# Section1 Business Update

# Key Takeaways

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# The Financial Targets on Group's Medium-term Management Policy

The Financial Targets over the next five years	P2
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### Providing value to stakeholders as well as striving for continuous growth

Sales promotion with "Electricity and gas bundling"		
Initiatives for expanding electricity demand	P5	
Start of operation of Sarulla geothermal unit No.2	P6	
Open innovation with start-up companies	P7	

### Process for restarting of Genkai NPS

Process for restarting of Genkai NPS	P8
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"The Financial Targets on Group's Medium-term Management Policy" was announced in June 2017
 Further clarification of our group's management stance and acceleration of initiatives for the management innovation
 (P2-3)

 Providing value to our stakeholders as well as striving for continuous growth

Pushing forward initiatives on a group wide basis, aiming to become "A corporate group that provides 'Japan's best energy services'" declared on Group's Medium-term Management Policy

(P4-7)

Under Pre-Operation Inspection toward restarting of Genkai NPS, which is the base of stable management

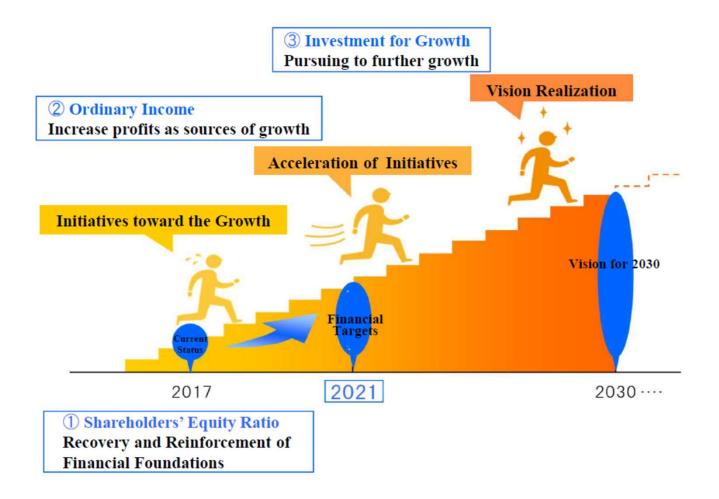
Four NPSs will be operated after restarting of Genkai NPS and contribute significantly to improve and stabilize our profitability and financial condition

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# The Financial Targets on Group's Medium-term Management Policy

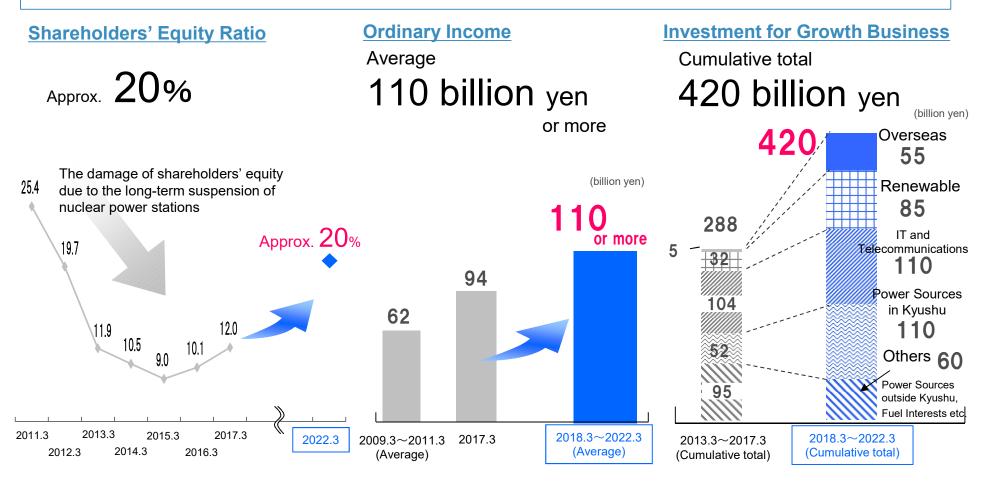
# The Financial Targets over the next five years

- We formulated Medium-term Management Policy in April 2015, and have made maximum efforts for initiatives toward the early restarting of NPSs, improvement of profitability and overcoming the competitions of the full liberalization of the electricity and gas retail markets.
- We set the financial targets for the next five years considering that it is necessary to further clarify our group's management stance and accelerate initiatives for the management innovation.



