with the optimal control of photovoltaic facilities and storage batteries.
- We aggregate energy resources of photovoltaic facilities and storage batteries owned by Sendai\* in this verification project. We remotely monitor and optimally control the operating status of these facilities. In parallel with this verification, we will verify whether VPP can be useful as a means of supply-demand control. We will also verify that we can create a “disaster-resilient and environment-friendly energy management mechanism” which realizes longer life of storage batteries.

\*: Sendai had difficulty securing power sources when the Great East Japan Earthquake occurred. Based on this experience, and with an aim to secure power sources at the time of disaster and to reduce carbon emissions, Sendai has installed photovoltaic facilities and storage batteries in designated evacuation spots, including all elementary and junior high schools in the city.



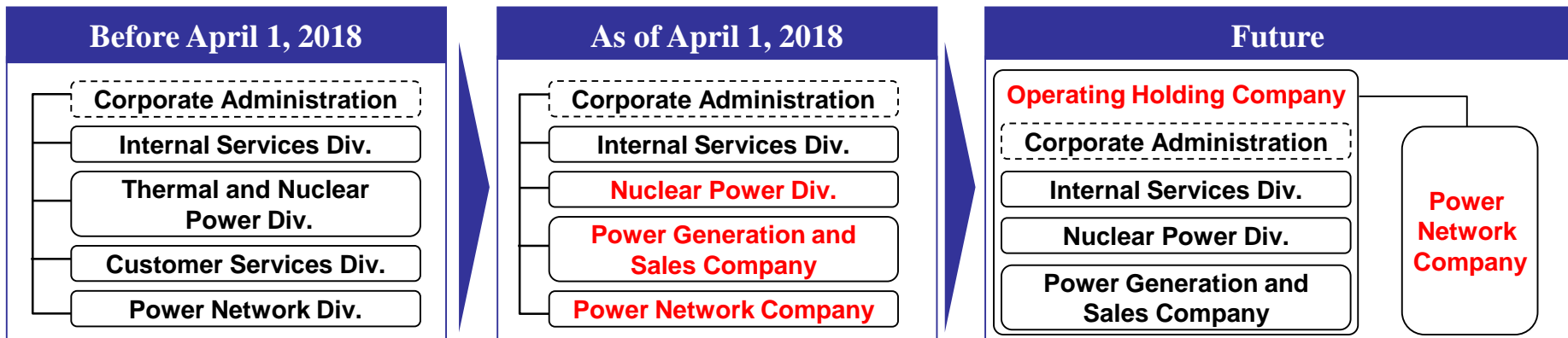
## ■ Introducing In-house Company System

- Positively confront intensifying competition resulting from retail deregulation and legal unbundling of transmission/distribution sectors scheduled for April 2020, we have just introduced in-house company system and reorganized our business structure in April 2018.
- The three divisions responsible for power generation, transmission/distribution and retailing were reorganized into two in-house companies: “Power Generation and Sales Company” and “Power Network Company”.
- While each Company conducts autonomous business operation to fulfill its mission, we aim to shift smoothly from the present structure to new one when legal unbundling is implemented.
- After transmission/distribution sectors are unbundled, we will establish 2-company system: “Power Network Company” and “Operating Holding Company” that incorporates in-house “Power Generation and Sales Company”.

### [Mission and Future Structure]

Company Name	Mission
Power Generation and Sales Company	Making maximum use of integrated operation of power generation and sales, this company aims at enhancing further competitiveness and profitability.
Power Network Company	This company continues providing stable energy supply for its franchise area and securing neutrality and fairness.

• Nuclear Power Division is under the direct control of the management team because it is vital for Tohoku EPCO to conduct company-wide efforts to improve safety of Onagawa and Higashidori Nuclear Power Stations and gain the understanding from local communities.



