

# Financial Summary 2nd Quarter of FY2018

(April 1, 2018 – September 30, 2018)

October 25, 2018





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Changing Corporate Structure to Prevail

against Competition



## 2nd Quarter of FY2018 Financial Results

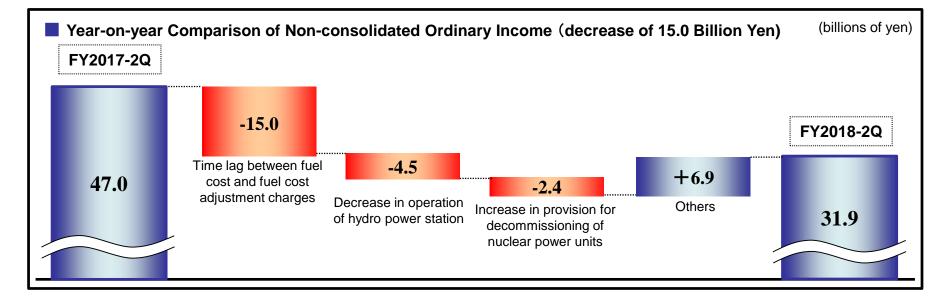
#### Summary of Financial Results

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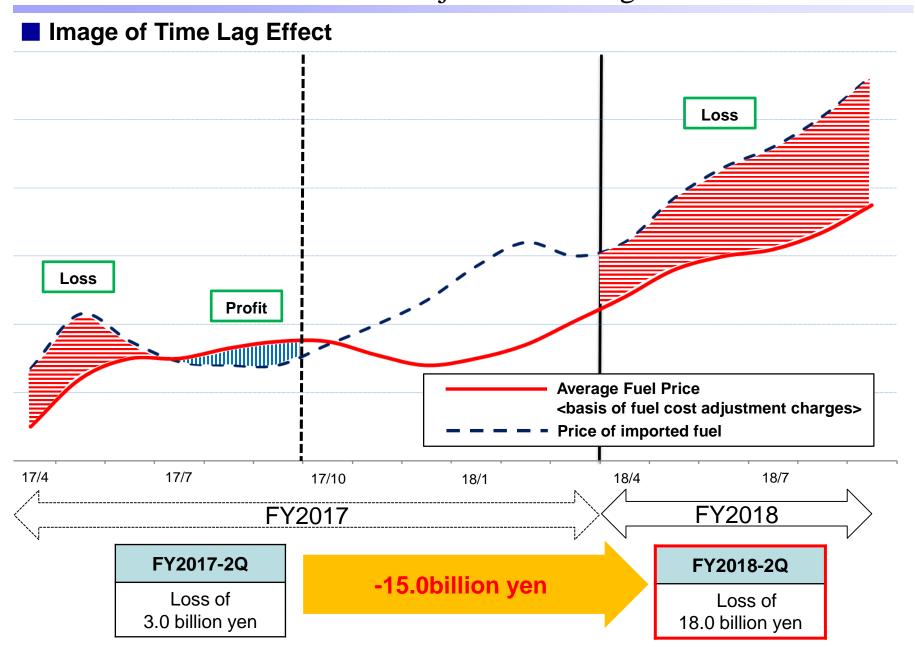
	(billionia)					illionic or you		
	Consolidated (A)			Non-consolidated (B)			(A) / (B) (times)	
	FY2018 2Q	FY2017 2Q	Change	FY2018 2Q	FY2017 2Q	Change	FY2018 2Q	FY2017 2Q
Operating Revenue	1,035.1	981.2	53.8	939.4	890.7	48.6	1.10	1.10
Operating Income	43.6	61.5	(17.8)	34.7	52.1	(17.3)	1.26	1.18
Ordinary Income	37.5	52.9	(15.4)	31.9	47.0	(15.0)	1.17	1.13
Net Income or Net Income Attributable to Owners of Parent	30.3	34.5	(4.2)	29.1	33.9	(4.8)	1.04	1.02

	Sep. 30, 2018	Mar. 31, 2018	Change	Sep. 30, 2018	Mar. 31, 2018	Change
Equity Ratio	18.2%	17.3%	0.9%	17.1%	16.3%	0.8%





## (Reference) Time Lag between Fuel Cost and Fuel Cost Adjustment Charges





#### **Electricity Supply**

(GWh)

	Electricity Supply	FY2018/2Q (A)	FY2017/2Q (B)	Change (A) - (B)	Change (A) / (B)
Own	Generated Power*1	28,059	28,438	(379)	98.7%
	Hydro	4,041	4,594	(553)	88.0%
	Thermal	23,760	23,606	154	100.7%
	Nuclear	(98)	(97)	(1)	100.7%
	Renewables	356	335	21	106.1%
Powe	er Interchanges and hased Power* <sup>2, 3</sup>	17,154	16,480	674	104.1%
Purc	hased Power*2, 3	(3,016)	(3,177)	161	94.9%
Used	d at Pumped Storage	(47)	(55)	8	83.7%
To	otal of Electricity Supply*2	42,150	41,686	464	101.1%

<sup>\*1 &</sup>quot;Own Generated Power" shows sending end.

<sup>\*2 &</sup>quot;Power Interchanges and Purchased Power" and "Total of Electricity Supply" include projected volume.

<sup>\*3</sup> As for "Power Interchanges and Purchased Power", the top is Received and the bottom is Transmitted. Received and Transmitted includes system operation.



