

# Business Update

November 5 , 2015



This material contains descriptions related to future performance. These descriptions do not guarantee that future performance, but involve some risks and uncertainties. Note that the future performance may vary with changes in conditions related to the management environment.

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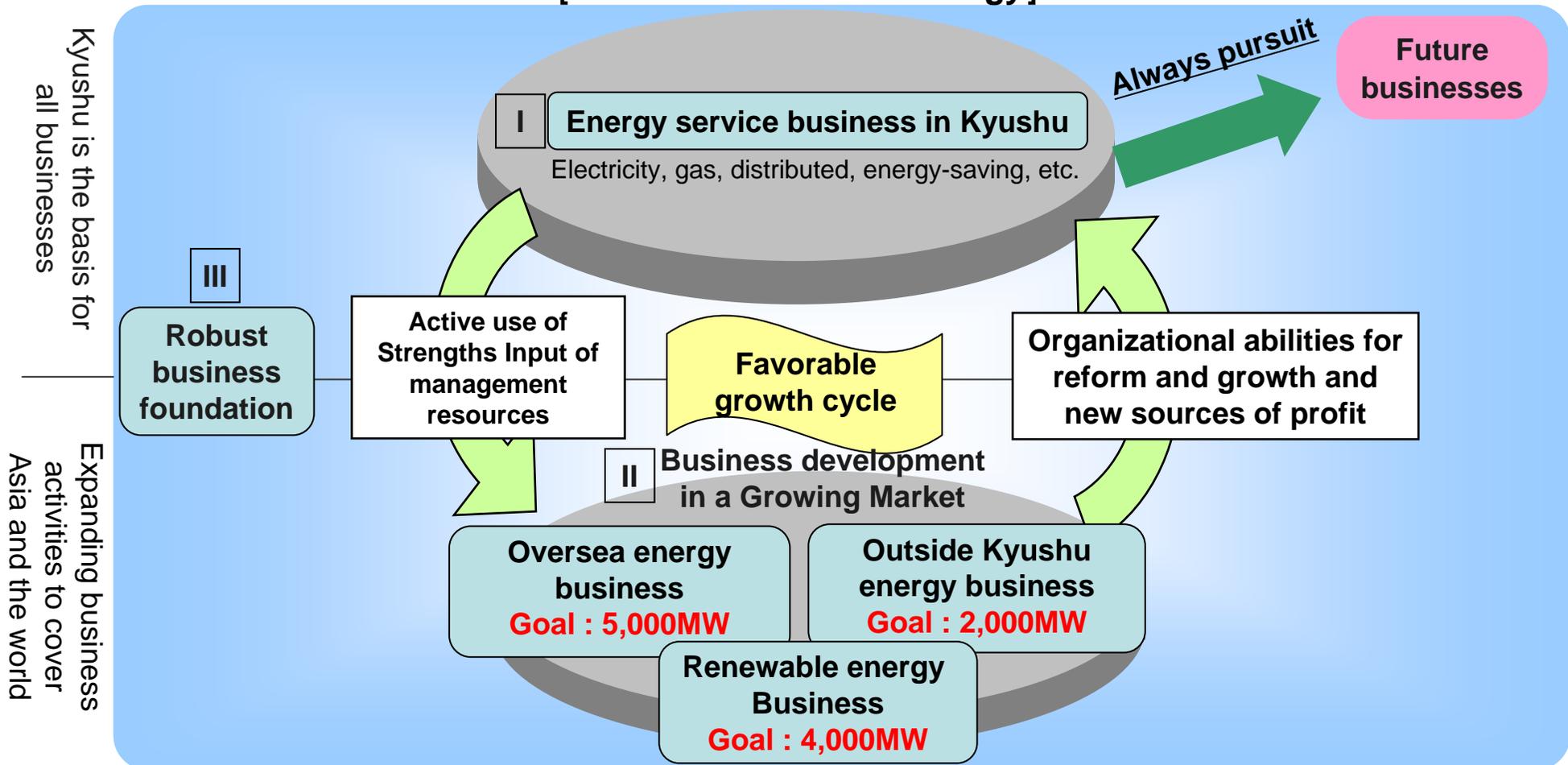
**1 The Kyushu Electric Power Group Medium-term Management Policy and the Outline of the FY2015 Management Plan**

# 1 The Kyushu Electric Power Group Medium-term Management Policy and the Outline of the FY2015 Management Plan

We formulated the Kyushu Electric Power Group Medium-term Management Policy and the Outline of the FY2015 Management Plan on April 2015.

Aim for sustainable growth under progressed competition on the full liberalization of the electricity retail market by continuing favorable growth cycle which develop business in a growing market such as Overseas, Outside Kyushu and Renewable Energy by making use of our strengths gained through energy service business in Kyushu, and reinvest in kyushu using profit from new business.

## [Direction of Future Strategy]



## < Establishment of New Energy Rates toward the Full Liberalization of Retail Market >

- Regarding the current electricity rate system, which offers menus that set seasonal and time zone unit rates, we plan to implement a partial change and introduce a new rate system that includes finer-grained time zones (by season, day or night, and weekday or holiday) to enable users to choose a plan that suits their lifestyle. (Details will be announced around January 2016)

### [ Concept of New Rate Menus ]

	Current system (seasonal and time zone rates)	New Rate Menus
Different unit prices between weekdays and weekends	No unit price difference	Daytime on holidays cheaper than daytime on weekdays
Different unit prices between seasons	Excluding summer cheaper than summer season (July to September)	Spring and autumn cheaper than summer and winter
Time zones for night rates	10 p.m. through midnight to 8 a.m.	Three options are available. (1) 9 p.m. through midnight to 7 a.m. (2) 10 p.m. through midnight to 8 a.m. (3) 11 p.m. through midnight to 9 a.m.

## < Enter the Gas Retail Business in Earnest >

In addition to the wholesaling of gas supplies in the past, we will enter the gas retail business in earnest as part of our energy services as the retail market is going to be fully liberalized on 2017.