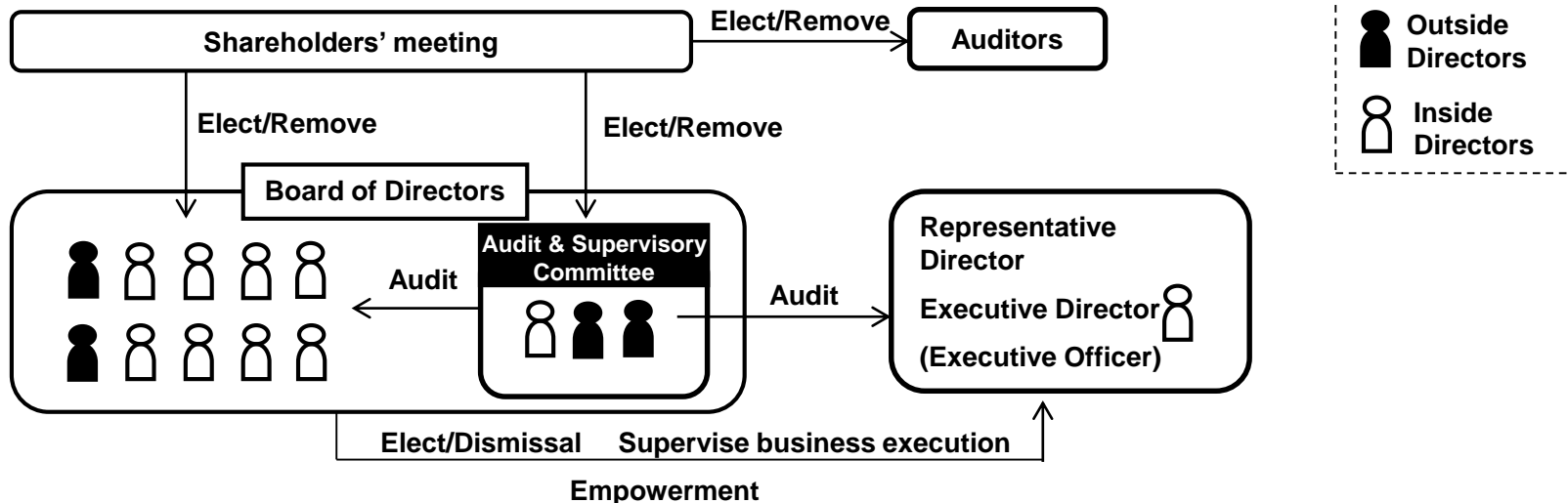
# Enhancing Corporate Governance by Revising Our Governance Framework

## ■ Enhancing Corporate Governance by Revising Our Governance Framework

➤ We have changed our corporate governance structure to a “company with audit and supervisory committee” and revised our executive officer system.

<p>Transition to a company with audit and supervisory committee*</p>	<ul style="list-style-type: none"> <li>• The new structure permits operational matters determined by the Board of Directors to be delegated to Directors to expedite decision-making and business execution.</li> <li>• Increase in the ratio of outside directors within the Board of Directors to more than one-third would reinforce supervisory functions.</li> <li>• After the approval at the 94th General Meeting of Shareholders scheduled for June 2018, the transition will be completed.</li> </ul> <p>* The present structure is a company with audit and supervisory board.</p>
<p>Revision of Executive Officer System</p>	<ul style="list-style-type: none"> <li>• Prior to the transition to a “company with audit and supervisory committee”, we will revise our executive officer system to clarify the roles and responsibility of “Directors” in charge of decision-making and management oversight and of “Executive Officers” in charge of business execution as members of the Board of Directors to expedite business operation.</li> </ul>