#### **Electricity Sales**

(GWh)

Electricity Sales	FY2018/2Q (A)	FY2017/2Q (B)	Change (A) - (B)	Change (A) / (B)
Lighting (Residential)	9,971	10,192	(221)	97.8%
Power	22,948	23,768	(820)	96.5%
Retail Electricity Sales	32,919	33,960	(1,041)	96.9%
Wholesale Electricity Sales*1	7,935	6,618	1,317	119.9%
Total of Electricity Sales	40,854	40,578	276	100.7%

<sup>\*1 &</sup>quot;Wholesale Electricity Sales" includes the volume of specified power interchange.



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

Major Factors	FY2018/2Q (A)	FY2017/2Q (B)	Change (A) - (B)
Crude Oil CIF Price (\$/bbl.)	73.7	51.4	22.3
Exchange Rate (¥/\$)	110	111	(1)
Hydro Power Flow Rate (%)	90.9	107.7	(16.8)
Nuclear Power Utilization Rate (%)	-	-	-

Sensitivity to Major Factors	FY2018/2Q (A)	FY2017/2Q (B)	Change (A) - (B)
Crude Oil CIF Price (per \$1/bbl.)	1.3	1.5	(0.2)
Exchange Rate (per ¥1/\$)	1.5	1.2	0.3
Hydro Power Flow Rate (per 1%)	0.4	0.4	-
Nuclear Power Utilization Rate (per 1%)	0.5	0.5	-

Tohoku Electric Power

#### Balance Sheets (Consolidated)

		Sep. 30, 2018 (A)	Mar. 31, 2018 (B)	Change (A) - (B)	Major factors for change
Т	otal Assets	4,177.2	4,222.1	(44.9)	
	Non-current Assets	3,571.2	3,557.4	13.7	
	Current Assets	606.0	664.6	(58.6)	Cash and deposits : (34.5)
T	otal Liabilities	3,347.8	3,423.4	(75.5)	
	Non-current Liabilities	2,328.3	2,411.1	(82.8)	
	Current Liabilities	1,019.2	1,011.1	8.0	Long-term loans payable : (89.7) Notes and accounts payable - trade : (15.8)
	Reserve for fluctuation in water levels	0.2	1.1	(0.8)	
N	let Assets	829.3	798.7	30.6	Retained earnings : 20.2
					Loans : (65.3)
	nterest-Bearing iabilities	2,359.4	2,424.4	(65.0)	Bonds: (29.7) CP: 30.0



#### Statements of Income (Consolidated)

					(billions of yen)
		FY2018/2Q			arison
		(A)	(B)	(A) - (B)	(A) / (B)
Оре	erating Revenue	1,035.1	981.2	53.8	105.5%
	Electric utility	933.2	884.5	48.7	105.5%
	Other business	101.8	96.6	5.1	105.4%
Оре	erating Expenses	991.4	919.6	71.7	107.8%
	Electric utility	894.5	829.7	64.7	107.8%
	Other business	96.9	89.8	7.0	107.9%
Оре	erating Income	43.6	61.5	61.5 (17.8) 70	
No	on-operating income	4.9	3.7	1.2	134.1%
No	on-operating expenses	11.1	12.2	(1.1)	90.5%
Ord	linary Income	37.5	52.9	(15.4)	70.9%
	ovision or reversal of reserve fluctuation in water levels	(0.8)	0.4	(1.2)	-
Ex	traordinary gain	7.9	-	7.9	-
Ex	traordinary loss	2.1	1	2.1	-
Ind	come taxes	12.6	16.1	(3.4)	78.5%
_	et income attributable to n-controlling interests	1.0	1.8	(0.7)	59.4%
	Income Attributable to ners of Parent	30.3	34.5	(4.2)	87.6%

#### Statements of Cash Flows (Consolidated)

(billions of yen)

	FY2018/2Q (A)	FY2017/2Q (B)	Change (A) - (B)	Major factors for change
Cash Flows from Operating Activities	104.4	133.7	(29.3)	
Cash Flows from Investing Activities	(112.1)	(128.1)	16.0	
Cash Flows from Financing Activities	(77.8)	(54.2)	(23.6)	Bonds : (59.5) Loan: (10.8) CP: 47.0
Net Cash Flows	(85.4)	(48.4)	(37.0)	
Cash and cash equivalents at end of the period	156.7	179.8	(23.1)	
Free Cash Flows*	1.4	16.3	(14.8)	

<sup>\*:</sup> Our definition;

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

#### Segment Information (Consolidated)

(billions of yen)

Sales*1		(Simone of you)							
1,035.1   981.2   53.8									
1,035.1   981.2   53.8     934.9   886.2   48.6	Solor	<b>^*</b> 1	1,156.6	1,113.0	43.5				
Sector Utility   933.2   884.5   48.7	Sales		1,035.1	981.2	53.8				
933.2     884.5     48.7       Construction       57.3     126.7     (9.0)       57.3     57.2     0.0       18.0     15.2     2.8       14.5     11.9     2.6       17     23.5     21.6     1.9       17     9.6     9.4     0.1       Others			934.9	886.2	48.6				
Construction       57.3     57.2     0.0       18.0     15.2     2.8       14.5     11.9     2.6       17     23.5     21.6     1.9       17     9.6     9.4     0.1       Others     62.3     63.1     (0.7)		Electric Utility	933.2	884.5	48.7				
Gas 18.0 15.2 2.8  14.5 11.9 2.6  17 23.5 21.6 1.9  9.6 9.4 0.1  Others 62.3 63.1 (0.7)		Construction	117.6	126.7	(9.0)				
Gas 14.5 11.9 2.6  17 23.5 21.6 1.9  9.6 9.4 0.1  Others 62.3 63.1 (0.7)		Construction	57.3	57.2	0.0				
14.5 11.9 2.6  23.5 21.6 1.9  9.6 9.4 0.1  Others 62.3 63.1 (0.7)		Coo	18.0	15.2	2.8				
9.6 9.4 0.1 Others 62.3 63.1 (0.7)		Gas	14.5	11.9	2.6				
9.6 9.4 0.1  62.3 63.1 (0.7)		IT	23.5	21.6	1.9				
Others		11	9.6	9.4	0.1				
		Others	62.3	63.1	(0.7)				
20.5			20.3	17.9	2.3				

<sup>\*1:</sup> Lower is net sales to outside customers.

