

# **Financial Summary**

## **2nd Quarter of FY2017**

**(April 1, 2017 – September 30, 2017)**

**October 26, 2017**



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

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## References

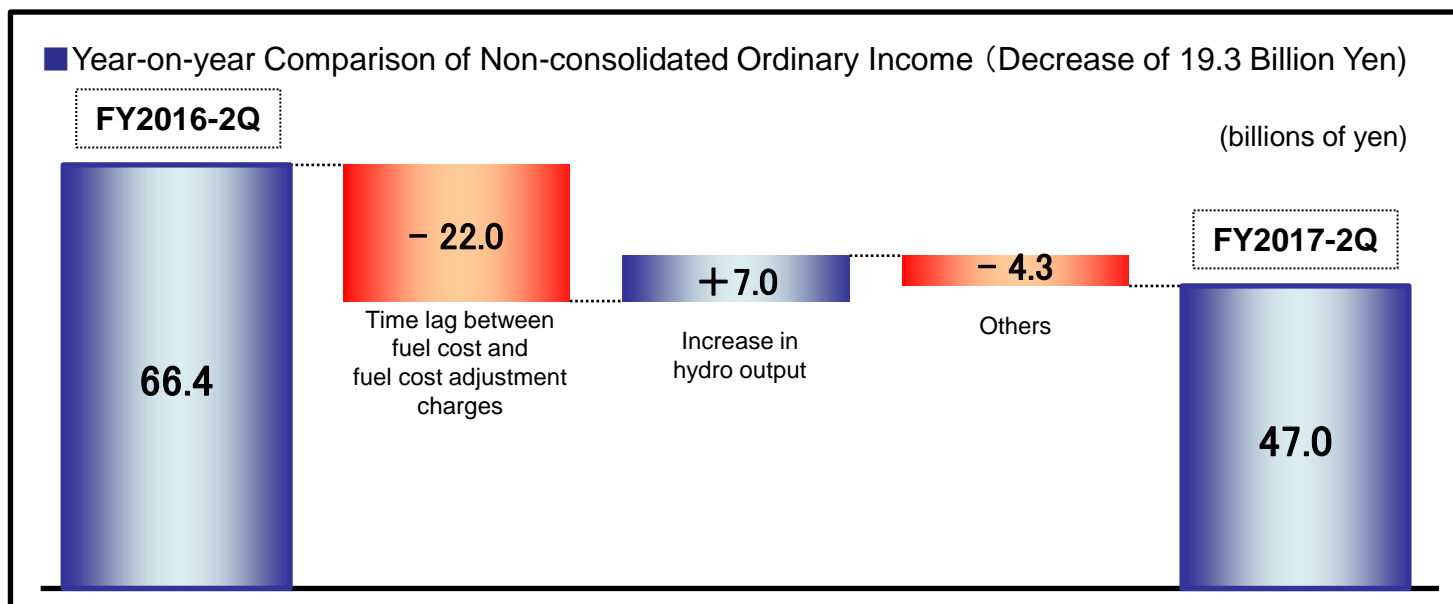
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# 2nd Quarter of FY2017 Financial Results

(billions of yen)

	Consolidated (A)			Non-consolidated (B)			(A) / (B) (times)	
	FY2017 2Q	FY2016 2Q	Change	FY2017 2Q	FY2016 2Q	Change	FY2017 2Q	FY2016 2Q
Operating Revenue	981.2	939.8	41.3	890.7	839.5	51.2	1.10	1.12
Operating Income	61.5	88.6	(27.0)	52.1	77.0	(24.8)	1.18	1.15
Ordinary Income	52.9	71.3	(18.3)	47.0	66.4	(19.3)	1.13	1.07
Net Income or Net Income Attributable to Owners of Parent	34.5	47.3	(12.7)	33.9	48.3	(14.4)	1.02	0.98

	Sep. 30, 2017	Mar. 31, 2017	Change	Sep. 30, 2017	Mar. 31, 2017	Change
Equity Ratio	17.7%	16.8%	0.9%	16.9%	16.0%	0.9%



(GWh)

		FY2017/2Q (A)	FY2016/2Q (B)	Comparison	
				(A) - (B)	(A) / (B)
Electricity Generated and Purchased	Own Generated power	29,683	30,992	(1,309)	95.8%
	Hydro	4,607	3,697	910	124.6%
	Thermal	24,703	26,840	(2,137)	92.0%
	Nuclear	—	—	—	—
	Renewables	373	455	(82)	81.8%
	Purchased Power (Net)*	10,381	11,103	(722)	93.5%
	Power Interchanges (Net)*	(3,683)	(3,930)	247	93.7%
	Used at Pumped Storage	(55)	(32)	(23)	173.5%
Total, Generated and Purchased*		36,326	38,133	(1,807)	95.3%
Electricity Sales	Lighting (Residential)	10,192	10,379	(187)	98.2%
	Power	23,768	24,938	(1,170)	95.3%
	Total of Electricity Sales		33,960	35,316	(1,356)

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

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

<b>Major Factors</b>	FY2017/2Q (A)	FY2016/2Q (B)	Comparison (A) - (B)
Crude Oil CIF Price (\$/bbl.)	51.4	43.8	7.6
Exchange Rate (¥/\$)	111	105	6
Hydro Power Flow Rate (%)	107.7	79.6	28.1
Nuclear Power Utilization Rate (%)	—	—	—

(billions of yen)

<b>Sensitivity to Major Factors</b>	FY2017/2Q (A)	FY2016/2Q (B)	Comparison (A) - (B)
Crude Oil CIF Price (per \$1/bbl.)	1.5	1.6	(0.1)
Exchange Rate (per ¥1/\$)	1.2	1.0	0.2
Hydro Power Flow Rate (per 1%)	0.4	0.3	0.1
Nuclear Power Utilization Rate (per 1%)	0.5	0.4	0.1

# Statements of Income & Balance Sheets (Consolidated)

(billions of yen)

<b>Statements of Income</b>		FY2017/2Q (A)	FY2016/2Q (B)	Comparison (A) - (B)	Major factors for change
Operating Revenue		981.2	939.8	41.3	Electric utility: 49.8 Other business: (8.4)
Operating Expenses		919.6	851.2	68.4	Electric utility: 75.0 Other business: (6.5)
Operating Income		61.5	88.6	(27.0)	
Ordinary Income		52.9	71.3	(18.3)	
Net Income Attributable to Owners of Parent		34.5	47.3	(12.7)	