### < Sample Image of a Company with Audit and Supervisory Committee >



## ■ Efforts to Improve Management Efficiency

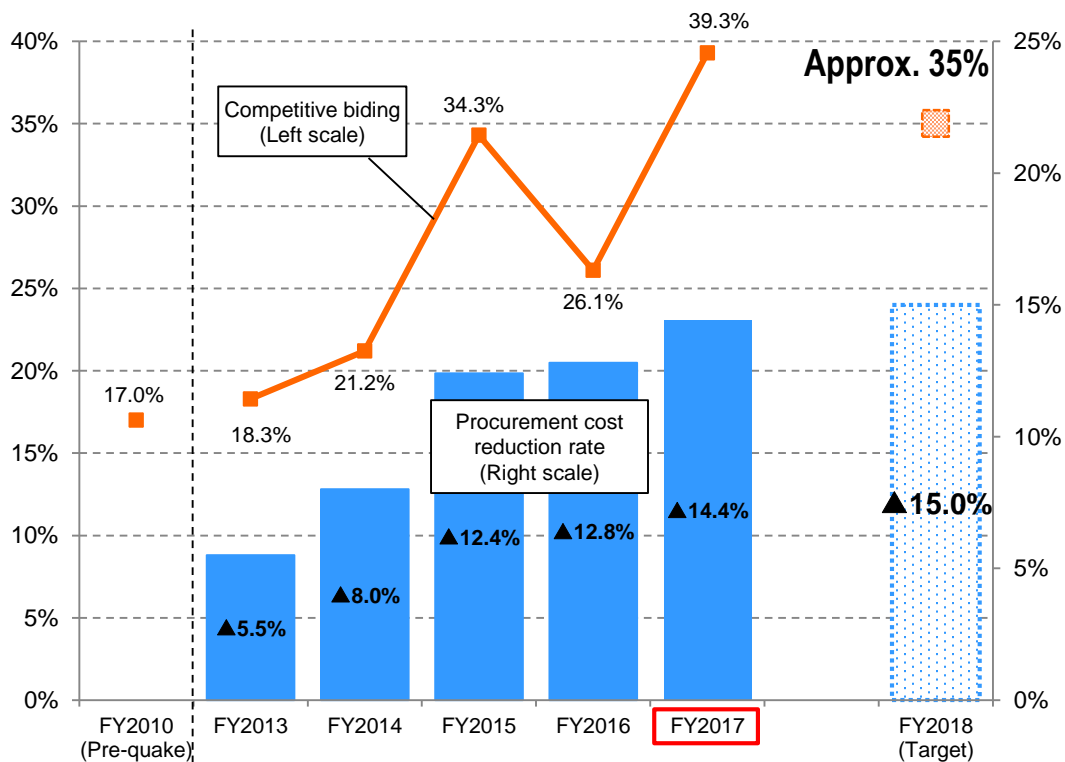
- Thanks to the acceleration of the structural cost reduction throughout our management operation securing both safety and a stable energy supply, we achieved a cost reduction of 149.2 billion yen in FY2017, exceeding our target of 113.9 billion yen (the average of FY2013 to FY2015).
- From June 2016, the second phase of our procurement reform has been being implemented. We intend to reduce 15% of procurement costs compared to FY2010 and expand competitive bidding ratio to approximately 35% (50% in network sector) by 2018. We will continue conducting structural cost reduction.

### Results in FY2017

(billions of yen)

Items	Cost reduction in FY2017	[Reference] Cost reduction target included in our rate base
		Average of rate base between FY2013 to FY2015
Personnel	18.7	40.3
Fuel and Power purchased	76.4	31.6
Capital expenditure	15.1	9.5
Maintenance	20.9	13.5
Others	18.1	19.0
<b>Total</b>	<b>149.2</b>	<b>113.9</b>

### Procurement Reform



## Power Source Development Plan

### Major Development Plans

Facility	Unit	Capacity (megawatts)	Start of Construction	Start of Operation
Nuclear	Higashidori No.2	1,385	Not determined	Not determined
Thermal	Noshiro No.3	600	Jan. 2016	Jun. 2020
	Joetsu No.1	572	May. 2019	Jun. 2023

### Major Abolishment Plans

Facility	Unit	Capacity (megawatts)	Abolishment
Thermal	Akita No.5	333	Sep. 2018
	Higashi-Niigata No.5	339	Sep. 2018
	Niigata No.4	250	Sep. 2018



The gas turbines of Akita No.5 and Higashi-Niigata No.5 are scheduled to be used at Higashi-Niigata Thermal Power Station Series 4-1 generator.