Seg [Ope	gment Income erating Income]	43.8	61.6	(17.7)
	Electric Utility	37.0	51.6	(14.5)
	Construction	0.6	3.8	(3.2)
	Gas	0.6	0.7	(0.1)
	IT	2.7	2.0	0.7
	Others	2.7	3.2	(0.5)

#### 【 (Reference) Major Consolidated Subsidiaries】\*2 (billions of yen)

(Dillions of yen)					
	FY20	18/2Q	Year-o	n-year	
	Sales	Operating Income	Sales	Operating Income	
[ Electric Utility ] Sakata Kyodo Power Co., Ltd.	18.6	(0.8)	1.2	0.7	
Tohoku Sustainable & Renewable Energy Co., Inc.	4.7	1.6	(0.7)	0.2	
[ Construction ]					
Yurtec Corp.	85.9	0.6	(5.1)	(2.1)	
Tohoku Electric Engineering & Construction Co., Inc.	29.8	0.6	(0.3)	(0.5)	
[ Gas ] Nihonkai LNG Co., Ltd.	5.6	0.5	0.3	0.0	
[ IT ]					
Tohoku Intelligent Telecommunication Co., Inc.	11.4	1.7	(0.0)	0.3	
Tohoku Information Systems Co., Inc.	11.7	0.6	(0.2)	(0.5)	
[ Others ]					
Kitanihon Electric cable Co., Ltd.	14.7	0.2	0.6	(0.0)	

<sup>\*2:</sup> The amounts before elimination of inter-company transaction



		Sep. 30, 2018 (A)	Mar. 31, 2018 (B)	Change (A) - (B)	Major factors for change
T	otal Assets	3,845.1	3,906.4	(61.3)	
	Non-current Assets	3,426.0	3,370.6	55.3	Deferred tax assets : 46.5
	Current Assets	419.1	535.7	(116.6)	Short-term investments: (50.5) Deferred tax assets : (50.2)
T	otal Liabilities	3,186.8	3,269.6	(82.8)	
	Non-current Liabilities	2,264.3	2,337.0	(72.7)	Long-term loans payable : (88.5)
	Current Liabilities	922.1	931.4	(9.2)	
	Reserve for fluctuation in water levels	0.2	1.1	(0.8)	
Net Assets		658.3	636.8	21.4	Retained earnings : 19.0
Interest-Bearing Liabilities		2,341.9	2,402.6	(60.6)	Loans: (60.6) Bonds: (30.0) CP: 30.0



#### Statements of Income (Non-consolidated)

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	FY2018/2Q FY2017/2Q Comparison			(billions of yen)			
		FY2018/2Q	FY2017/2Q			Major factors for change	
		(A)	(B)	(A) - (B)	(A) / (B)		
	Revenue from Electricity Sales	671.0	673.4	(2.4)	99.6%		
	Lighting (Residential)	258.7	254.2	4.4	101.7%		
۱ ــ	Power	412.3	419.1	(6.8)	98.4%		
Revenue	Sales of power to other utilities and other companies	123.1	97.3	25.8	126.5%	Increase in wholesale beyond our franchise area	
nue	Grant under Act on Purchase of Renewable Energy Sourced Electricity	94.7	82.5	12.1	114.7%	Increase in purchased volume from solar	
	Other revenue	58.0	44.2	13.8	131.4%		
	[Operating Revenue]	[ 939.4 ]	[ 890.7 ]	[ 48.6 ]	[ 105.5%]		
	Total revenue	947.0	897.6	49.4	105.5%		
	Personnel	81.1	77.7	3.3	104.4%		
	[Amortization of actuarial gain or loss]	[ 10.1 ]	[ 7.3]	[ 2.7 ]	[ 136.7%]		
	Fuel	175.9	146.3	29.5	120.2%	Increase in thermal fuel expenses	
	Maintenance	82.2	88.8	(6.5)	92.6%	Decrease in maintenance expenses for thermal power facilities	
т	Depreciation	98.8	100.6	(1.8)	98.2%		
Expenses	Power purchased from other utilities and other companies	262.4	225.3	37.1	116.5%	Increase in purchased volume from solar	
ses	Interest	9.5	10.9	(1.4)	86.5%		
	Taxes, etc.	41.0	40.5	0.5	101.3%		
	Nuclear power back-end cost	5.3	3.6	1.6	143.8%		
	Levy under Act on Purchase of Renewable Energy Sourced Electricity	78.5	73.5	5.0	106.9%		
	Other expenses	79.9	82.8	(2.8)	96.5%		
	Total expenses	915.0	850.5	64.4	107.6%		
[Op	perating Income]	[ 34.7 ]	[ 52.1 ]	[ (17.3) ]	[ 66.7%]		
Or	dinary Income	31.9	47.0	(15.0)	68.0%		
	ovision or reversal of reserve for fluctuation in tter levels	(0.8)	4	(1.2)	-		
Ex	traordinary gain	7.9	-	7.9	-	Compensation income for damage	
Ex	traordinary loss	2.1	_	2.1	_	Loss on decommissioning of Onagawa Nuclear Power Station Unit 1	
Inc	come taxes	9.3	12.6	(3.2)	74.1%		
Ne	et Income	29.1	33.9	(4.8)	85.8%		