(billions of yen)

<b>Balance Sheets</b>		Sep. 30, 2017 (A)	Mar. 31, 2017 (B)	Comparison (A) - (B)	Major factors for change
Total Assets		4,114.0	4,145.9	(31.8)	
Non-current Assets		3,474.8	3,475.4	(0.5)	
Current Assets		639.2	670.5	(31.2)	
Liabilities		3,324.0	3,390.3	(66.2)	Notes and accounts payable – trade: (16.8)
Net Assets		790.0	755.6	34.3	Retained earnings: 24.5

Interest-Bearing Liabilities		2,394.0	2,435.5	(41.4)	Loans: (54.4) , CP: (17.0), Bonds: 30.0
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(billions of yen)

	FY2017/2Q (A)	FY2016/2Q (B)	Comparison (A) - (B)	Major factors for change
Cash Flows from Operating Activities	133.7	122.2	11.4	
Cash Flows from Investing Activities	(128.1)	(121.4)	(6.6)	
Cash Flows from Financing Activities	(54.2)	(23.7)	(30.4)	Bonds: (19.9) Loans: 11.2 CP: (19.0)
Net Cash Flows	(48.4)	(23.1)	(25.3)	
Cash and Cash Equivalents at End of the Period	179.8	239.3	(59.5)	
Free Cash Flows*	16.3	12.4	3.9	

\*: Our definition;

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



(billions of yen)

		FY2017/2Q (A)	FY2016/2Q (B)	Comparison		Major factors for change
				(A) - (B)	(A) / (B)	
Revenue	Lighting (Residential)	254.2	248.2	6.0	102.4%	
	Power	419.1	420.9	(1.7)	99.6%	
	Sub total	673.4	669.1	4.3	100.7%	
	Sales of power to other utilities and other companies	97.3	73.8	23.4	131.7%	Increase in sales of power on Japan Electric Power Exchange
	Grant under Act on Purchase of Renewable Energy Sourced Electricity	82.5	71.0	11.5	116.2%	Increase in purchased volume from solar
	Other revenue	44.2	32.4	11.7	136.3%	
	[Operating Revenue]	[ 890.7 ]	[ 839.5 ]	[ 51.2 ]	[ 106.1% ]	
Total revenue		897.6	846.5	51.1	106.0%	
Expenses	Personnel	77.7	75.1	2.6	103.5%	
	Fuel	146.3	129.2	17.1	113.2%	Increase in thermal fuel expenses
	Maintenance	88.8	84.2	4.5	105.4%	
	Depreciation	100.6	103.3	(2.6)	97.5%	
	Power purchased from other utilities and other companies	225.3	189.7	35.5	118.7%	Increase in purchased volume from solar
	Interest	10.9	12.4	(1.4)	88.4%	
	Taxes, etc.	40.5	39.8	0.7	101.8%	
	Nuclear power back-end cost	3.6	4.1	(0.4)	90.1%	
	Levy under Act on Purchase of Renewable Energy Sourced Electricity	73.5	63.4	10.0	115.9%	Increase by a price revision of renewable energy surcharge
	Other expenses	82.8	78.5	4.3	105.5%	
Total expenses		850.5	780.1	70.4	109.0%	
[Operating Income]		[ 52.1 ]	[ 77.0 ]	[ (24.8) ]	[ 67.7% ]	
Ordinary Income		47.0	66.4	(19.3)	70.8%	
Net Income		33.9	48.3	(14.4)	70.2%	

# Balance Sheets (Non-consolidated)

(billions of yen)

	Sep. 30, 2017 (A)	Mar. 31, 2017 (B)	Comparison (A) - (B)	Major factors for change
Total Assets	3,789.0	3,838.8	(49.7)	
Non-current Assets	3,339.8	3,340.1	(0.3)	
Current Assets	449.2	498.7	(49.4)	
Liabilities	3,148.9	3,224.9	(76.0)	Accounts payable – other: (21.2) Short-term debt to subsidiaries and affiliates: (19.5)
Net Assets	640.1	613.8	26.3	Retained earnings: 23.8
Interest-Bearing Liabilities	2,371.5	2,413.2	(41.6)	Loans: (54.6) CP: (17.0) Bonds: 30.0

(billions of yen)

	FY2017/2Q (A)	FY2016/2Q (B)	Comparison (A) - (B)
Operating Revenue*1	1,113.0	1,072.9	40.1
	981.2	939.8	41.3
Electric Utility	886.2	836.3	49.9
	884.5	834.6	49.8
Construction	126.7	131.9	(5.1)
	57.2	65.6	(8.3)
Gas	15.2	12.8	2.3
	11.9	9.4	2.4
IT	21.6	21.5	0.1
	9.4	9.9	(0.4)
Others	63.1	70.2	(7.0)
	17.9	20.1	(2.2)

	FY2017/2Q (A)	FY2016/2Q (B)	Comparison (A) - (B)
Segment Income [Operating Income]	61.6	88.4	(26.8)
Electric Utility	51.6	77.3	(25.6)
Construction	3.8	5.0	(1.1)
Gas	0.7	0.7	(0.0)
IT	2.0	2.0	(0.0)
Others	3.2	3.2	0.0

\*1: Lower is operating revenue from outside customers.

## 【 Major Consolidated Subsidiaries 】\*2

(billions of yen)

	FY2017/2Q		Year-on-year	
	Operating Revenue	Operating Income	Operating Revenue	Operating Income
<b>[ Electric Utility ]</b>				
Sakata Kyodo Power Co., Ltd.	17.4	(1.6)	1.9	(0.3)
Tohoku Sustainable & Renewable Energy Co., Inc.	5.4	1.3	0.4	(0.5)
<b>[ Construction ]</b>				
Yurtec Corp.	91.0	2.7	(6.1)	(1.2)
Tohoku Electric Engineering & Construction Co., Inc.	30.1	1.1	(0.4)	(0.1)
<b>[ Gas ]</b>				
Nihonkai LNG Co., Ltd.	5.2	0.5	0.0	0.0
<b>[ IT ]</b>				
Tohoku Intelligent Telecommunication Co., Inc.	11.4	1.3	(0.3)	(0.4)
Tohoku Information Systems Co., Inc.	12.0	1.2	2.2	1.0
<b>[ Others ]</b>				
Kitanihon Electric cable Co., Ltd.	14.1	0.2	(0.6)	0.1

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

## ■ Financial Forecasts for FY2017

➤ Financial forecasts for FY2017 remain unchanged from the previous release on April 27, 2017.