### 【Latest Development of Thermal Power Stations】

[Noshiro No.3] (Noshiro, Akita)

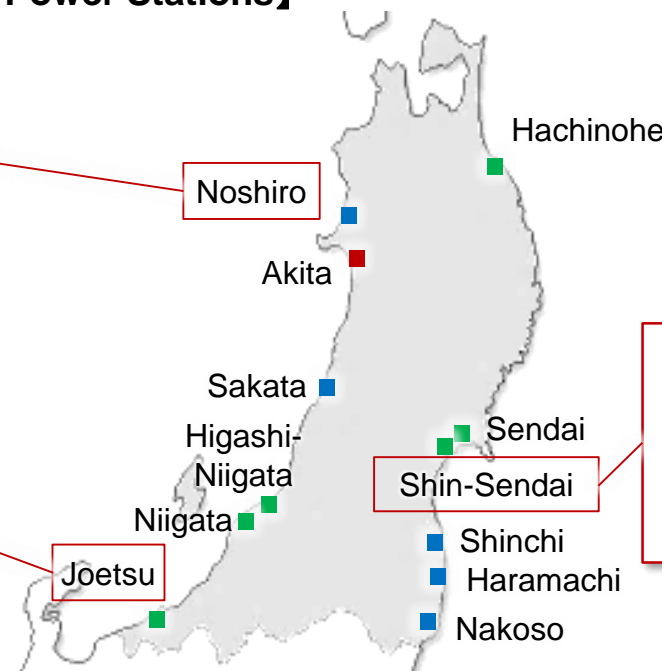
Output: 600 megawatts  
Thermal efficiency: 44.8% [LHV standard]  
Fuel: Coal  
Start of operation: June 2020 (scheduled)

[Joetsu No.1] (Joetsu, Niigata)

Output: 572 megawatts  
Thermal efficiency: approx. 63% (under design) [LHV standard]  
Fuel: LNG  
Start of operation: June 2023 (scheduled)

[Shin-Sendai No.3 Series] (Sendai, Miyagi)

Output: 1,046 megawatts  
Thermal efficiency: 60% or more [LHV standard]  
Fuel: LNG  
Start of operation: July 2016 (full scale)