# The Financial Targets over the next five years

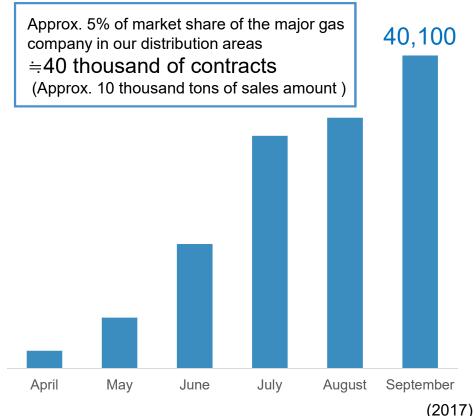
- We set the targeted shareholders' equity ratio at around 20% at the end of FY ending Mar 31<sup>st</sup>, 2022, because the recovery of damaged financial foundation is an urgent task.
- To achieve the targeted shareholder's equity ratio and ensure sources for further growth, we set the target of average ordinary income 110 billion yen or more for the next five years.
- We aim to invest a cumulative total of 420 billion yen for the next five years toward growth business such as overseas and renewable energy in order to gain sustainable profits.



# Sales promotion with "Electricity and gas bundling"

- We regard gas retail business as a great opportunity to retain and regain electricity customers, and develop the sales with "Electricity and gas bundling".
- Gaining new contracts through our customer service offices and one day office in shopping mall as well as our web site and call center.
- The target of household gas sales in FY2017 has been already achieved as the number of contracts is about 40,100 (at September 2017).

#### Sales target of household gas



#### One day office





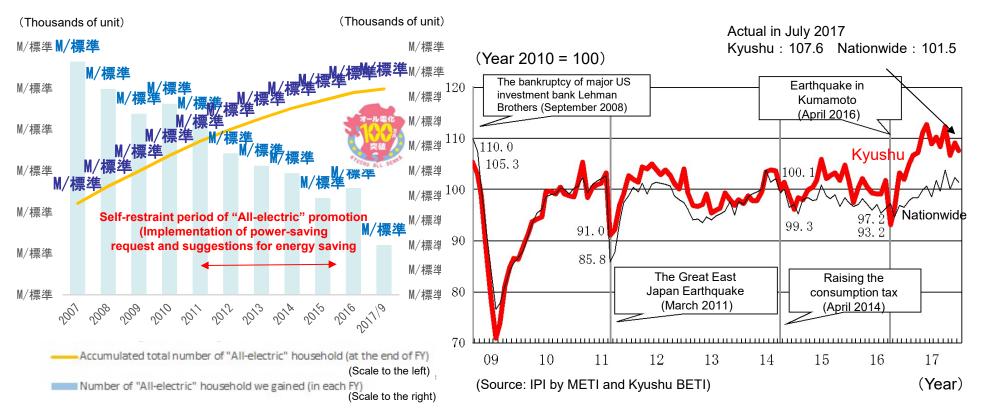
### Our web site



### Initiatives for expanding electricity demand

- We restarted All-electric promotion in FY2016 for the first time in 6 years. Eventually, number of new contracts stopped decreasing trend and turned to increase in that FY.
- Cumulative number of contracts will surpass 1 million within the period of "All-electric campaign", held from October to December 2017 (Refer to the figure on the left).
- Production of Kyushu Economy continues to be in higher level compared with nationwide level, based on an increase of the export in automotive and semiconductor industries (Refer to the figure on the right).
- Capital expenditure in Kyushu is forecast to increase by approx.14.7% y/y, which is higher than nationwide level (2.9%). Therefore expansion of electricity demand will be expected.