### 【Consolidated】

(billions of yen)

	Operating Revenue	Operating Income	Ordinary Income	Net Income Attributable to Owners of Parent
FY2017 forecast	2,070.0	112.0	90.0	60.0

### 【Non-consolidated】

(billions of yen)

	Operating Revenue	Operating Income	Ordinary Income	Net Income
FY2017 forecast	1,880.0	89.0	70.0	50.0

## ■ Dividend Per Share

- The Company decided to pay the interim dividend of 20 yen per share for FY2017.
- The year-end dividend forecast for FY2017 remains unchanged from the previous release on April 27, 2017.

(yen)

	Interim	Year-end (Forecast)	Annual (Forecast)
Dividend Per Share	20	20	40

# Topics

## ■ Enhancing our Services for Family Customers

- Our new rate plans introduced after April 2016 have gained 36,000 contracts, and the total enrollment of our member-only website service “Yorisou e Net” reached 267,000.
- To increase members, we ran a new enrollment campaign and increased point redemption partners for “Yorisou e Points” which can be earned by using “Yorisou e Net” services.
- We will continue creating new web-based services and enhancing rate plans in order to be the power company of customers’ choice in Tohoku and Niigata.

## ■ Power Supply Beyond our Franchise Area

- Synergia Power Co., Ltd., a joint company of Tohoku EPCO and Tokyo Gas, started selling electricity in April 2016, and captured approximately 140 megawatts as of the end of September 2017.

	As of October 2017	As of July 2017
Enrollment of Yorisou e Net	Approximately 267,000	Approximately 228,000
Contracts of New Rate Plans*	Approximately 36,000	Approximately 28,500

\*New rate plans introduced after April 2016

## ■ Launching New Power Supply Labels

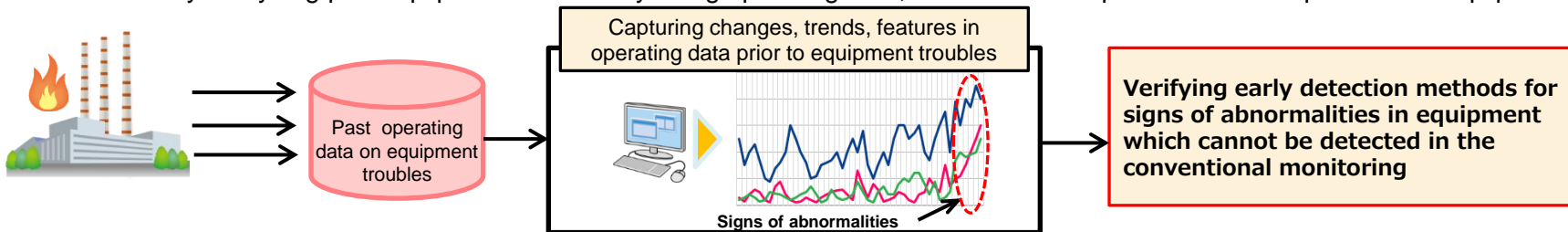
- In September 2017, we launched new power supply labels with Iwate, Akita and Yamagata Prefectures, respectively. Under new labels, Tohoku EPCO sells power up to the purchased volume from these local governments’ hydroelectric power stations.
- New labels will offer power at inexpensive price and selectively supply to entities which meet each prefecture’s requirement.
- We expect these initiatives will help the reconstruction of areas affected by the Great East Japan Earthquake and will contribute to vitalization of local economy and industry, such as increase in population or job creation by new entrants.

## Further Improvement in Operational Efficiency of Thermal Power Plants

- In September 2017, Tohoku EPCO and Toshiba Corporation have started a collaborative investigation into applying IoT solutions and big data analytics to improve the operational efficiency of thermal power plants.
- This collaborative investigation will include:
  1. analyzing and developing methods for early detection of the signs of abnormalities in thermal power generating equipment by applying big data analytics
  2. analyzing conditions to improve heat efficiency by comparing expected heat efficiency calculated from the design data against actual operational data, in order to identify the factors that degrade heat efficiency by applying IoT solutions
- The two companies aim to complete these investigation by the end of FY2017. Based on the results, they will construct a system that will further improve the operational efficiency of thermal power plants. After demonstration tests, Tohoku EPCO will install the system in all of its thermal power plants by FY2019.

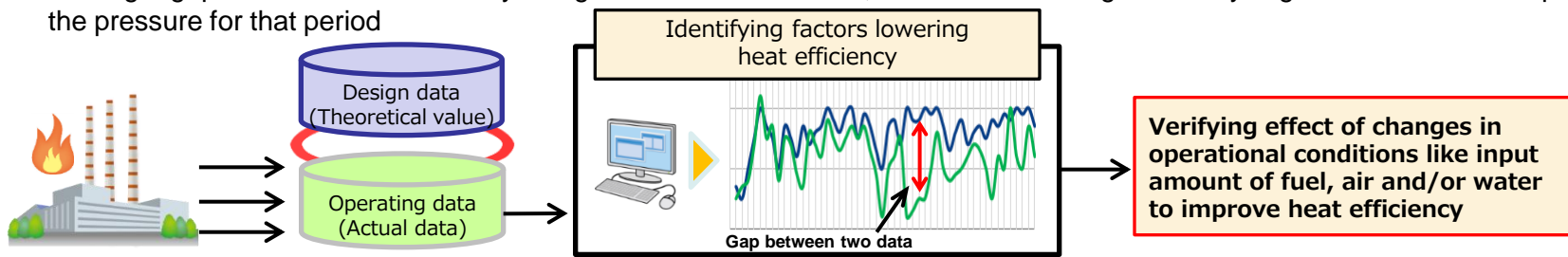
### 1. Verifying early detection methods for signs of abnormalities in equipment (At Noshiro No.2 and Sendai No.4)

- Applying big data analytics
- Correlatively analyzing past equipment troubles by using operating data, such as the temperature and the pressure of equipment