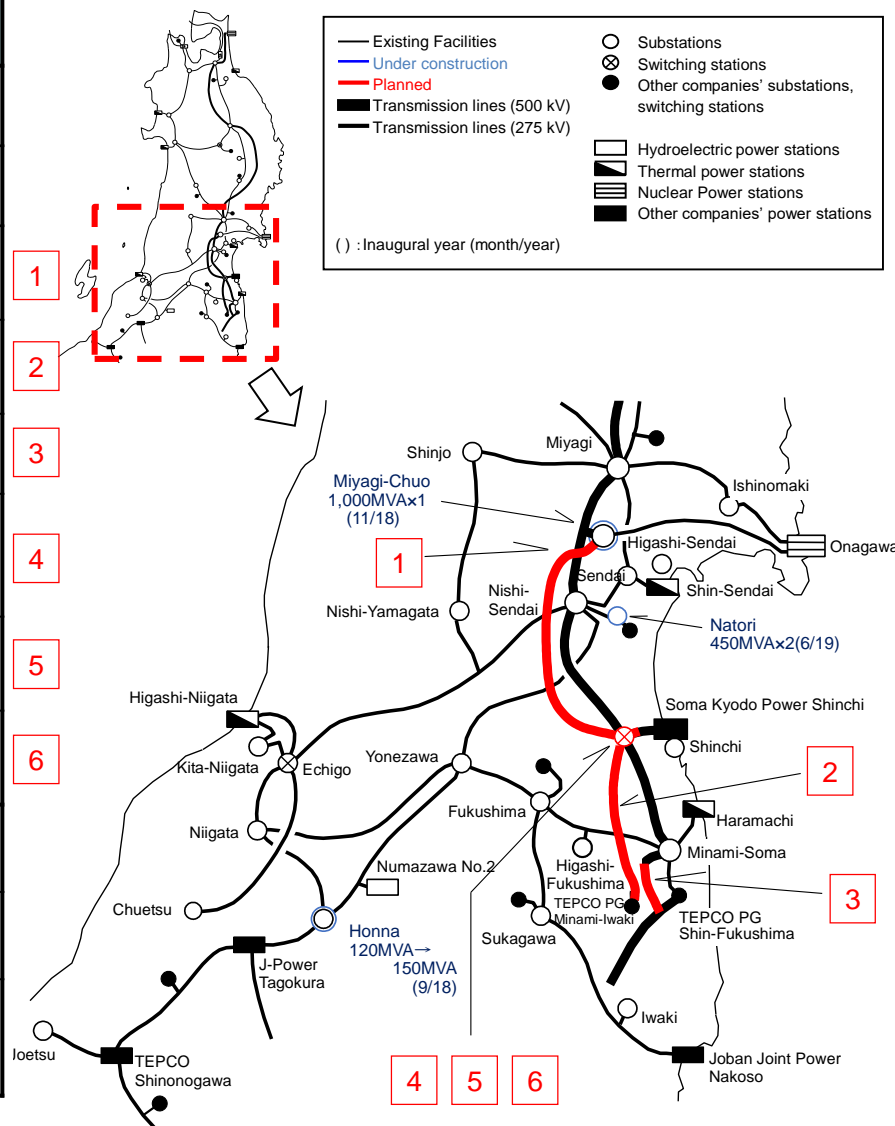


■ Natural Gas and others  
■ Coal/Biomass  
■ Heavy oil and others

## Major Transmission System Planning

Facility	Projects	Specification	Start of Construction	Start of Operation
Transmission	AC/DC converter station Lead-in	275 kV 2 km	Aug. 2016	Jun. 2018
	Natori Substation Lead-in	275 kV 0.4 km	May 2018	Jun. 2019
	Construction of Cross-Regional Interconnection Northern Trunk Line <sup>*1</sup>	500 kV 81 km	Sep. 2022	Nov. 2027
	Construction of Cross-Regional Interconnection Southern Trunk Line <sup>*1</sup>	500 kV 62 km	Sep. 2024	Nov. 2027
	Connection Change of Soma-Futaba Trunk Line <sup>*1</sup>	500 kV 15 km	Apr. 2022	Nov. 2025
	Shinchi-Karyoku Line Cross-Regional Interconnection Switching Station Lead-in Construction <sup>*1</sup>	500 kV 1 km	Jul. 2024	Jun. 2026
	Joban Trunk Line Cross-Regional Interconnection Switching Station Lead-in construction <sup>*1</sup>	500 kV 1 km	May. 2025	Jul. 2026
	Construction of Cross-Regional Interconnection Switching Station <sup>*1</sup>	500 kV 10 circuit	May. 2023	Nov. 2027 <sup>*2</sup>
Transformation	Expansion of Miyagi Chuo Substation	500/275 kV 1,000 MVA × 1	Feb. 2016	Nov. 2018
	Construction of Natori Substation	275/154 kV 450 MVA × 2	Feb. 2017	Jun. 2019
	Capacity Change of Honna Substation	275/154 kV From 120MVA × 1 to 150MVA × 1	Aug. 2017	Sep. 2018

[Reference] Power Supply Network



\*1: These projects relate to Cross-regional Network Development Plan between Tohoku and Tokyo. The names of transmission and switching stations are tentative.

\*2: Partly starts in June 2026.

# References



(As of March 31, 2018)

		FY2013	FY2014	FY2015	FY2016	FY2017	Number of conformity assessment meetings
Oragawa Unit 2	Assessment of plants (facilities)		▼Application (Dec. 2013)			▼Full-fledged conformity assessment (from Oct. 2017) ▼On-site survey (Nov. 2017)	111
	Assessment of earthquake and tsunami			▼On-site survey (Jan. 2015)			
		Conformity assessment					
		Conformity assessment					
Higashidori Unit 1	Assessment of plants (facilities)		▼Application (Jun. 2014)				14
	Assessment of earthquake and tsunami			▼Supplementary survey of faults in the premises (from Oct. 2015) ▼Starts of hearing (from Jun. 2015)	▼On-site survey (Dec. 2016) ▼Additional supplementary survey of faults in the premises (from Apr. 2016)	▼On-site survey (Nov. 2017) ▼Additional survey of faults in the premises (from May 2017)	
		Conformity assessment					
		▼Submission of report on additional geological survey (Jan. 2014)		▼Completion of experts' evaluation statement (Mar. 2015)			
		Experts Meeting on faults in the premises					