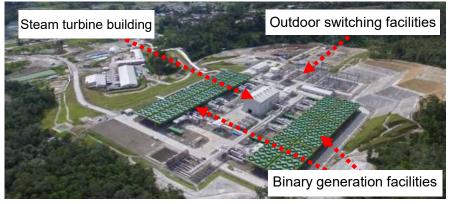
### The number of new contracts of "All-electric" Trend of industrial production index



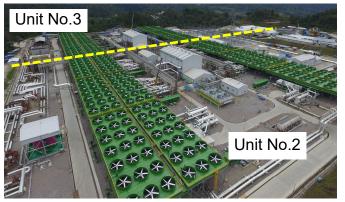
### Start of operation of Sarulla geothermal unit No.2

- Regarding Sarulla geothermal, which is the world's largest scale, unit No.2 (output 108.7MW) started commercial operation in October 2017 following unit No.1 (output 105.9MW) in March 2017.
- We have an electricity sales contract for 30 years with EPCO owned by Indonesia government, so stable profits are expected.
- Unit No.3 will start commercial operation in 2018.

#### Unit No.1



### Unit No.2 / No.3



Location	Sarulla area, the north of Sumatra island, Indonesia			
Business outline	<ul> <li>Total development from geothermal resources development to generation</li> <li>Electricity sales contract with EPCO owned by Indonesia government for 30 years</li> </ul>			
Output	320.8MW (3 units)			
Investment ratio	25%			
Start of operation	Unit 1: March 2017 Unit 2: October 2017 Unit 3: 2018 (scheduled)			

A Near side: Unit No.2 (started to operate since October 2017), Far side: Unit No.3 (start of operation scheduled in 2018)

### **Open innovation with start-up companies**

- We have implemented "Kyushu EPCO Accelerator 2017" with Creww inc., which operates Japan's largest start-up community, since August 2017. In this initiative, we aim to co-create new businesses by open innovation with start-up companies.
- New businesses will be created by open innovation, linking our plenty resources with creative and innovative ideas, services and products of start-up companies organically.
- We aim to create the new values that can lead to solution for social problems as well as development of Kyushu by creating completely new businesses with start-up companies beyond infrastructure business we have focused on so far.



Press conference by Mr. Izichi, the representative of Creww inc.,(left) and president Uriu

#### Our group's resources

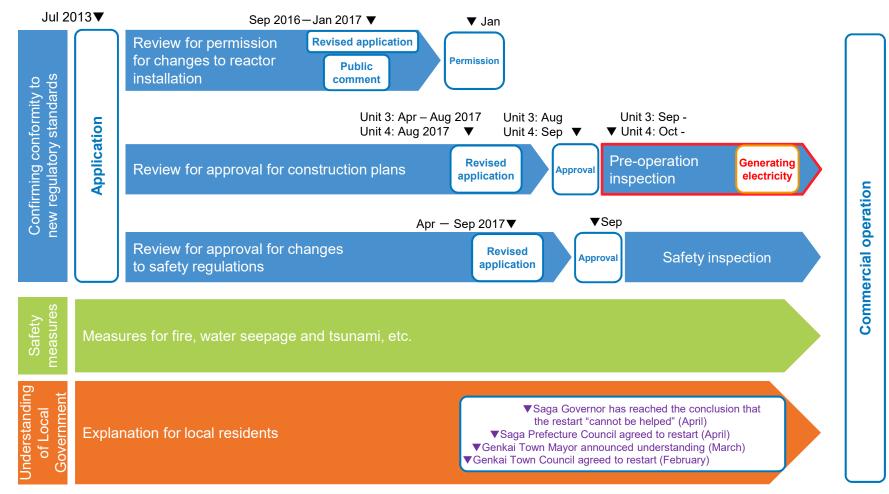
- 1. Connection with customers over 8 million contracts
- 2. 2.4 million electric poles in Kyushu
- 3. Link with smart meters
- 4. Link with our 84 group companies
- 5. Network with local governments in Kyushu
- 6. Network with 30 thousand employees
- 7. Network with local enterprises
- 8. Fields for proof tests
- 9. Various data
- 10. Know-how of disaster response