#### Tohoku Electric Power Financial and Dividend Forecast for FY2018 (1/2)

- ➤ We revised our forecast of operating revenue and other incomes for FY2018 announced on April 2018, according to the latest conditions of supply and demand, etc.
- ➤ Consolidated ordinary income is expected to be approximately ¥62.0 billion, a 22.5% decrease compared to the previous forecast, because of time lag between fuel cost and fuel cost adjustment charges caused by a rise in fuel prices, a decrease in operation of hydro power station caused by a lower-than-normal water flow rate, despite expansion of wholesale beyond our franchise area and our thorough streamlining efforts under the circumstance competition has been intensifying.
- > The year-end dividend forecast for FY2018 remains unchanged from the previous release on April 2018.

#### Financial Forecasts for FY2018

(billions of yen)

		Conso	lidated		Non-consolidated			
	FY2018 Forecast (new) (A)	FY2018 Forecast (previous) (B)	Changes (A-B)	(Reference) FY2017 Result	FY2018 Forecast (new) (A)	FY2018 Forecast (previous) (B)	Changes (A-B)	(Reference) FY2017 Result
Operating Revenue	2,240.0	2,140.0	100.0	2,071.3	2,040.0	1,940.0	100.0	1,869.3
Operating Income	78.0	98.0	(20.0)	107.6	52.0	74.0	(22.0)	82.3
Ordinary Income	62.0	80.0	(18.0)	88.4	40.0	60.0	(20.0)	67.5
Net Income Attributable to Owners of Parent	43.0	50.0	(7.0)	47.2	35.0	43.0	(8.0)	41.8

#### Major Factors

		FY2018		
		Forecast (new)	Forecast (previous)	
	Retail	Approx. 68.9	Approx. 69.5	
Electricity Sales (TWh)	Wholesale	Approx. 16.9	Approx. 16.1	
,	Total	Approx. 85.8	Approx. 85.6	
Crude Oil CIF (\$/bbl.)		Approx. 77	Approx. 65	
Exchange Rate (¥/\$)		Approx. 110	Approx. 110	
Nuclear Power Utilization Rate (%)		_	_	

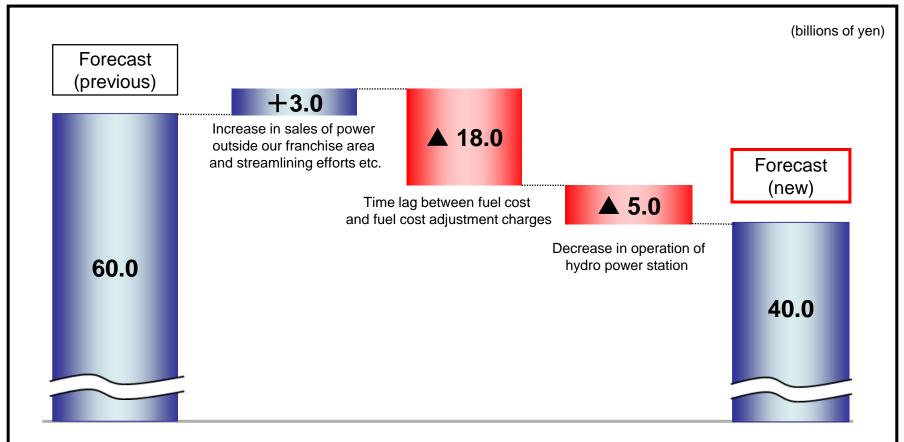
#### Sensitivity to Major Factors

	Forecast (new)
Crude Oil CIF Price (per \$1/bbl.)	Approx. 3.3 billion yen
Exchange Rate (per ¥1/\$)	Approx. 3.6 billion yen

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#### Tohoku Electric Power Financial and Dividend Forecast for FY2018 (2/2)

#### ■ Factors for Change in Non-consolidated Ordinary Income (Decrease of 20.0 billion Yen)



#### Dividend Per Share (Forecast)

	Interim	Year-end		Annual	
2018FY	20 yen	(Forecast)	20 yen	(Forecast)	40 yen
(Reference) 2017FY Result	20 yen		20 yen		40 yen

### **Topics**



#### Progress of Our Mid-Term Management Policies

#### Focal Points for 2018

- ➤ 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 are expediting 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

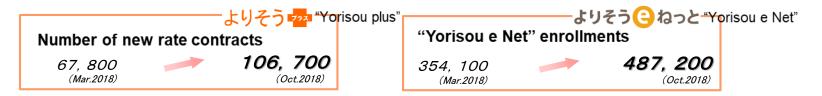
Changing corporate structure to prevail against competition

## Further Enhancing the Competitiveness in Power Sales

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#### Major Efforts in Our Franchise Area

- > Providing new rate plan and enhancing our members-only website "Yorisou e Net" for residential customers.
- Driving further total energy solutions and promote the widespread use of heat pump devices for business customers.
- To strengthen sales activities and marketing, we aggregated sales offices in Tohoku and Niigata prefectures and set up "Business Customer Center" to expand sales channels for corporate customers in July 2018.
- Continuing to enhance further sales and competition from both price and non-price.