### 2. Verifying heat efficiency improvement in different operation conditions (At Hachinohe No.5)

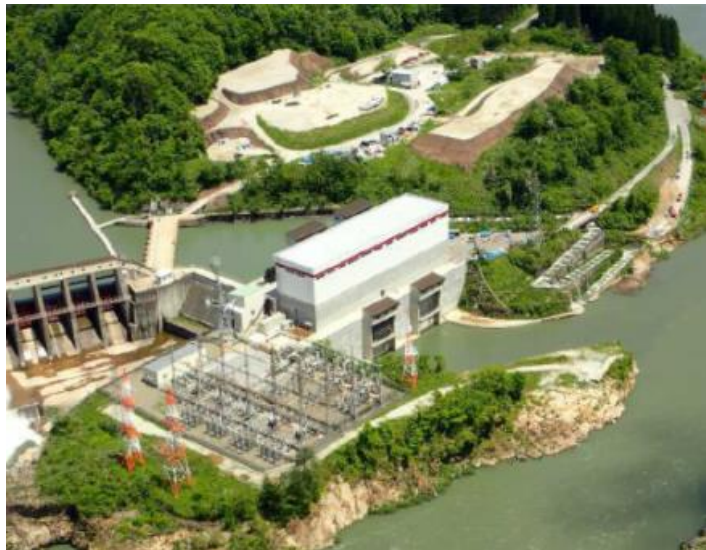
- Applying IoT solutions
- Finding a gap between heat efficiency design data and actual data, and then extracting and analyzing the data on the temperature and the pressure for that period



# Further Improvement in Efficiency of Power Plants (2/2)

## ■ Completing Large-Scale Upgrade of Hydroelectric Power Station

- We finished large-scale construction work to upgrade our Kanose Hydroelectric Power Station in September 2017 and restarted commercial operation.
- By replacing six water turbines with two high efficient water turbines (bulb turbines), we successfully increased the maximum output from 49.5 megawatts to 54.2 megawatts with no increase in water usage.
- We strived to cut environmental impact by reusing existing dam, water intakes as well as demolition concrete; moreover, we properly treated polluted water resulted from the construction work.
- This is our second large-scale construction work to upgrade hydroelectric power station succeeding the first Toyomi Hydroelectric Power Station with the maximum output of 61.8 megawatts, which restarted operation in September 2013.
- We will continue working toward stable supply of electricity and realization of a low carbon society.



Kanose Hydroelectric Power Station

### < Kanose Hydroelectric Power Station >

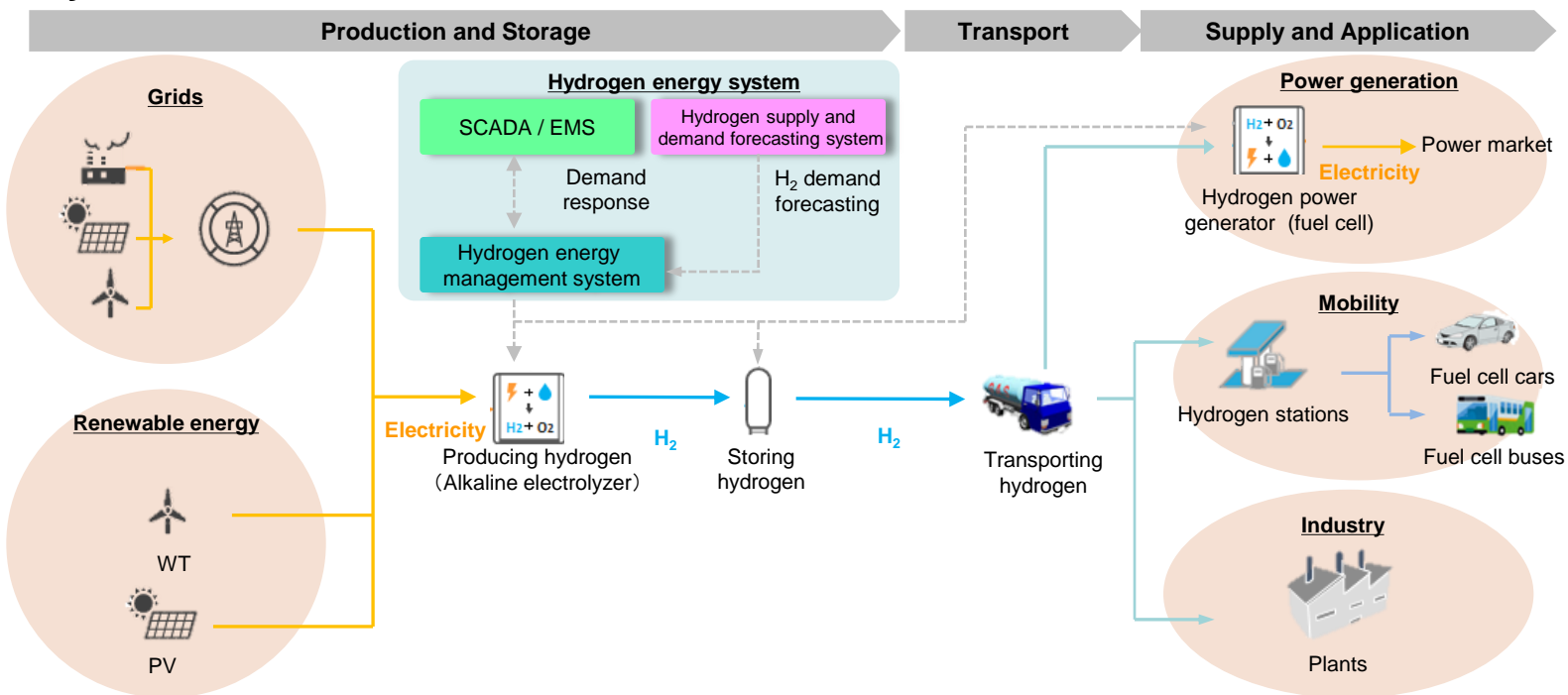
	Before Upgrade	After Upgrade
Generation Type	Dam	
Maximum Output	49.5 megawatts	54.2 megawatts
Effective Head	22.43 meters	22.53 meters
Water Usage	270 m <sup>3</sup> /s	
Water Turbine Type	Vertical shaft Francis water turbine	Vertical shaft tubular type movable blade propeller water turbine (Vertical shaft water turbine)
Number of turbines	6 turbines	2 turbines
Operation Start	December, 1928	September, 2017 (restart)



## Developing a Large-scale Hydrogen Energy System Using Renewable Energy

- We finished a basic study phase and have moved to system development for a large-scale hydrogen energy system using renewables in a joint project\* of Toshiba Corp., Iwatani Corp. and Tohoku EPCO.
  - \*: A hydrogen energy system technology development project funded by New Energy and Industrial Technology Development Organization (NEDO)
- We will construct and operate a large-scale hydrogen energy system in Namie-cho, Fukushima Prefecture, based on a 10 megawatts class hydrogen production facility, and verify the practical effectiveness of the system in fiscal year 2020.
- We will study how to use hydrogen energy systems to stabilize electricity grids with the aim of increasing the use of renewables and continuing contributing to Fukushima.