We established new department on July 2015, which is evaluating profitability, sales system and safety measures entering gas retail business, considering the progress of gas system reform,

### [ Gas Business ( FY2014 ) ]

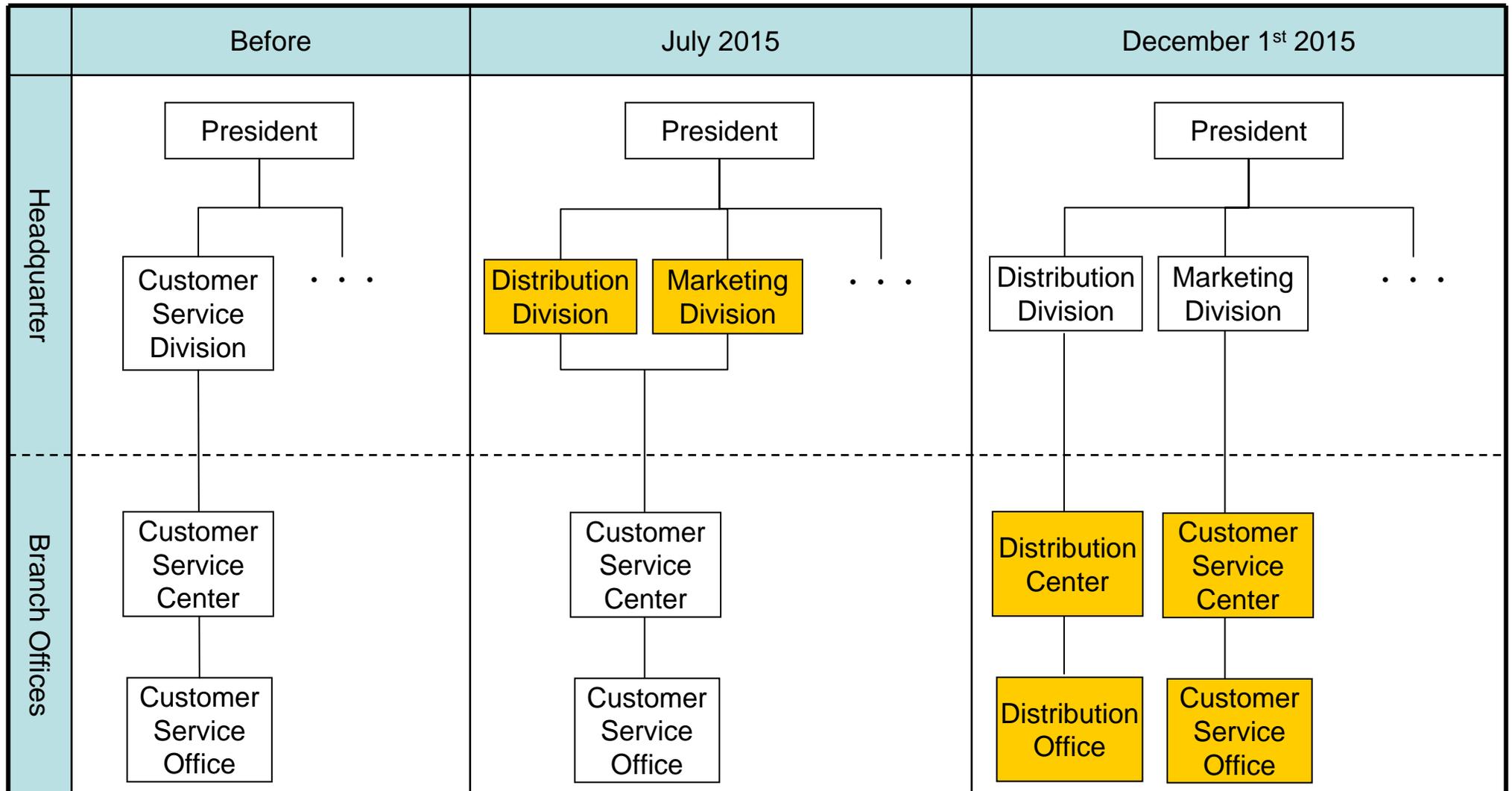
Volume	271 thousand tons
Sales	24.8 billion yen
Profit	2.3 billion yen

### [ Our LNG Tanks ]

	Kitakyushu LNG Base	Oita LNG Base
Capacity of LNG Tanks	480 thousand kl ( 60 thousand kl × 8 tanks )	460 thousand kl ( 80 thousand kl × 4 tanks 140 thousand kl × 1 tank )

# ( Reorganization for the full liberalization of the electricity retail market )

- ✓ Divided 'Customer Service Division' into 'Distribution Division' and 'Marketing Division' in July 2015 for responding introduction of license system each business on the full liberalization of the electricity retail market on April 2016.
- ✓ Branch Offices will be divided in December 2015 as well as Headquarter.



# - Business Development in a Growing Market < Overseas Energy Business >

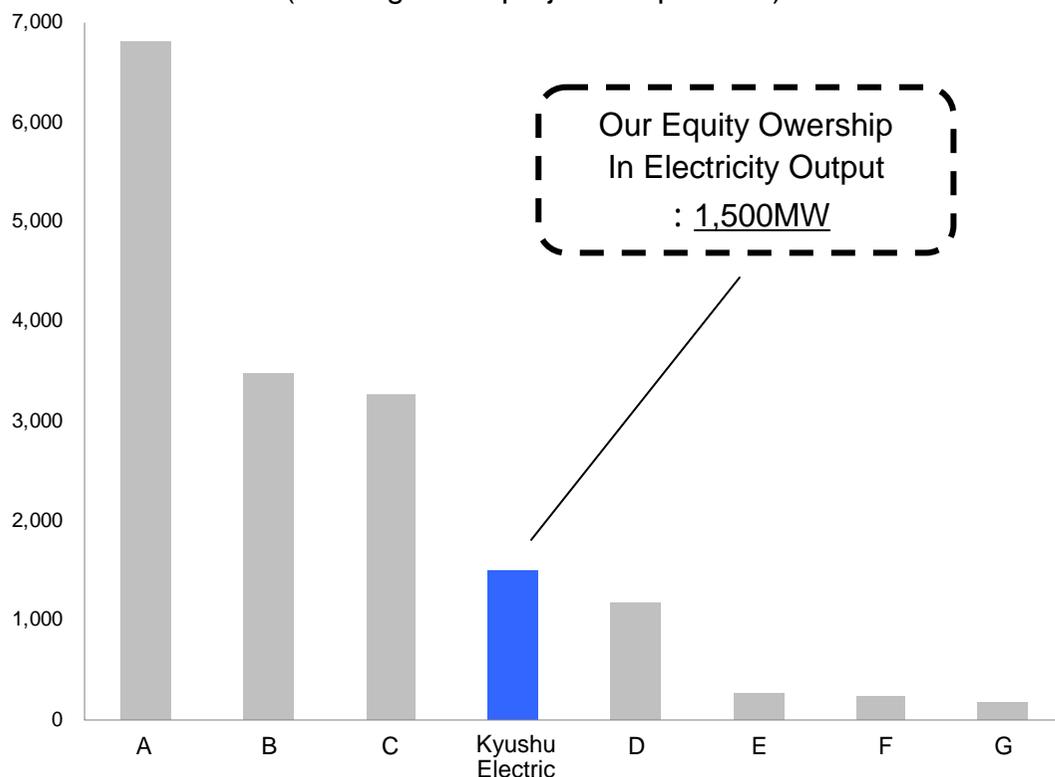
## < Goal for Equity Ownership in Electricity Output on Overseas Energy Business as of 2030 >