#### 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 <a href="Synergia Power Co., Ltd.">Synergia Power Co., Ltd.</a>, a joint company of TOKYO GAS Co., Ltd. and Tohoku EPCO.
- ➤ <u>Investing in Tokyu Power Supply Co., Ltd.</u>, which sells electricity in the metropolitan area in March 2018. With cooperative deployment, we are developing retail electric supply business in the metropolitan area.
- Aiming to expand further power sales volume beyond our service area by providing wholesale supply through alliance and being proactively committed to power trading at the wholesale electricity market.







## Enhancing Cost Competitiveness with Optimal Power Portfolio

#### Constructing Advanced Thermal Power Plants

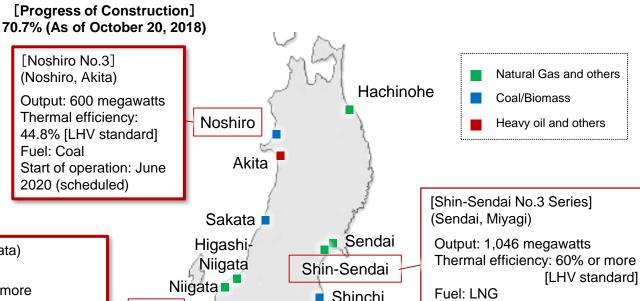
- ➤ Shin-Sendai No.3 series commenced full-scale commercial operations in July 2016.
- ➤ We started construction work for Noshiro No.3 in February 2016 toward the commencement of commercial operation in June 2020 and we are currently conducting construction work on mechanical and electrical equipment.
- ➤ We set up a local construction site for Joetsu No.1 in July 2018 toward the commercial operation in June 2023 and we are preparing for the development.
- ➤ In parallel with the development of advanced thermal power plants, we will close down aging thermal power plants with low economic efficiency, from the viewpoint of replacing with new power plants and streamlining power generation facilities.

Joetsu

#### <Current Status of Thermal Power Stations>



Generator and Turbine Assembly Status in Turbine Building



Haramachi

Nakoso

Start of operation:

July 2016 (full scale)

[Joetsu No.1] (Joetsu, Niigata)

Output: 572 megawatts

Thermal efficiency: 63% or more

[LHV standard]

Fuel: LNG

Start of operation: June 2023 (scheduled)



#### Making Steady Efforts to Restart Nuclear Power Reactors (1/2)

#### ■ Current Status of Onagawa Nuclear Power Station

- > Concerning construction work of Onagawa Unit 2, we are working diligently to aim for completion in FY 2020.
- ➤ Concerning Conformity Assessments, full-scale assessments on plants and facilities have been being conducted. However, we expect that it will take a certain period of time before the completion of these assessments.

≽

#### <Efforts to improve safety>



Filter vent installed in August 2018

#### <Current Status of Conformity Assessments>

Onaga	ssessment of earthquake and tsunami	<ul> <li>(1) The design-basis earthquake ground motions</li> <li>(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>
Onagawa Unit 2	Assessment of plants (facilities)	<ol> <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> </ol>



#### Making Steady Efforts to Restart Nuclear Power Reactors (2/2)

#### ■ Current Status of Higashidori Nuclear Power Station

- > Concerning construction work of Higashidori Unit 1, we are working diligently to aim for completion in FY 2021.
- Concerning Conformity Assessments, our explanation that faults just below seismic critical facilities are inactive for the foreseeable future has been judged to be appropriate by the Nuclear Regulation Authority (NRA). However, we expect that it will take a certain period of time before assessments on the activity of faults within and around the premises and plants/facilities are completed.

#### <Efforts to improve safety>



Debris removal training by the wheel loader

#### < Current Status of Conformity Assessments >

- (1) Our explanation that faults of f-1and f-2 just below seismic critical facilities, such as the reactor building, are inactive for the foreseeable future has been judged to be appropriate.
- (2) Other faults within and around the premises are under assessment.
- (3) The conceivable maximum tsunami is under assessment.

sessment of plants (facilities)

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.



## Decommissioning of Unit 1 of Onagawa Nuclear Power Station

#### Decision of Decommissioning of Onagawa Unit 1

- ➤ Concerning the handling of Onagawa Unit 1, we have been studying considering specific concrete measures required for compliance with new regulatory standards, design differences with Onagawa Units 2 and 3, and Higashidori Unit 1 etc. .
- ➤ As a result of examination, as the problem unique to Onagawa Unit 1, the space necessary for adding new safety measures equipment such as fire extinguishing equipment, power supply equipment, alternative water injection pump etc. is insufficient compared to Onagawa Unit 2 and so on, safety improvement Technical restrictions for implementing countermeasures were large, and it was decided to abolish as a result of comprehensive consideration such as the output scale of the generator and the operating years in the case of re-operation.

#### Overview of Onagawa Unit 1

[Overview of Power Station]

Location	1 Maeda, Tukahama, Onagawa-cho, Oshika-gun, Miyagi Prefecture	
Type of Reactor	Boiling Water Reactor (BWR)	
Reactor Container	MARK - I	
Rated Output	524MW	
Number of Fuel Assembly Loading Bodies	368	

#### [Power Generation Results]

Generated Electricity	83TWh <sup>※1</sup>
Utilization Rate	67.4% **2

<sup>※1</sup> Cumulative until the end of FY2010 with operational results

#### [Main History]

January 5, 1968	Decided construction site to Onagawa	
May 30, 1970	Made an application for a reactor installation license	
December 10, 1970	Obtained the reactor installation license	
December 25, 1979	Started construction	
October 18, 1983	First critical state	
November 18, 1983	First power transmission	
June 1, 1984	Started commercial operation	
March 11, 2011	Operation stopped by the Great East Japan Earthquake	