### <System Structure>



## ■ Design-Basis Earthquake Ground Motions for Onagawa Nuclear Power Station Unit 2

- The original design-basis earthquake ground motions (Ss) in our application for the conformity assessment were Ss-1 (640 gals\*1) and Ss-2 (1,000 gals).
- We revised the above at the conformity assessment meeting held in December 2016. We set six design-basis earthquake ground motions: Ss-1, revised Ss-2 and additional four new ones. These reflected our additional evaluations by the ground motion, including ground motions with specific hypocenters or with no specific hypocenters\*2.
- Subsequently, on the basis of comments at the above-mentioned conformity assessment meeting, we conducted additional evaluations. We reviewed the response spectrum\*3 of Ss-D1 and added one ground motion calculated by a different evaluating method for oceanic intraplate earthquakes. As a result, we have presented seven design-basis earthquake ground motions in total, but the maximum gals is unchanged from 1,000 gals.
- These were judged appropriate at the conformity assessment meeting in August 2017.
- We consider these changes in design-basis earthquake ground motions will not affect the ongoing seismic constructions, since their facility design already has seismic margins from the original ground motions. We will continue evaluating these facility designs in detail, based on the seven new design-basis earthquake ground motions.

\*1: A unit of acceleration used in the science of gravimetry (1 cm/sec<sup>2</sup>). In general, seismic intensity increases as gal increases.

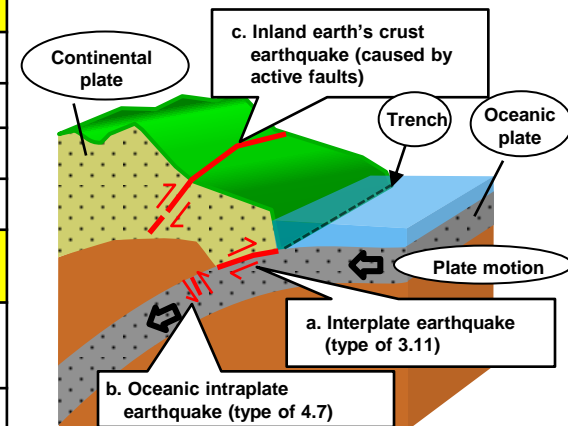
\*2: Ground motions caused by past inland earth's crust earthquakes, whose hypocenters are difficult to be correlated with specific active faults.

\*3: A response plot of the performance of structures and equipment in earthquakes.

## < Outline of Ground Motions for Onagawa Unit 2 >

		Original ground motions		Revised ground motions	Latest ground motions
Ground motions with specific hypocenters	a. Interplate earthquake	Reference to the Great East Japan Earthquake of March 11, 2011 (type of 3.11)	Ss-1 640gals	i. Ss-D1: 640gals	[revised] i. Ss-D1: 640 gals
				ii. Ss-F1: 717 gals	ii. Ss-F1: 717 gals
				iii. Ss-F2: 722 gals	iii. Ss-F2: 722 gals
	b. Oceanic intraplate earthquake	Reference to the Miyagi Offshore Earthquake of April 7, 2011 (type of 4.7)	Ss-2 1,000gals	iv. Ss-D2: 1,000 gals	iv. Ss-D2: 1,000 gals
				v. Ss-D3: 800 gals	v. Ss-D3: 800 gals
	c. Inland earth's crust earthquake	Reference to earthquakes due to faults from F-6 to F-9	Ss-2 1,000gals	—	[added] vi. Ss-F3: 835 gals
				(Below Ss-D2 and Ss-D3)	(Below Ss-D1, Ss-D2 and Ss-D3)
	Ground motion with no specific hypocenters	Conventional Evaluation (450gals)		vi. Ss-N1: 620gals	vii. Ss-N1: 620 gals

[Image of Seismogenic Structure]



## ■ Current Status of Nuclear Power Stations

- We submitted applications for conformity assessments for Onagawa Nuclear Power Station Unit 2 and Higashidori Nuclear Power Station 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.
- We will continue making all-out efforts toward conformity assessments and to complete construction work on safety measures in the latter half of FY2018 for Onagawa Unit 2 and in FY2019 for Higashidori Unit 1, realizing early resumption of nuclear power units.
- After the construction is completed, we will set out to make preparation for resuming operation while gaining the understanding from local communities.

## <Current Status of Conformity Assessments>

Onagawa Unit 2	Higashidori Unit 1
<p>[Earthquake/Tsunami-related assessment ]</p> <p>(1) The design-basis earthquake ground motions (Ss) , conceivable maximum tsunami, faults within and around the premises, and effects of volcanoes were judged appropriate. (Refer to previous page for design-basis earthquake ground motions.)</p> <p>(2) Next agenda will be the stability evaluations of ground and slope.</p> <p>[Plant-related assessment ]</p> <p>(1) The plant is under assessment in parallel with other companies' BWR (boiling water reactor) plants.</p> <p>(2) We are explaining that the reactor building does not have any issues with its seismic safety based on inspections and analysis results.</p>	<p>[ Earthquake/Tsunami-related assessment ]</p> <p>(1) The activity of the faults on the premises is under assessment.</p> <p>(i) f-2 fault just below the reactor building was judged to be inactive for the foreseeable future.</p> <p>(ii) As further detailed explanations of f-1 fault and m-a fault just below the seismic critical facilities were required, we conducted the additional survey, such as trenching, in May 2017 and have been conveying the results.</p> <p>(iii) On-site survey of above mentioned results will be conducted.</p> <p>(2) The conceivable maximum tsunami is under assessment.</p> <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>