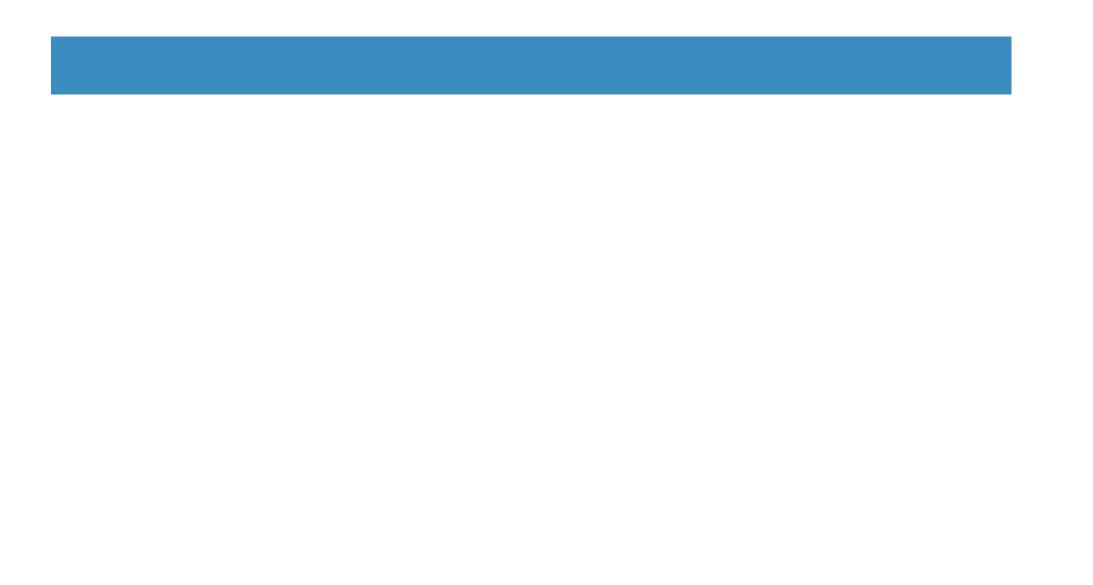
# **Process for restarting of Genkai NPS**

## **Process for restarting of Genkai NPS**

- We received the construction planning permission of unit No.3 in August and No.4 in September 2017 as well as the permission for change in safety regulations of unit No.3 and 4 in September 2017.
- Unit No.3 and 4 have been under pre-operation inspection since September and October 2017 respectively, as we submitted the application for it after receiving the construction planning permission.

#### **Process for Restart of Genkai NPS**





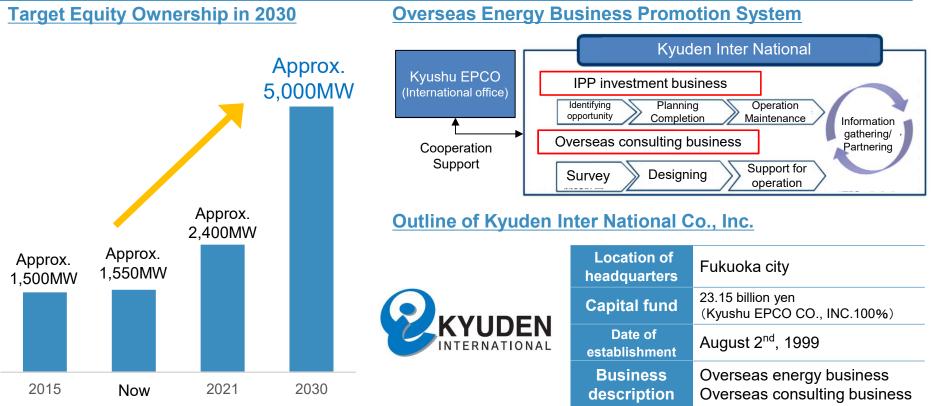


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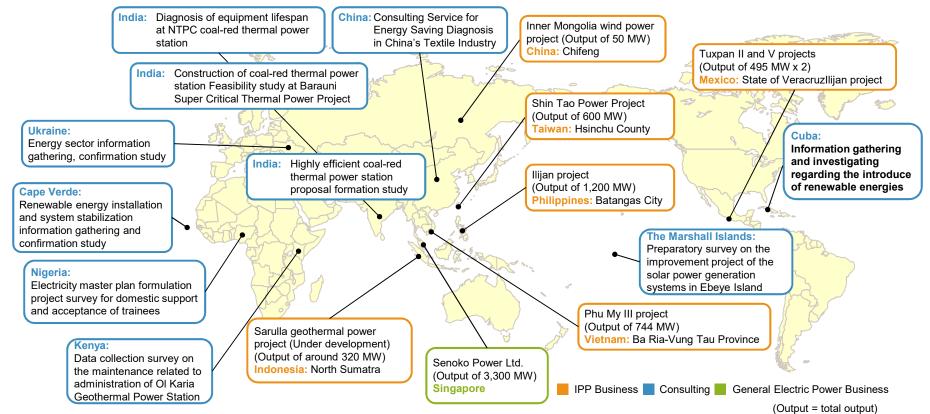
### **Overseas energy business**