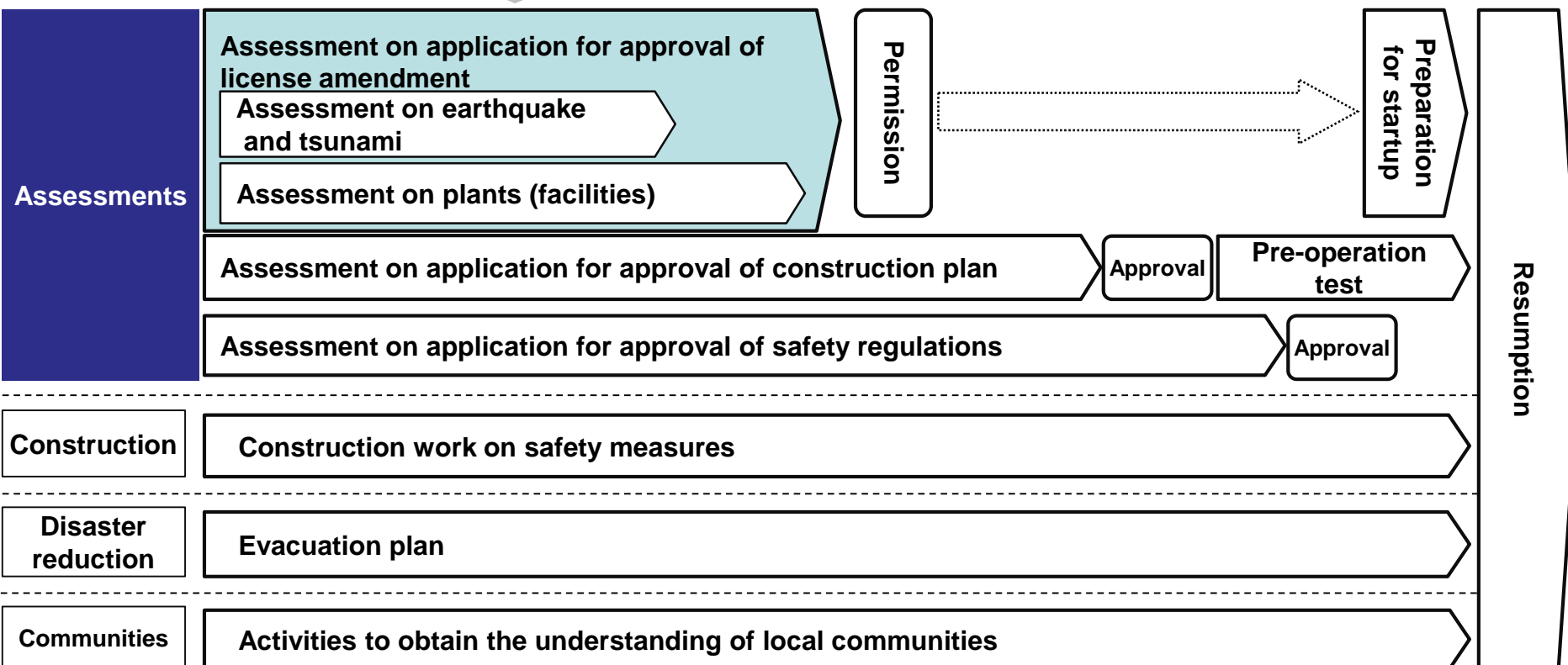


## ■ Conformity Assessments and Process of Resumption of Nuclear Power Reactors

(as of March 31, 2018)

- 26 units (11 companies including us) submitted applications for conformity assessments.
- Of them, 12 pressurized water reactors (PWR, 3 companies) were authorized permission of license amendment, and 5 of them were approved their safety and resumed operation.
- Concerning boiling water reactors (BWR), including our Onagawa Unit 2 and Higashidori Unit 1, Tokyo Electric Power Company Holdings, Inc.'s Kashiwazaki-Kariwa Unit 6 and 7 were authorized permission of license amendment in December 2017 for the first time.