# References

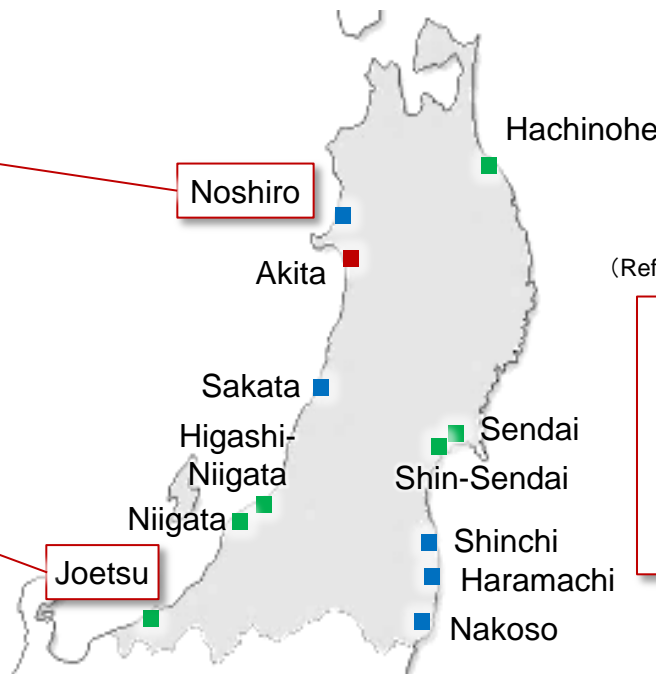
# Enhancing Cost Competitiveness with Optimal Power Portfolio (1/2)

## ■ Constructing Advanced Thermal Power Plants (Noshiro No.3 and Joetsu No.1)

- Given aging of our thermal power plants and the full retail market liberalization, we have been systematically replacing aged thermal power facilities and constructing new economically efficient thermal power plants. We are constructing Noshiro Thermal Power Station Unit No.3 and Joetsu Thermal Power Station Unit No.1.
- Concerning Noshiro No.3, we plan to adopt power generating facilities that use higher temperature steam than the existing Units No.1 and 2, which enable high thermal efficiency and to expand the use of sub-bituminous coal that is abundant and generates less coal ash. We aim to attain both high economic efficiency and reduction of the environmental impact. Civil engineering works started in February 2016 are on schedule. We began to install the boiler in February 2017 and will continue working toward the commencement of commercial operation in June 2020.
- Concerning Joetsu No.1, we plan to introduce the state-of-the-art gas combined-cycle facilities to secure the world's highest level of thermal efficiency. We are drafting the detailed design of facilities to commence construction in May 2019.

[Noshiro No.3](Noshiro, Akita)  
 Start of construction: January 2016  
 Output: 600 megawatts  
 Thermal efficiency: 44.8% [LHV standard]  
 Fuel: Coal  
 Start of operation: June 2020 (scheduled)

[Joetsu No.1](Joetsu, Niigata)  
 Start of construction: May 2019 (scheduled)  
 Output: 572 megawatts  
 Thermal efficiency: approx. 63%  
 (under design) [LHV standard]  
 Fuel: LNG  
 Start of operation: June 2023 (scheduled)



(Reference) Further use of highly efficient thermal power

[Sendai No.4](Shichigahama, Miyagi)  
 Output increase: from 446 megawatts to 468 megawatts (from April 2017)

[Shin-Sendai No.3 Series] (Sendai, Miyagi)  
 Output increase: from 980 megawatts to 1,046 megawatts (from July 2017)

## ■ Efforts toward Efficient Fuel Procurement

- Through introduction of new fuel procurement schemes as well as diversification of fuel pricing systems, we strive to further enhance our cost competitiveness.
- Through continuous review of our procurement portfolio, including diverse procurement sources, we quest for more efficient and optimal fuel procurement with emphasis on stability, economic efficiency and resilience.

### < Coal >

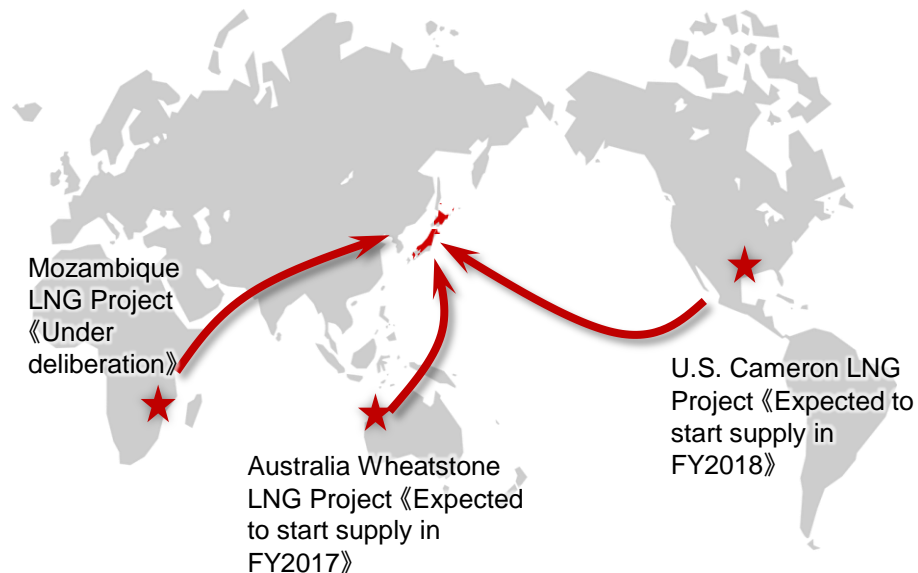
- Diversification of procurement sources to minimize supply risks and improve economic efficiency and resilience
- Total cost reduction (including ash treatment-related expenses) with the expansion of the use of sub-bituminous coal
- Securing stability and economic efficiency by using specialized/regular routed carriers



Regular-routed carrier  
"Noshiro Maru"

### < LNG >

We are planning to procure LNG from three new projects, including a project in North America, to improve flexibility of LNG procurement and diversify LNG pricing system.