X2 Average until the end of FY2010 with operational results



#### Overseas Business

- ➤ Participating in the Rantau Dedap Geothermal Power Project in South Sumatra, Indonesia, from March 2018.
- ➤ Hoping for long-term stable income by concluding a power trading contract over 30 years since its launch of operation with Indonesian state-owned power company.
- ➤ Proactively contributing stable operation at power stations by making use of our knowledge and experiences of geothermal technology which our company has cultivated in Japan over the past 40 years



Steam power testing
(Site of Rantau Dedap Geothermal Power Plant)

#### Gas Business

- We started operation of our first LNG shipping facilities at Shin-Sendai Thermal Power Station in August 2018.
  Currently, we supply LNG to Toyota Motor East Japan, Inc. and Denso Iwate Corp. from the facilities.
- ➤ We will expand our gas sales volume by utilizing the facilities.



LNG shipping (Shin-Sendai Thermal Power Station)

#### Electricity and Fuel Trading Business

- We established Tohoku EPCO Energy Trading Co., and started operation in April, 2018.
- > Through comprehensive trading of electricity and fuel, our company is to properly control business risk, proactively respond to a new business area by thinking ahead, and expand profitability.

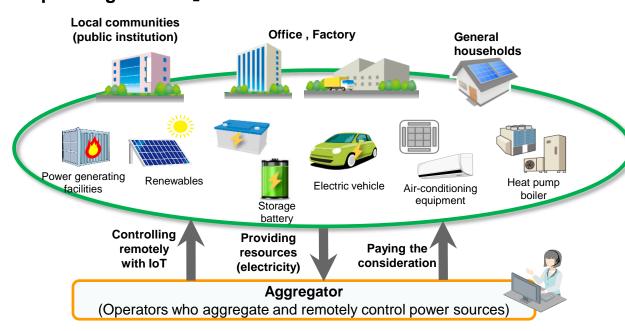


#### Commencing "Virtual Power Plant Verification Project"

- ➤ We have 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 will not only utilize the knowledge and know-how gained from this verification project as a function of adjusting the electricity supply and demand balance, but also link the knowledge and know-how to the provision of energy management services leading to customer's energy saving and cost saving.

  By doing so, we will establish relationships that allow customers and us to mutually benefit.

#### [Sample Image of VPP]



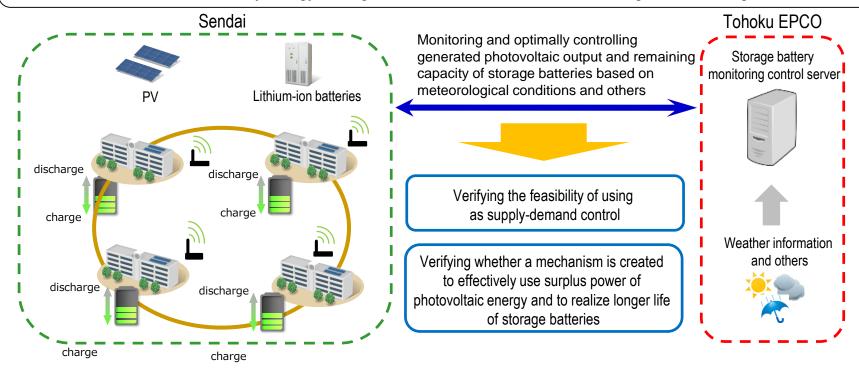
Virtual Power Plant (VPP):

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.



#### Start of "V2G Verification Project"

➤ Tohoku EPCO, Nissan, Mitsui, and Mitsubishi Estate will jointly work on verification project until March 31, 2019 in order to formulate V2G which the storage batteries of electric cars are connected to electric power system to charge and discharge.



#### Start of the Yorisou Smart Project

- ➤ We are running the Yorisou Smart Project designed to explore services we can offer by using new information technologies and communication robots.
- ➤ This project will explore the two services below over the period from July 2018 to late August 2019.
- ➤ With the knowledge and know-how acquired through this project, we plan to develop new services that will help customers live more convenient and comfortable daily lives.

#### <Services explored in the Yorisou Smart Project>

#### Life assistance services offered through communication robot "Bocco\*"



Multiple services will make use of Bocco's functions designed to assist communication between family members in different everyday situations and to provide our newly developed services, including air-conditioner control assistance.

#### Energy conservation assistance services tailored to specific home appliances



Services advise customers how to use home appliances leading to energy saving and cost saving by utilizing a system that estimates electricity usage by household electric appliances which is estimated from the usage of electricity measured by smart meter every 30 minutes.

<sup>\*</sup> Bocco is a communication robot developed by Yukai Engineering Inc. It can be linked with a smartphone to enable the user to exchange messages with family members living separately and to monitor his or her home (e.g. temperature and humidity in the house, presence, of family members, etc.).

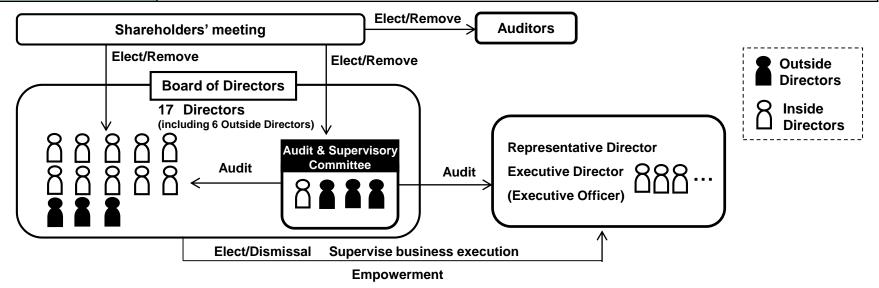


## Changing Corporate Structure to Prevail against Competition (1/2)

#### ■ Enhancing Corporate Governance by Revising Our Governance Framework

➤ <u>We have changed our corporate governance structure</u> to a "company with audit and supervisory committee" and revised our executive officer system in June 2018.