**5,000MW ( +3,500MW )**

We will make the most of the technology and know-how we have accumulated in Japan and abroad to develop overseas electricity business focusing on IPP projects mainly in Asia, whose market has high growth potential and aim for 5,000MW equity ownership in electricity output.

### [ Equity Ownership in Electricity Output on Overseas ]

Compare to other Utilities in Japan as of Sep. 2015  
(Limiting to the project in operation)



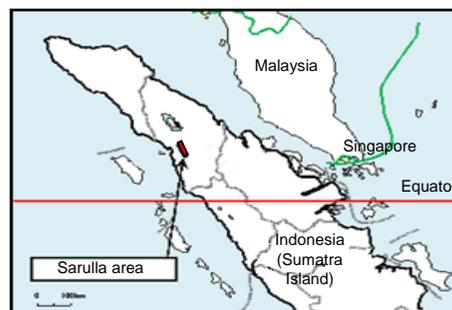
\* Compiled by Kyushu Electric Company based on published data from each company

### [Sarulla Geothermal IPP Project in Indonesia ]

- ✓ We will make effective use of the geothermal power generation technology we have gained through geothermal development in Japan to steadily implement the Sarulla geothermal IPP project in Indonesia.

#### < Outline of the Project >

Outline	Consistent project from development to generation (Electricity sales contract with electric power company owned by Indonesia government for 30 years)
Output	320.8MW ( 3 Units ) [Our equity Ownership in Electricity Output : 80.2MW]
Start of Operation	Unit 1 : 2016, Unit 2 : 2017, Unit 3 : 2018



Location of the the project

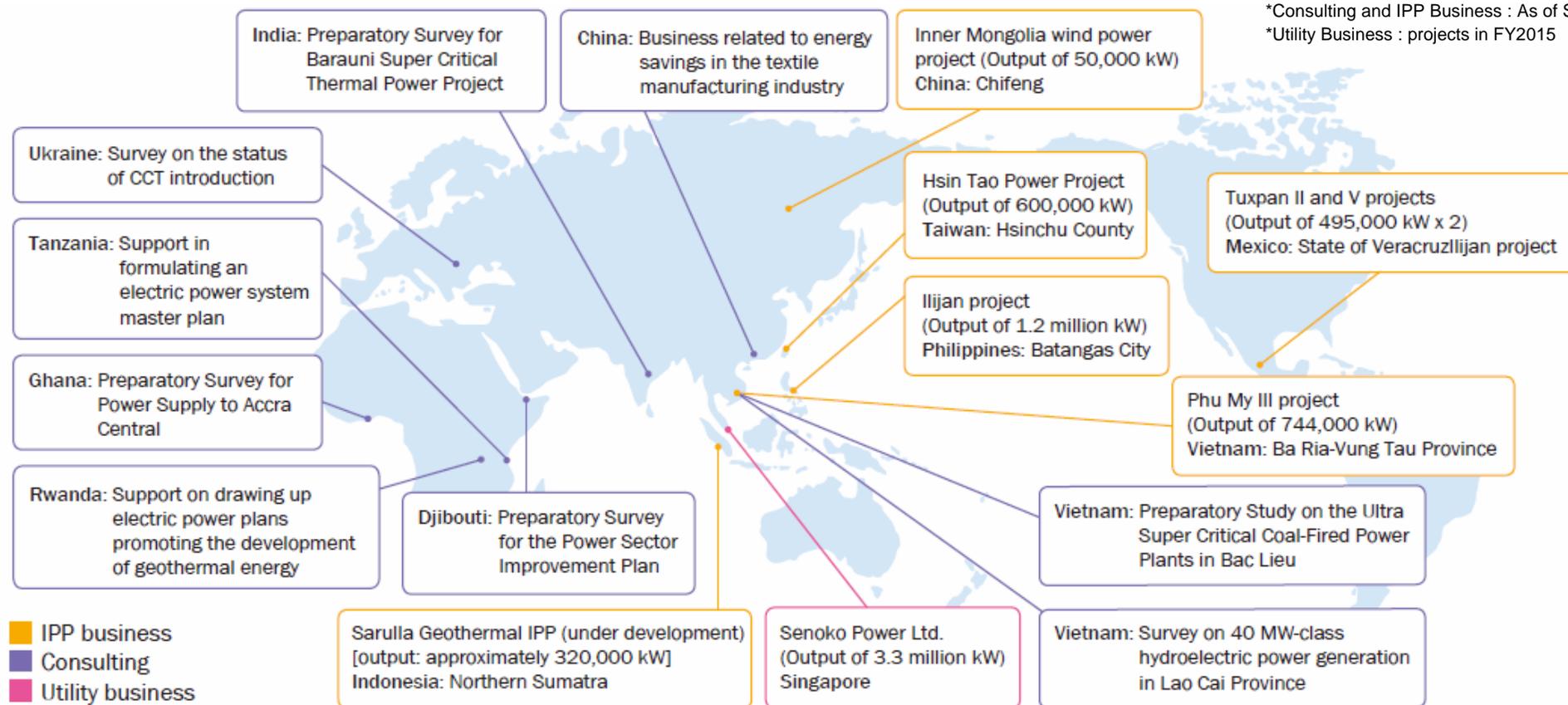


View from a production test site

# ( Our Overseas Energy Business )

\*Consulting and IPP Business : As of Sep. 2015

\*Utility Business : projects in FY2015



## < Projects in Overseas Energy Business >

Projects	Mexico /Tuxpan	Philippine /Ilijan	Vietnam /Phu My	Mexico /Tuxpan	Singapore /Senoko Power	China /Inner Mongolia Wind Power	Taiwan /Hsin Tao Power
Energy Resorces	Gas	Gas	Gas	Gas	Gas/Oil	Wind	Gas
Start of Operation / Investment	Dec. 2001 (Operation)	June 2002 (Operation)	Mar. 2004 (Operation)	Sep. 2006 (Operation)	Sep. 2008 (Investment)	Sep. 2009 (Operation)	Oct. 2010 (Investment)
Equity Ownership (Total:1,500MW)	248MW	96MW	199MW	248MW	495MW	15MW	199MW