(as of September 30, 2017)

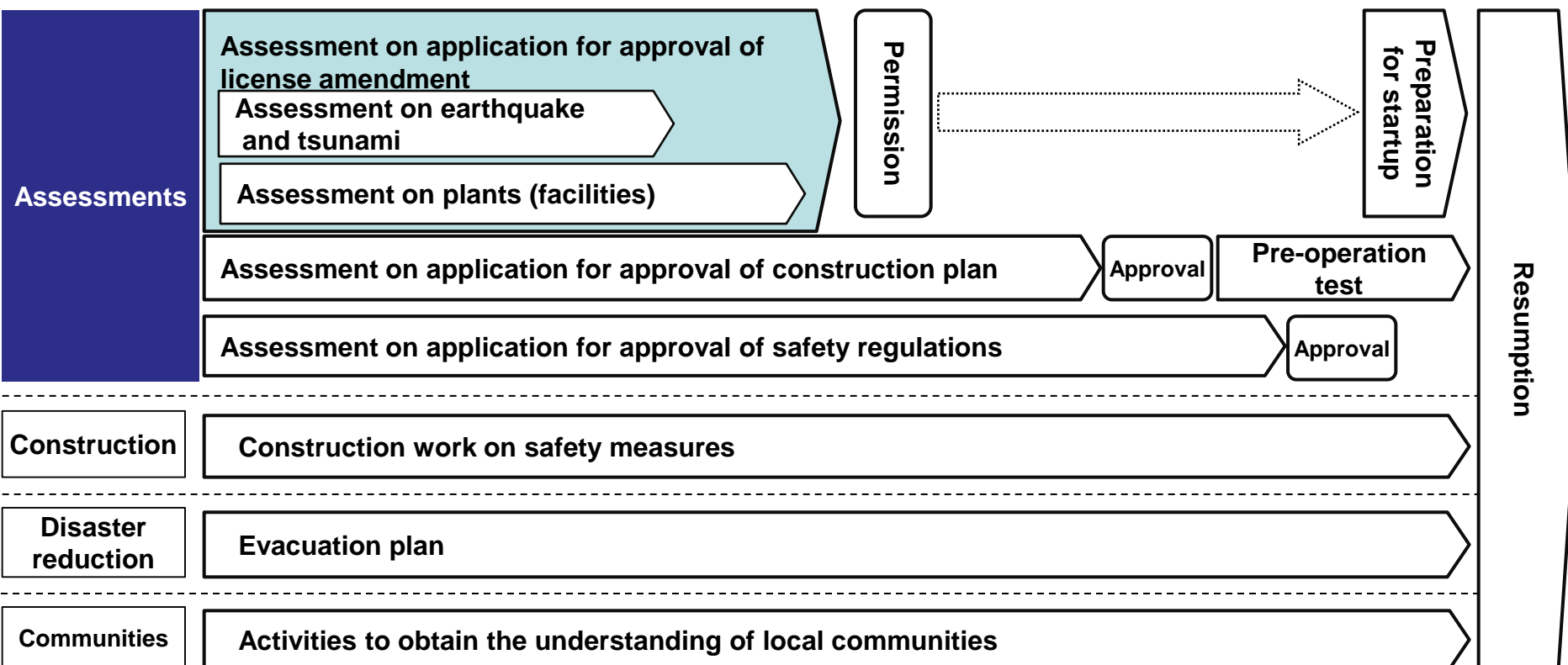
		FY2013	FY2014	FY2015	FY2016	FY2017	
Onagawa Unit 2	Assessment of plants (facilities)	▼Application (Dec. 2013)	▼On-site survey at Onagawa (Jan. 2015)	▼[Start of intensive assessments on TEPCO's Kashiwazaki-Kariwa Units 6 and 7 (from Aug. 2015)]	▼Restart of assessments in parallel (from Apr. 2016)		
	Assessment of earthquake and tsunami		▼Full-fledged conformity assessments on BWR (Jul. 2014)			▼On-site survey at Onagawa (Jun. 2016)	
							94 meetings in total
Higashidori Unit 1	Assessment of plants (facilities)		▼Application (Jun. 2014)				
	Assessment of earthquake and tsunami			▼Start of hearing (from Jun. 2015)	▼Additional supplementary survey of faults in the premises (from Apr. 2016)	▼Additional survey of faults in the premises (from May 2017)	
							12 meetings in total
		▼Submission of report on additional geological survey (Jan. 2014)	▼Completion of experts' evaluation statement (Mar. 2015)				
		Experts Meeting on faults in the premises					

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

(as of September 30, 2017)

- 26 units (11 companies) 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.
- Boiling water reactors (BWR), including our Onagawa Unit 2 and Higashidori Unit 1, are under assessments.