Transition to a company with audit and supervisory committee	<ul> <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> </ul>
Revision of Executive Officer System	• We have revised 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.



#### ■Reorganization of Power Network Business along with Legal Unbundling

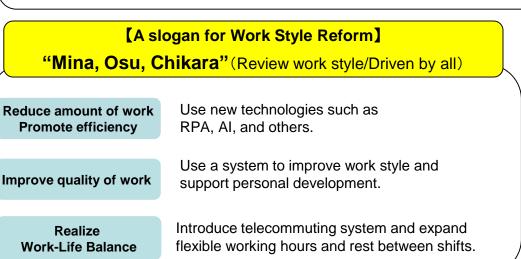
- > We introduced in-house company system and reorganized our business structure from April 2018.
- ➤ In response to legal unbundling scheduled in April 2020, we will split power network business in order to secure further neutrality of transmission/distribution sectors. Under Operating Holding Company which operates power generation business and sales business, we will <a href="mailto:set up">set up "Power Network Company</a> (Tohoku Electric Power Network)" as 100%-owned company.

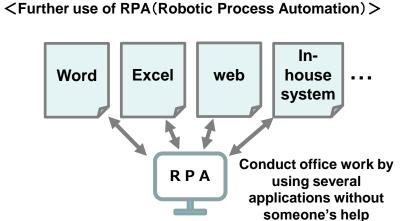


## Changing Corporate Structure to Prevail against Competition (2/2)

#### ■ Efforts for "Work Style Reform" to Improve Further Productivity

We set up task force to drive "Work Style Reform Promotion Commitee" led by Representative Director & President. We will make all-out efforts to implement Work Style Reform which requires drastic change of working style and introduction of flexible working system and establish a strong management foundation by improving employee productivity. By doing so, we aim to become a company trusted and selected by customers and local communities.





#### Establishment of Tohoku Electric Power Friendly Partners

- ➤ We established a new company, Tohoku Electric Power Friendly Partners in order to further promote the employment of persons with disabilities on July 2018. It has commenced operation in October 2018.
- ➤ We aim to offer more opportunities for our diverse talent through this new company. We will also develop and maintain working environments that allow employees with disabilities to focus on their work with a sense of reassurance, find meaning in their tasks and feel rewarded fore their effort. This way, we will actively support persons with disabilities to become independent and socially engaged.



#### References



#### Outline of system and application for approval

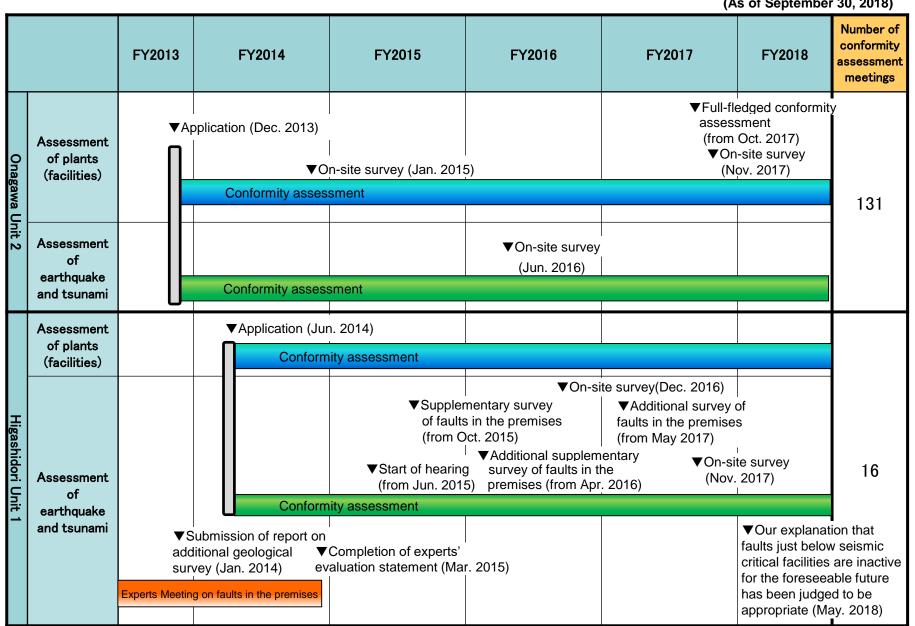
- ➤ In case of decommissioning of nuclear power station, loss of power supply equipment due to adopting asset-impairment accounting and recording of reprocessing expenses was required before.
- ➤ After revision of Electricity Business Act, it is possible to adopt Decommissioning Accounting System if "Application for approval for special account related to nuclear power decommissioning" and "Application for approval for special account related to nuclear power decommissioning" are submitted to the Minister of Economy, Trade and Industry.
- ➤ Adopting Decommissioning Accounting System allows us to depreciate and expense them as an asset over a certain period of time after the decision on decommissioning has been made without recording the costs in a lump sum.
- ➤ On October 25, 2018, we determined decommissioning of Onagawa Unit 1 and submitted an application for approval regarding Decommissioning Accounting System.