# - Business Development in a Growing Market < Renewable Energy Business >

**< Goal for Development Output on the Renewable Energy Business as of 2030 >**  
**4,000MW ( +2,500MW )**

We will actively develop the renewable energy business, a globally growing market in Japan and abroad while taking into account possibilities for its stable supply and its environmental performance. We will make the most of the technology and know-how we have accumulated in Japan and abroad in the past to focus on geothermal/hydroelectric power generation. But we will also work on ocean wind power generation which has growth potential while taking into account the advancement of technological development.

Kyuden Mirai Energy, a new company founded In July 2014, is working with us to implement power generation projects making the most of integrated technology and know-how that cover all processes from investigations and planning for various renewable energy sources construction to operation and maintenance and to provide customers with related services. Especially in geothermal development, we will cooperate with our group companies such as 'West Japan Engineering Consultants' which has eminent technologies on geothermal development.

## [ Introduction Output of Renewable Energy by our Group ]

Wind : 68MW ( As of Sep. 2015 )



Solar : 43MW



Introduction Output : **1,648MW**

Geothermal : 213MW



Biomass : 40MW



Hydro : 1,284MW ( except pumping )



## [ The biggest geothermal binary in Japan to Operation ]

- ✓ Kyuden Mirai Energy has started operation of the Sugawara Binary Cycle Power Station in June 2015
- ✓ This is Japan's first geothermal power development project that involves collaboration between a local government and a private enterprise, Kokonoe-cho provides geothermal resource and Kyuden Mirai Energy generates electricity using that, and the biggest output of this geothermal binary system in Japan.

### < Outline of the Sugawara Binary Cicle Power Station >

Place	Kokonoe-cho Kusu-Gun, Oita Prefecture
Output	5MW
System	Air-cooled binary (medium : pentane)





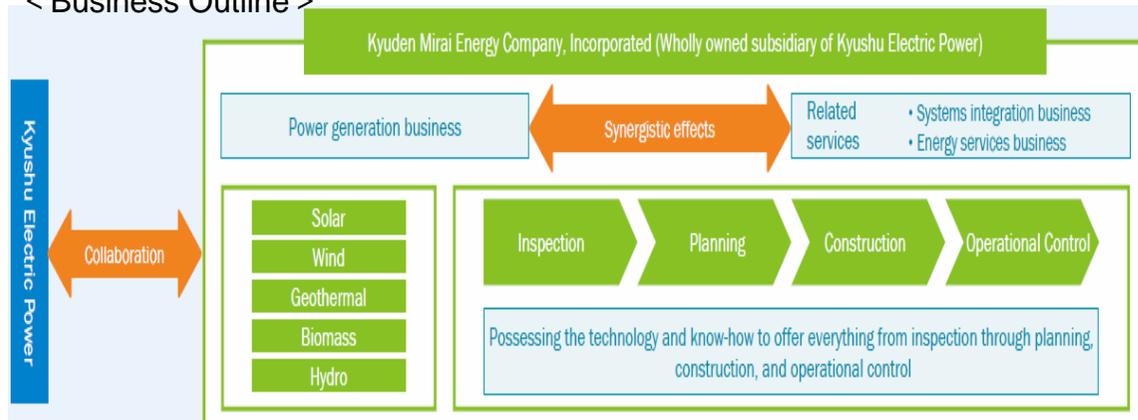
## Kyuden Mirai Energy

- ✓ Kyuden Mirai Energy was formed in July 2014 as a new company aggregating the Kyushu Electric Power Renewable Energy Department and the renewable energy business of our Group companies.
- ✓ Possessing the technology and know-how to execute everything from renewables testing and planning through construction and operational control, and can develop power business associated with a wide variety of renewable energy.
- ✓ Aim for development of 700MW output by developing business outside Kyushu region by the 10th year since our founding.

< Holding Facility > ( As of Sep. 2015 )

	Output	remarks
Geothermal	5MW	Sugawara binary
Solar	53MW	Omura Mega Solar(15.5MW)、 Sasebo Mega Solar(10MW)
Wind	50MW	Nagashima Wind Hill*
Biomass	11MW	Miyazaki Biomass Recycle*
Total	120MW	*Subsidiary of Kyuden Mirai Energy

< Business Outline >



## West Japan Engineering Consultants

- ✓ General construction consultant on electric power, energy, environment and development of public infrastructure ( Date of foundation : February 1, 1967)
- ✓ Having the highest level technology on geothermal development over the world, which is famous as 'West JEC' overseas
- ✓ Only one company over the world having consistent technology from investigation of geothermal resource to generation and distribution
- ✓ Business experiences on geothermal development and consulting in more than 20 countries

< Representative geothermal projects >

Southeast Asia	Sarulla Geothermal Power Project / Indonesia
Latin America	Miravalles Geothermal Power Project / Costa Rica
Africa	Geothermal Development for Capacity Improvement Project / Kenya



# - Business Development in a Growing Market < Energy Business Outside Kyushu >

## < Goal for Development Output on Energy Business Outside Kyushu as of 2030 >

**2,000MW ( +2,000MW )**

We agreed with Idemitsu Kosan Co., Ltd. and Tokyo Gas Co., Ltd. to form an alliance to consider developing coal-burning thermal power stations jointly. To that end, the three companies established the Chiba-Sodegaura Energy Co., Ltd (CSE). on May 1, 2015.