Our Onagawa Unit 2 and Higashidori Unit 1

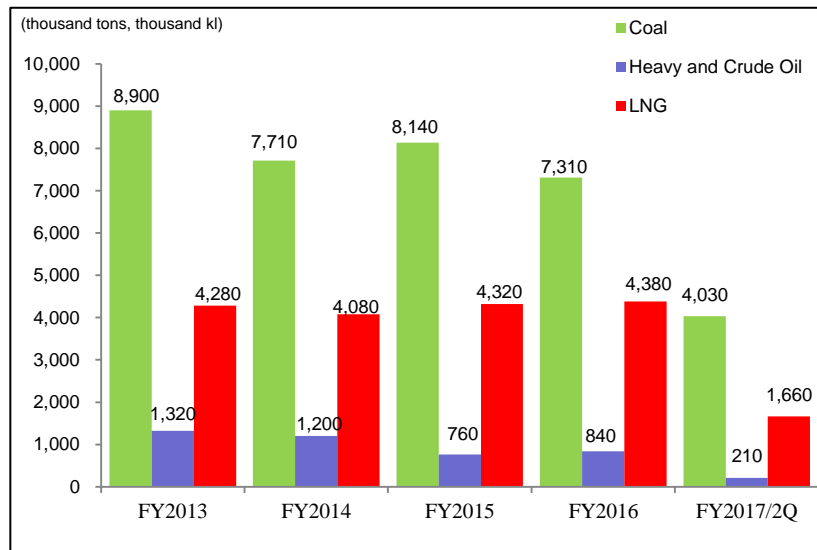




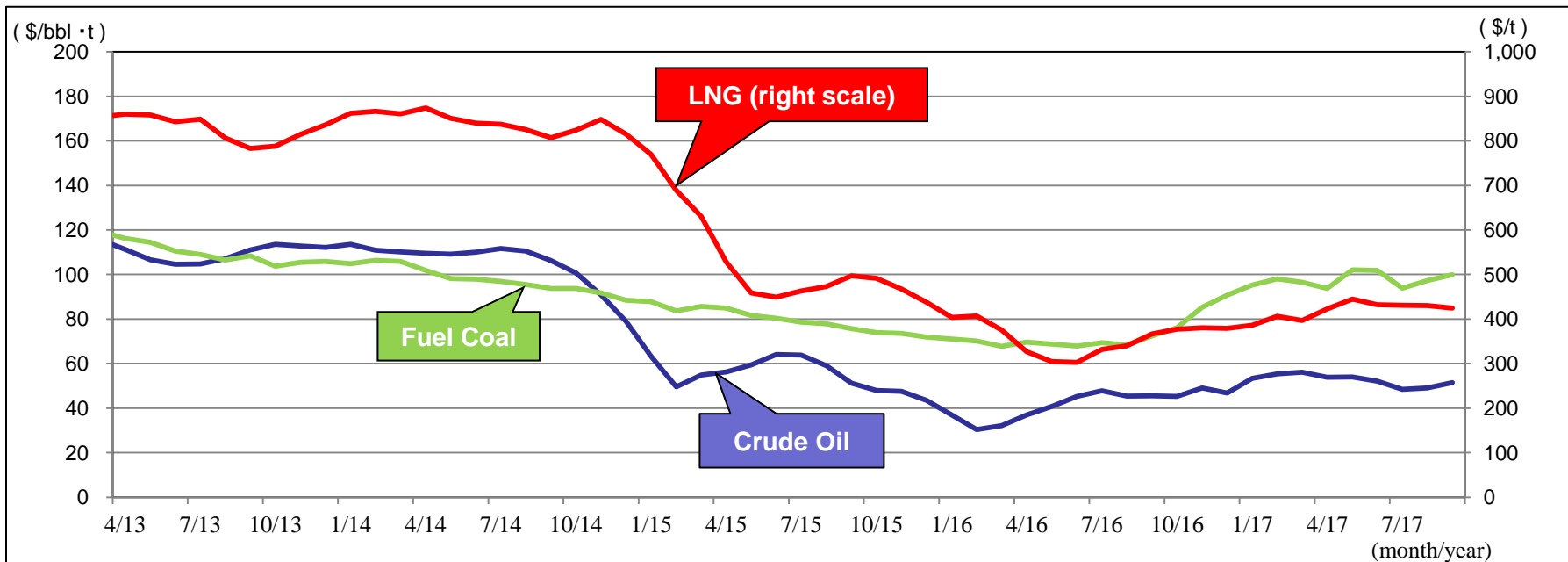
## Fuel Consumption

(thousand tons, thousand kl)

	FY2017/2Q (A)	FY2016/2Q (B)	Change (A) - (B)	(Reference) FY2016
Coal	4,030	4,120	(90)	7,310
Heavy and Crude Oil	210	380	(170)	840
LNG	1,660	1,870	(210)	4,380



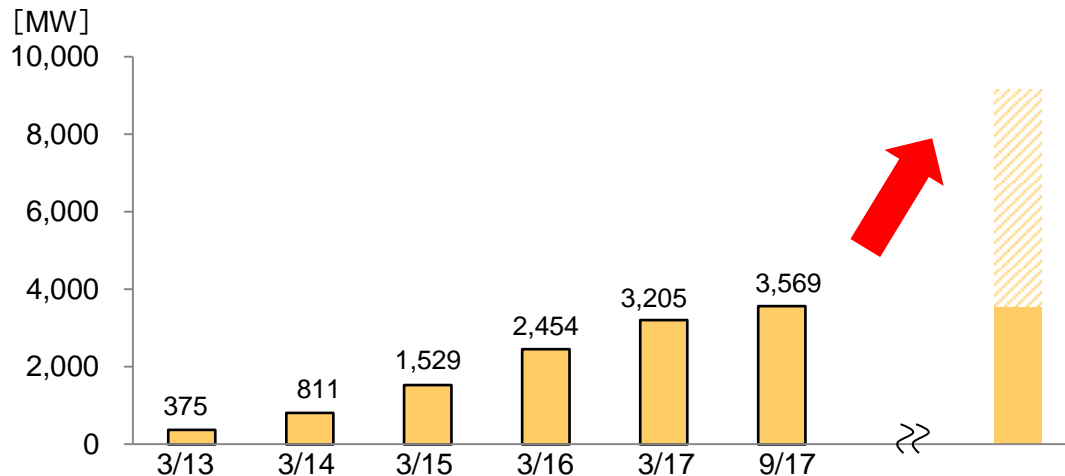
## [Reference] Historical CIF Prices of Crude Oil, Fuel Coal and LNG



## Solar & Wind Power Generations Connected to our Grid and Estimated Grid Access Volume

(as of September 30, 2017)

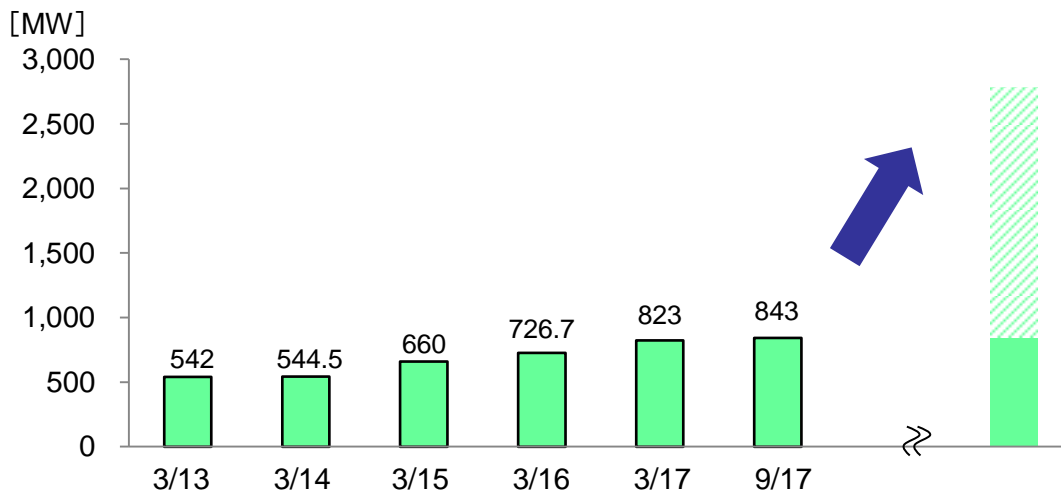
### [Solar]



Expected grid access volume: 5,583 MW

Old rule: 2,819 MW  
New rule: 2,764 MW

### [Wind]



Expected grid access volume: 1,939 MW

Old rule: 1,621 MW  
New rule: 318 MW

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

(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.

Tohoku Electric Power Co., Inc. hereby disclaim any responsibility or liability in relation to consequences resulting from decisions made by investors.