### **Overseas energy business**

- Our group reviewed the overseas energy business promotion structure in April 2017. Since then, Inter national office is positioned as main body for constructing a strategic network including outside group, and Kyuden Inter National Co., Inc., which is our 100%-owned subsidiary, as main body for promoting IPP investment and overseas consulting business.
- We will proactively promote development in key fields such as gas-thermal, coal-thermal and geothermal mainly in Asia, in which the electricity demand is expected to expand and also in anticipation of the enlargement of our business field. This is how we aim for 5,000MW equity ownership in electricity output in 2030.



#### **Business Development Overseas (as of October 2017)**



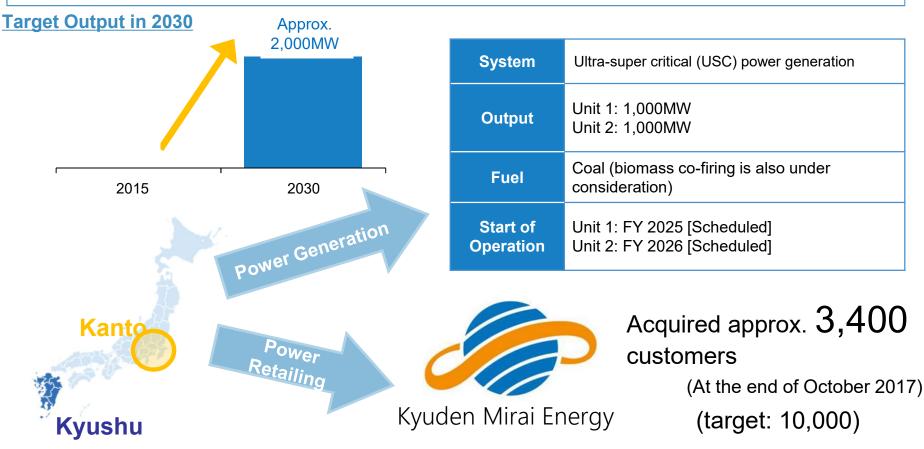
#### **Ongoing Projects in Overseas Energy Business**

Projects	Mexico /Tuxpan II	Philippine /Ilijan	Vietnam /Phu My III	Mexico /Tuxpan V	Singapore /Senoko Power	China /Inner Mongolia Wind Power	Taiwan Hsin Tao Power	Indonesia / Sarulla Unit 1,2
Resources	Gas	Gas	Gas	Gas	Gas/Oil	Wind	Gas	Geothermal
Start of Operation / Investment	Dec. 2001 (Operation)	Jun. 2002 (Operation)	Mar. 2004 (Operation)	Sep. 2006 (Operation)	Sep. 2008 (Investment)	Sep. 2009 (Operation)	Oct. 2010 (Investment)	Mar. 2017 Oct. 2017 (Operation)
Equity Ratio	50%	8%	26.7%	50%	15%	29%	33.2%	25%
Equity Ownership (Total:1,553MW)	248MW	96MW	199MW	248MW	495MW	15MW	199MW	53MW

# **Energy Business in Japan outside Kyushu**

### **Energy Business in Japan outside Kyushu**

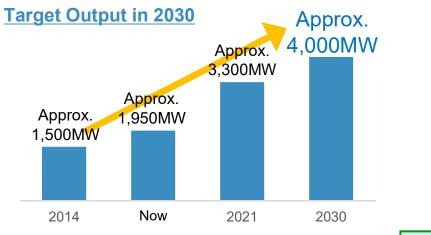
- We have reached an agreement with Idemitsu Kosan Co., Ltd. and Tokyo Gas Co., Ltd. to form an alliance to carry out studies for a joint development of a coal-fired power plant. As a result, we established Chiba-Sodegaura Energy Co., Ltd. (CSE) in May 2015.
- Regarding environmental assessment, CSE received examination results (not required a recommendation) for "Document Concerning Environmental Impact Assessment" from METI in July 2016. Subsequently, CSE implemented survey of existing conditions (from October 2016 to September 2017), and is preparing "Draft Environmental Impact Statement".
- In parallel with the environmental assessment, CSE is considering the business schemes based on the use of project finance as well as technologies of power generation facilities.
- Our subsidiary, Kyuden Mirai Energy Co., Inc., has engaged in the retail electricity business in Kanto area since FY2016.