We are considering Securing the ability to supply electrical power for our retail sales until power sources are developed by using material exchanges and other means of procurement effectively in addition to power transmission from within Kyushu region

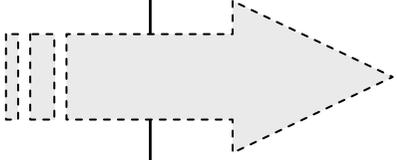
### [ Outline of Chiba-Sodegaura Energy ]

Name	Chiba-Sodegaura Energy Co., Ltd.
Place(Headquarter)	Sodegaura City, Chiba Pref,
Date of Establishment	May 1, 2015
Capital stock paid in	996 million yen (Paid in capital : 498 million yen Additional paid in capital : 498 million yen)
Investment Ratio	Equal investment by 3 companies

### [ Outline of the power station plan ]

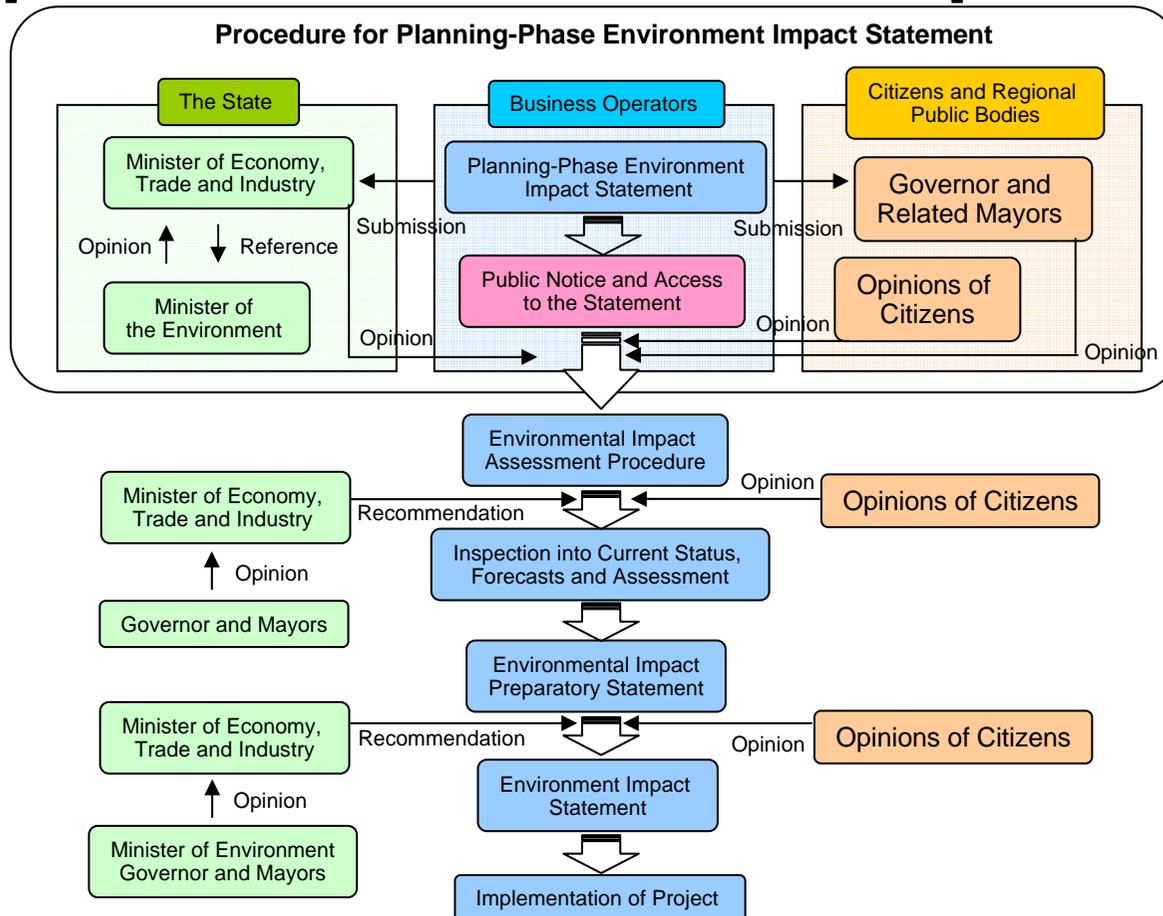
Planned site	3-1, Nakasode, Sodegaura City, Chiba Pref. (The site is owned by Idemitsu Kosan)
System	Ultra-super critical (USC) power generation
Output	Maximan 2,000MW ( 1,000MW x 2Units)
Fuel	Coal (Burning a mixture of biomass and coal is also under consideration)
Start of Operation	Scheduled for the mid-2020s

### [ Outline of Schedule for Start of Operation]

Fiscal Year	2015	2016	2017	2018	2019	2020s
Principal Process	Established the company(May, 2015)	<ul style="list-style-type: none"> <li>• Procedure of Environmental Assessment</li> <li>• Examination of construction plan of the plant</li> <li>• Evaluation of profitability of the project</li> </ul>				 Start of Operation ( Scheduled )

- CSE, which is proceeding with the procedure for environmental assessment, submitted a "Planning-Phase Environment Impact Statement" to the Ministry of Economy, Trade and Industry (METI); the governor of Chiba Prefecture, and the mayors of three related cities(Sodegaura, Kisarazu and Ichihara) on June 15, 2015.
- In response, the governor of Chiba sent a written opinion, based on the opinions of the three mayors, to CSE on August 17, and the Minister of the Environment submitted his opinion to the Minister of Economy, Trade and Industry on August 28, 2015.
- Subsequently, the Minister of Economy, Trade and Industry sent a written opinion, based on the opinion of the Minister of Environment, to CSE on September 11.
- CSE intends to work on the assured reduction of CO2 under the voluntary framework in the "Action Plan for the Electricity Business for Achieving a Low-Carbon Society" (page 10).

## [ Flowchart of Environmental Assessment Procedure ]



< Outline of Opinion of Minister of Environment (August 28, 2015) >

- There are problems with the announced voluntary framework at the moment.
- This project may disrupt the achievement of Japan's intended determined contributions and energy mix as determined by the government.
- Under the circumstance, as it is impossible to judge whether there is consistency between the content of this project plan and the government's targets and plans for CO2 emission reduction, this project cannot be approved at this stage. Consequently, it is essential to establish a specific mechanism and rules as soon as possible.

< Outline of Opinion of the Minister of Economy, Trade and Industry (September 11, 2015) >

- Regarding Outline of a Voluntary Framework, etc., which was announced on July 17, efforts should be made to establish a concrete mechanism and rules in order to achieve the goal of the voluntary framework as soon as possible.