#### System Coverage of Onagawa Unit 1

Application Type	System Coverage	Accounting Measures	
Nuclear power special assets (Approx. 4.1 billion yen)	Book value of nuclear power production facilities	Record nuclear power production facilities and continue depreciation even after decommissioning of nuclear power station	
Special account related to	Book value of nuclear power production facilities and construction in progress	Transfer to "Special account related to nuclear power decommissioning", and	
nuclear power decommissioning	Book value of nuclear fuel	record "Amortization of special account related to nuclear power	
(Approx. 24.5 billion yen)	Cost for nuclear fuel processing	decommissioning"  • Straight-line depreciation	

#### Tohoku Electric Power Current Status of Conformity Assessments (1/2)

(As of September 30, 2018)



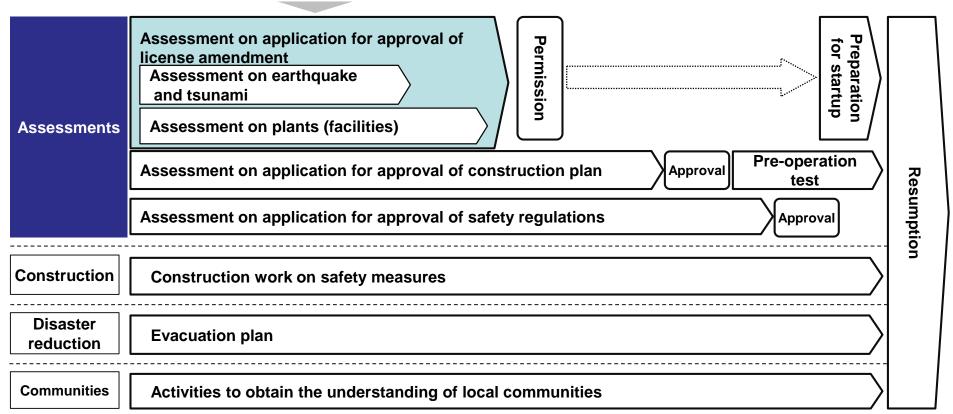
#### Current Status of Conformity Assessments (2/2)

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

(as of September 30, 2018)

- > 27 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 9 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, Japan Atomic Power Company's Tokai No2 were authorized permission in September 2018. (Construction plan of Tokai No.2 was approved in October 2018.)

Our Onagawa Unit 2 and Higashidori Unit 1



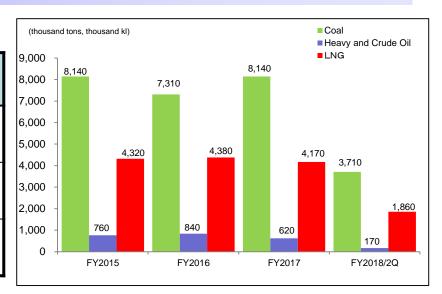


#### Fuel Consumption Results

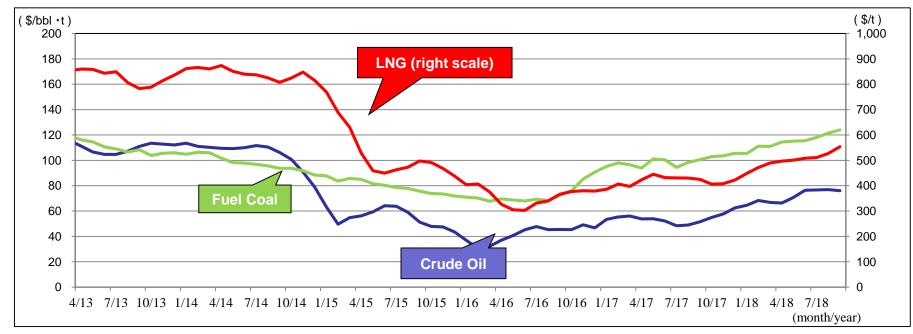
#### **■ Fuel Consumption**

(thousand tons, thousand kiloliters)

	FY2018/2Q (A)	FY2017/2Q (B)	Change (A) - (B)	(Reference) FY2017
Coal	3,710	4,030	(320)	8,140
Heavy and Crude Oil	170	210	(40)	620
LNG	1,860	1,660	200	4,170



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

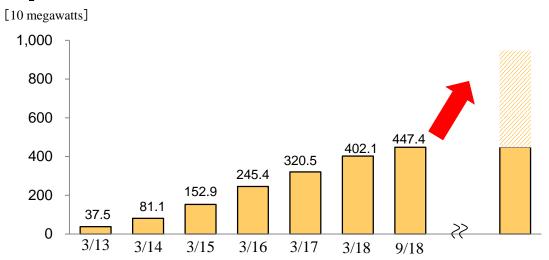




#### Current and Expected Grid Access Volume of Solar and Wind within our Service Area

(as of September 30, 2018)

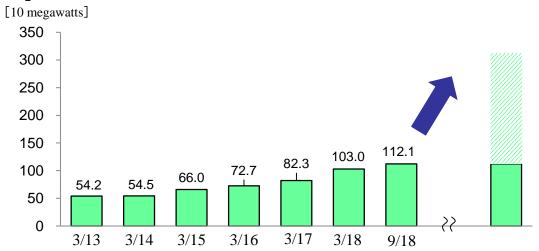
#### [Solar]



Expected grid access volume: 4,995 megawatts

Old rule: 2,110 megawatts New rule: 2,885 megewatts

#### [Wind]



Expected grid access volume: 1,996 megawatts

Old rule: 1,252 megawatts New rule: 744 megawatts



#### (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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