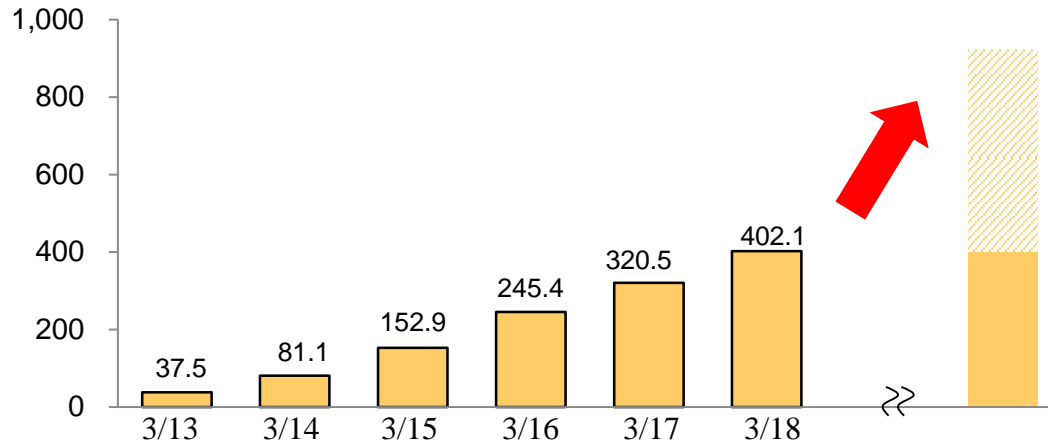
Our Onagawa Unit 2 and Higashidori Unit 1



## ■ Current and Expected Grid Access Volume of Solar and Wind within our Service Area (as of March 31, 2018)

### [Solar]

[10 megawatts]

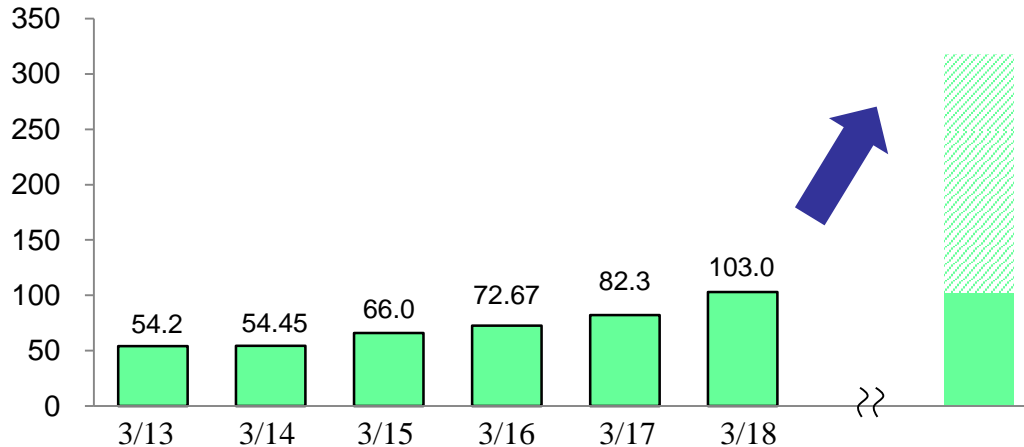


Expected grid access volume:  
5,214 megawatts

(Old rule: 2,431 megawatts  
New rule: 2,783 megawatts)

### [Wind]

[10 megawatts]



Expected grid access volume:  
2,143 megawatts

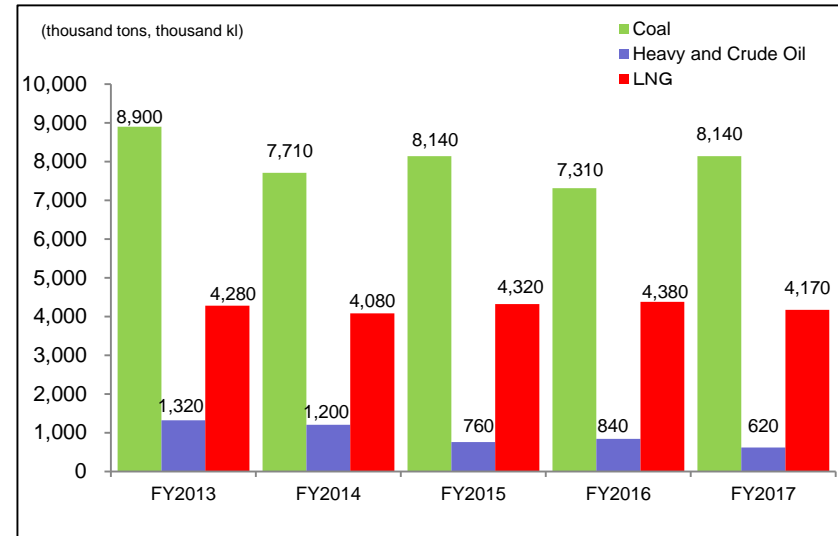
(Old rule: 1,462 megawatts  
New rule: 681 megawatts)

\* Since figures are rounded off, totals may not equal the sum of individual figures.