\*In consideration of the opinion of the Minister of Environment

- In July 2015, the Federation of Electric Power Companies (FEPC) (composed of 10 companies), J-Power, the Japan Atomic Power Company (JAPC), and Voluntary Power Producers and Suppliers (PPSs) (made up of 23 companies), formulated and announced the Action Plan for the Electricity Business for Achieving a Low-Carbon Society (Phase II), which established a new voluntary framework for realizing a low carbon society through achieving reduction targets by fiscal year 2030.
- The Action Plan for Achieving a Low-Carbon Society with FY2020 as the Target Year (Phase I) had been formulated separately for FEPC member companies and electricity wholesale business operators and PPSs. But, in September 2015, their actions plans were integrated into the Action Plan for the Electricity Business for Achieving a Low-Carbon Society (Phase I).

## [ Action Plan for the Electricity Business for Achieving a Low-Carbon Society ]

Action Period		Phase I (FY2013 to FY2020)	Phase II (FY2021 to FY2030)
Keidanren (Japan Business Federation)		Keidanren Action Plan for the Electricity Business to Achieve a Low-Carbon Society (Phase I)	Keidanren Action Plan for the Electricity Business to Achieve a Low-Carbon Society (Phase II)
Central Government		<u>GHG* emission volume: -3.8% to be cut from the FY2005 level (provisional)</u> (There is no expected energy-mix at FY2020)	<u>GHG* emission volume: -26% to be cut from the FY2013 level</u> (There is expected energy-mix at FY2030)
Electricity	Coefficient Target	-	Approx. 0.37 kg-CO <sub>2</sub> /kWh (the end user level) (-35% to be cut from the FY2013)
	Target not dependent on energy mix *	BAT reduction potential: approx. 7 million tons	BAT reduction potential: Approx.11 million tons

\* TheGHG : Greenhouse Gas

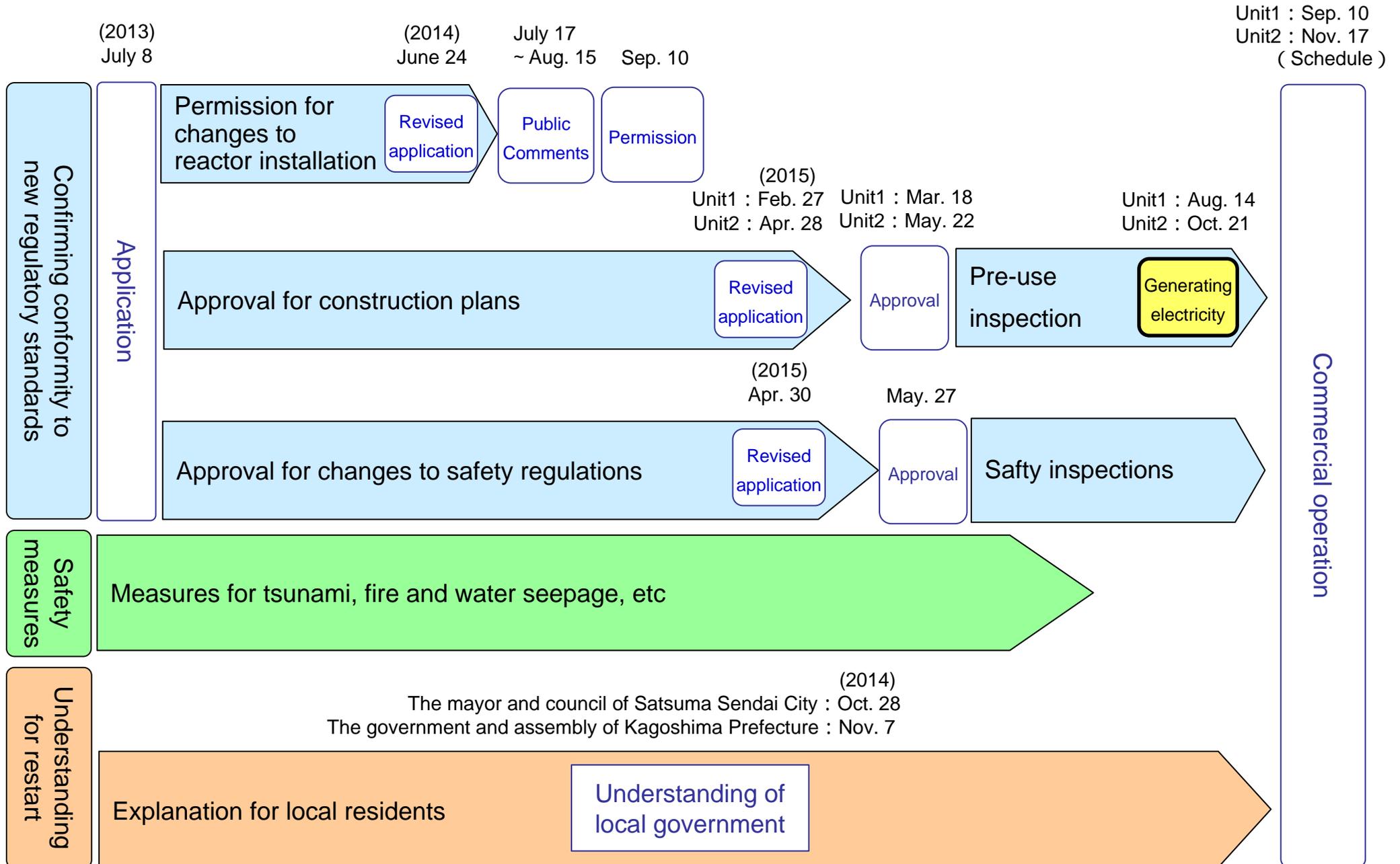
\* The maximum reduction potential that would be effective from the introduction of BAT(Best Available Tecnology) in the development of major energy sources in and after FY2013, when compared with the introduction of conventional technologies.