# **Renewable Energy Business**

### **Renewable Energy Business**

- We have set approx. 4,000MW of output as a target in 2030 by promoting geothermal and hydroelectric power generation both inside and outside Japan.
- We have developed geothermal power generation with our group companies such as West Japan Engineering Consultants (West JEC), which has eminent technologies.
- The consortium composed of Kyuden Mirai Energy Co., Inc., and other four companies has started studying possibility for commercialization of an offshore wind power system off the coast of Kitakyushu city since June 2017.



#### **Breakdown of New Development**

Wind	+1,100MW
Geothermal	+800MW
Hydro	+200MW
Others	+400MW
Total	+2,500MW







<sup>(</sup>At the end of October 2017)

# **Development plan of renewable energy**

(At the end of October 2017)

	Name	Prefecture	Output (MW)	Notes
	Kushima Wind Hill	Miyazaki	64.80	Starting operation in October 2020 (Scheduled)
Wind Farm Experimental Study of Ne	Karatsu Chinzei Wind Farm	Saga	28.00 (Maximum)	Starting operation in 2022 (Scheduled) [Under environmental assessment]
	Experimental Study of Next Generation Offshore Floating Wind Power System	Fukuoka	3.00	From 2014 to 2017(Scheduled) [Commissioned project in collaboration with NEDO]
		Sub total	95.80	-
	Otake		2.00	Timing of start of operation undecided Update of existing facility $(12.5 \rightarrow 14.5 \text{MW})$
Geothermal	Yamakawa Binary	Kagoshima	4.99	Starting operation in February 2018 (Scheduled)
	Sarulla, Indonesia (III)	—	107.70	Starting operation in 2018 (Scheduled)
		Sub total	114.69	-
	Tsukabaru	Miyazaki	4.00	Unit 1: Starting operation in April 2019 (Scheduled) Unit 2: Starting operation in May 2019 (Scheduled) Unit 3 & 4: Decommissioned Unit 5: Remained (63.05→67.05MW)
Hydro	Shin-Kosa	Kumamoto	7.20	Starting operation in July 2019 (Scheduled)
	Kamoshishi	Kumamoto	1.99	Starting operation in July 2018 (Scheduled)
		Sub total	13.19	_
	Buzen-Biomass	Fukuoka	74.95	Starting operation in 2020 (Scheduled)
	Soyano Wood Power	Nagano	14.50	Starting operation in 2020 (Scheduled)
Biomass	Nanatsushima Biomass Power	Kagoshima	49.00	Starting operation in 2018 (Scheduled)
	Sub total		138.45	—
Tidal	Tidal power generation technology commercialization project	Nagasaki	2.00	Expected in 2016 – 2019 [Governmental competitive budget program by Ministry of the Environment]
Total			364.13	-

# Cases under resources investigation regarding renewable energy

(At the end of October 2017)

	Area	Prefecture	Starting schedule	Contents of study
Wind (offshore)	Hibikinada in Kitakyushu	Fukuoka	2017	Investigation of wind, ocean and ground Environmental assessment Basic design of generating facilities
	The south of Yamashita pound	Oita	2017	Investigation of the earth's surface Monitoring of hot springs
	Sobetsu town, Oukei	Hokkaido	2016	Investigation of the earth's surface (technical support for Sobetsu town)
Geothermal	lbusuki	Kagoshima	2015	Investigation of the earth's surface (technical support for Ibusuki city) *Project has been suspended since October 2016
	Minamiaso village	Kumamoto	2015	Preparation for drilling of wells for investigation Monitoring of hot springs
	The north of Hiijidake	Oita	2013	Drilling of wells for investigation Monitoring of hot springs