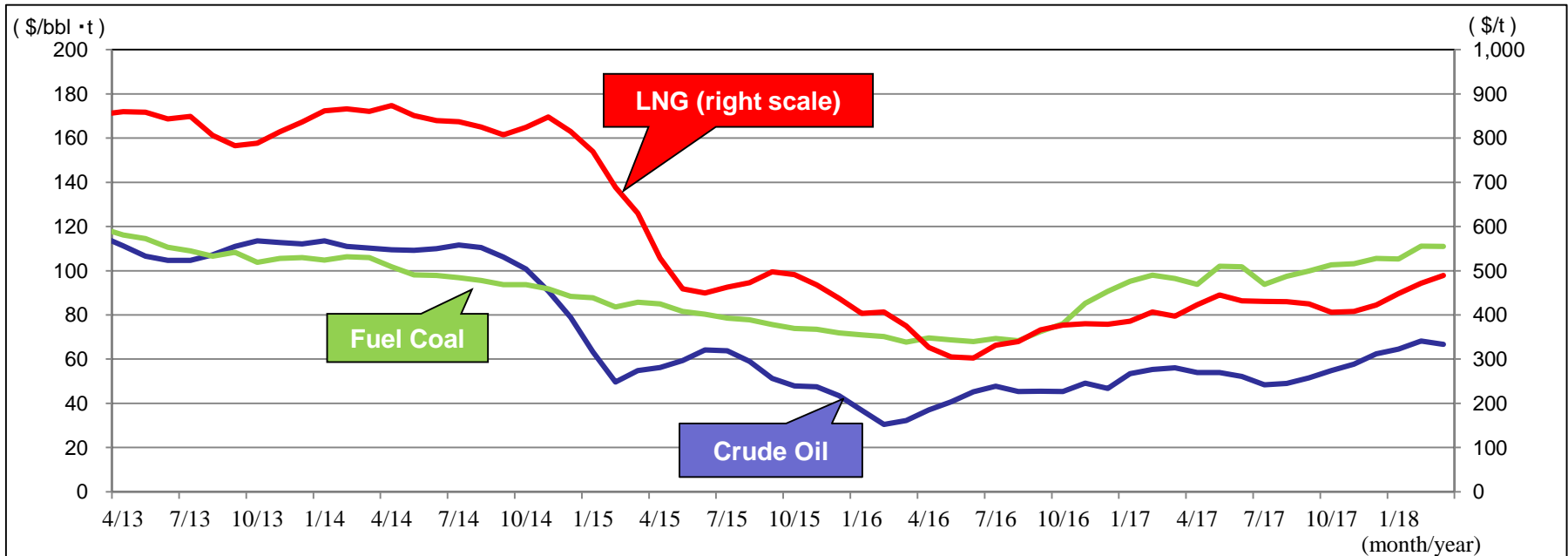
## Fuel Consumption

(thousand tons, thousand kiloliters)

	FY2017 (A)	FY2016 (B)	Change (A) - (B)
Coal	8,140	7,310	830
Heavy and Crude Oil	620	840	(220)
LNG	4,170	4,380	(210)



## [Reference] Historical CIF Prices of Crude Oil, Fuel Coal and LNG



(Note)

This presentation solely constitutes reference material for the purpose of providing the readers with relevant information to evaluate our company.

The information contains forward-looking statements based on assumptions and projections about the future with regard to our company. As such, the readers are kindly asked to refrain from making judgment by depending solely on this information.

The forward-looking statements inherently involve a degree of risks and uncertainties. Consequently, these risks and uncertainties could cause the actual results and performance to differ from the assumed or projected status of the company.

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