**2-1 Timeline of Restarting Process of Sendai Nuclear Power**

**2-2 Progress in Effort for Review on Conformity of Genkai Nuclear Power Station  
for New Regulatory Requirements**

# 2-1 Timeline of Restarting Process of Sendai Nuclear Power



# ( Pre-use Inspection and Safety Inspections of Sendai Nuclear Power Satation )

FY2015		April	May	June	July	August	September	October	November
Unit 1	Pre-use Inspections	Apr.7 Inspection NO.1	May 29 Inspection No.3	June 17	July 23 Inspection No.4	Aug.14 Parallel Start-up	Sep.9-10 Inspection No.5 Aug.31 constant rated thermal power output operation		
	Safety Inspections				When loading fuel When operating mid-loop Severe accident drill	When starting-up			
Unit 2	Pre-use Inspections			June 23 Inspection No.1	July 16 Inspection No.1	Aug. 21 Inspection No.1	Sep.24 Inspection No.4	Oct.21 Parallel Start-up	Nov.16-17 Inspection No.5 Nov.1 constant rated thermal power output operation
	Safety Inspections			June 23 Inspection No.3	July 3 Inspection No.3	July 17 Inspection No.3	Aug. 28 Fuel Loading	Sep.11-13 Fuel Loading	Oct.15 Start-up

## Pre-use Inspection



Confirming Electrical hydrogen igniter



Checking the total performance of the plant

## Safety Inspections



Activating Mobile high-capacity generator



Operating main steam relief valve

## 2-2 Progress in Effort for Review on Conformity of Genkai Nuclear Power Station to New Regulatory Requirements

13

We have submitted application for conformity of Genkai Nuclear Power Station No.3 and 4 to new regulatory requirements on July 12, 2013.

We are focusing people on preparing revised application of Permission for Changes to Reactor Installation while discussing sincerely our safety measures with NRA, and aim for early resumption of Genkai NPS.

### [ Progress of Review on Conformity ]

July 12, 2013

Sep. 12, 2014

Current

- Application for conformity to new regulatory standards

- ✓ Permission for Changes to Reactor Installation
- ✓ Approval for Construction Plans
- ✓ Approval for Changes to Safety Regulations

- All explanations have been given and most items with respect to earthquakes and tsunamis have been confirmed.

- ✓ Standard Seismic Motion
  - Seismic motion with identified hypocenter
    - Ss-1 : 540 gal
    - Ss-2 : 268 gal
    - Ss-3 : 524 gal
  - Seismic motion with unidentified hypocenter
    - Ss-4 : 620 gal (The earthquake south of the Rumoe Branch Office in Hokkaido)
    - Ss-5 : 531 gal (The earthquake in western Tottori Pref.)
  - seismic motion for designing the seismically isolated buildings
    - Ss-L : 400 gal
- ✓ Maximum Tsunami Height
  - sea level + approx. 4 m (the plant site: 11 m above sea level)

- Preparing revised application of Permission for Changes to Reactor Installation

- ✓ Increasing people preparing the documents of Genkai NPS from Sep. 7, 2015  
〔 As of end of Oct. : 230 persons 〕

- ✓ Explained concerning earthquakes and tsunamis again due to replacement of NRA's Committee Member (Sep. 2014)

# (Conclusion and Discussion of safety agreements with local governments around Genkai Nuclear Power Station)

We have concluded safety and other agreements not only with the local government of the area where the power station is located but also neighboring local governments and other parties concerned.  
 We are continuing discussions with Imari City of Saga Prefecture about entering into a safety agreement.

## [ Conclusion and Discussion of safety agreements with local governments ]

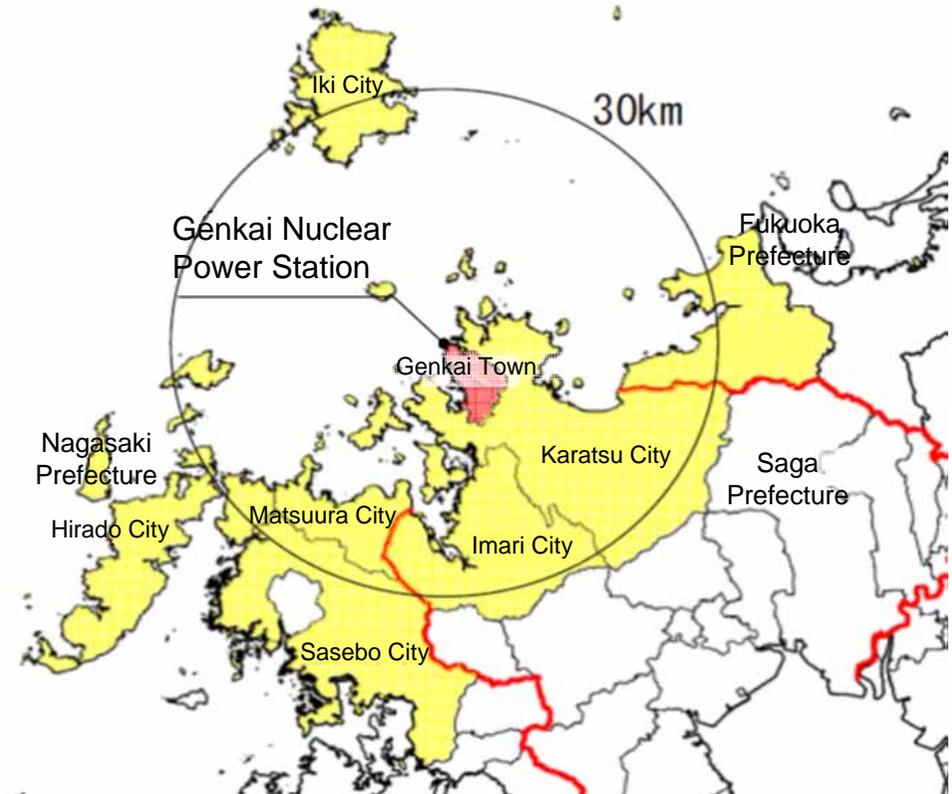
< Local governments that concluded agreements with us >

Saga Pref.	Saga Pref., Genkai Town, Karatsu City, Saga City, Tosu City, Taku City, Takeo City, Kashima City, Ogi City, Ureshino City, Kanzaki City, Yoshinogari Town, Kiyama Town, Kamimine Town, Miyaki Town, Arita Town, Ohmachi Town, Kouhoku Town, Shiraishi Town, Tara Town
Fukuoka Pref.	Fukuoka Pref., Itoshima City, Fukuoka City
Nagasaki Pref.	Nagasaki Pref., Matsuura City, Sasebo City, Hirado City, Iki City
Kumamoto Pref.	Kumamoto Pref.

< Local government that discussing agreement with us >

Saga Pref.	Imari City
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## [ Local governments around the Genkai NPS ]



We achieved cost saving about 148 billion yen in the 2Q of FY2015 by implementing the expenditure restraints, which are short term limited, such as deferring repair work to another periodic within this fiscal year, as well as the efficiency( target value 153 billion yen) we announced on April 2015.

We'll make every effort to achieve through cost savings and profitability in FY2015 based on safety, compliance and stable supply.

## [ Efficiency in the 2Q of FY2015 ]

( billions of yen )

Item	FY2015 plan to achieve greater efficiency	Efficiency in the 2Q of FY2015 (actual)	[Reference] Efficiency of FY2015 (actual)	
			2Q	Full-year
Repair expenses	-28.0	-52.0	-53.0	-98.0
Other expenses (Miscellaneous expenses)	-22.0	-28.0	-26.0	-71.0
Personnel expenses	-51.0	-22.0	-24.0	-37.0
Fuel expenses and purchased electrical power rates	-22.0	-22.0	-22.0	-74.0
Depreciation expenses	-30.0	-24.0	-18.0	-34.0
<b>Total</b>	<b>-153.0</b>	<b>-148.0</b>	<b>-143.0</b>	<b>-314.0</b>
[If fuel expenses and purchased electrical power rates are excluded]	<b>[-131.0]</b>	<b>[-126.0]</b>	<b>[-121.0]</b>	<b>[-240.0]</b>

Applications for renewable energy in Kyushu (excluding remote islands) at the end of September 2015 were worth 21,390,000 kW (including 17,470,000 kW for solar energy). Of this amount, 8,240,000 kW of renewable energy (including 5,450,000 kW for solar energy) have already been connected to Kyushu Electric Power.

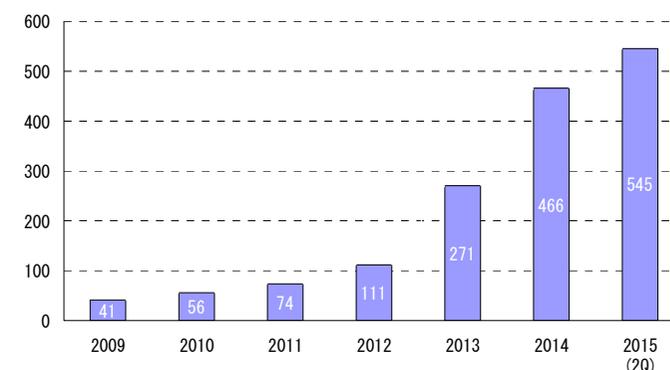
- On December 22, 2014, we were appointed as a designated electric utility (electric operator)\* for photovoltaic power generation because the amount for applications for connection exceeded the amount of renewable energy that can be connected (8,170,000 kW).
- In terms of solar energy, the total amount of renewable energy that has already been connected and the amount of energy whose connection has already been approved reached the amount of renewable energy that can be connected at the end of December 2014.

\* it has now become possible that after applications for connections exceeds the total amount of renewable energy that has already been connected and the amount for such energy whose connection has already been approved, we may impose on the applicants a set of conditions for system connection that assume output restrictions without days limit and compensation.

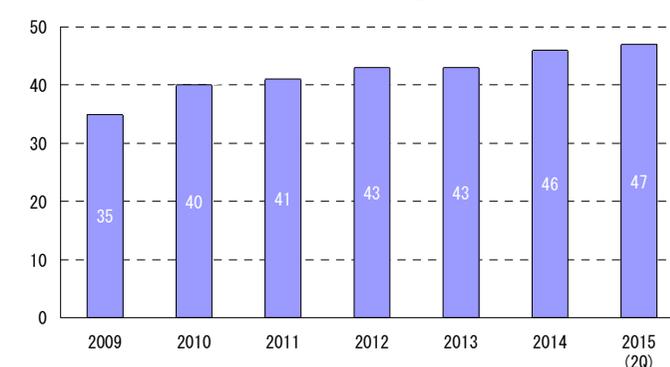
Applications for renewable energy in mainland Kyushu (excluding remote islands and including Kyushu Electric Power) (as of the end of Sep. 2015) (10,000kW)

	Solar	Wind	Biomass	Hydro	Geothermal	Total
Applications for consideration of connection	244	39	5	2	3	293
Applications for connection contracts	581	20	11	10	1	623
Connection already approved	376	18	4	1	1	400
Already connected	545	47	26	183	22	824
<b>Total</b>	<b>1,747</b>	<b>124</b>	<b>45</b>	<b>197</b>	<b>27</b>	<b>2,139</b>

Changes in the amount of solar energy connected in mainland Kyushu (excluding remote islands)



Changes in the amount of wind power connected in mainland Kyushu (excluding remote islands)



Connection of Kyushu Electric Power's renewable energy (excluding remote islands and including group companies) (as of the end of Mar. 2015) (10,000kW)

	Solar	Wind	Biomass	Hydraulic	Geothermal	Total
Already connected	4	7	4	128	21	165

\* The total may not be the same as the sum of figures in all items because the latter is rounded off.

It is expected that this winter we can secure a reserve margin of 8% without support supply from other electric power companies due to restarting of Sendai Nuclear Power Unit No.1, 2.

[ Maximum power balance ( generating end ) ] ( MW )

	December	January	February	March
Demand ( freezing winter the level of FY2011 )	13,870	15,150	15,150	12,940
Supply capabilities (total)	15,557	16,336	16,482	16,193
Nuclear	1,780	1,780	1,780	1,780
Thermal	11,152	11,802	11,935	11,731
Hydraulic	826	814	751	914
Pumping up	1,750	1,894	1,966	1,718
Solar	0	0	0	0
Wind	13	10	12	13
Geothermal	166	166	168	167
Provided by other companies	0	0	0	0
PPS, etc.	-130	-130	-130	-130
Reserve [Reserve margin]	1,687 (12.2%)	1,186 (7.8%)	1,332 (8.8%)	3,253 (25.1%)

\* The total may not be the same as the sum of figures in all items because the latter is rounded off.

<Contact>

Kyushu Electric Power Co., Inc.

Corporate Planning Div., IR Group

Phone (092) 726-1575

FAX (092) 733-1435

URL: [http://www.kyuden.co.jp/ir\\_index](http://www.kyuden.co.jp/ir_index)