

# Management Reference Materials

**November 2017**



The Okinawa Electric Power Company, Inc.

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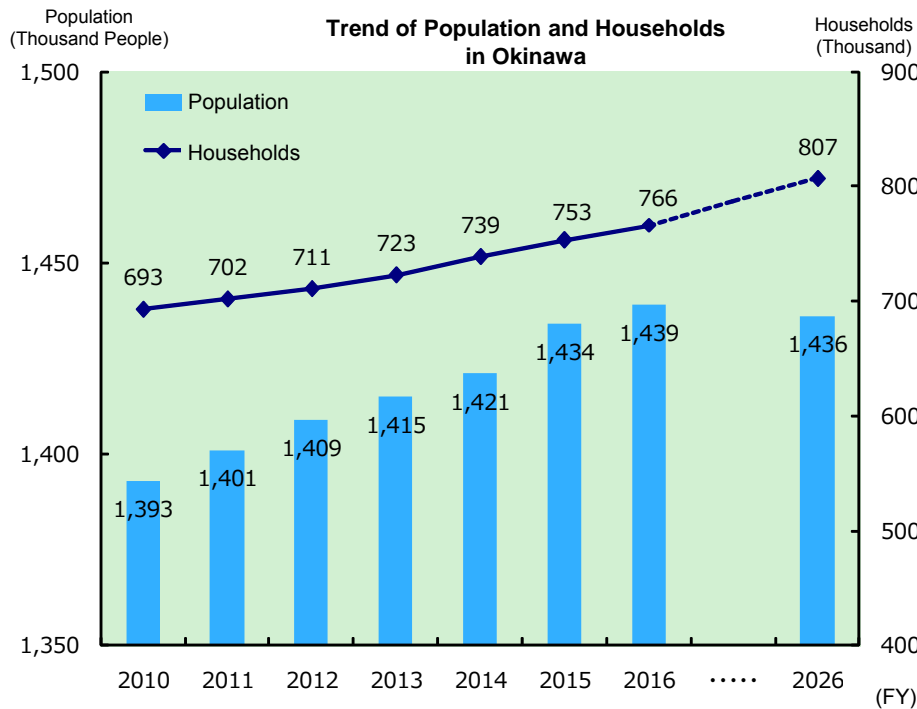
# Characteristics of the Business Bases

Item	Overview	Reference Page
Demand for Electric power	<ul style="list-style-type: none"> <li>◆ Increasing demand due to population growth and increasing tourists.</li> <li>◆ As the proportion of energy for consumer use is high, effects of economic fluctuations are low.</li> <li>◆ Potential demand due to large-scale urban development projects</li> </ul>	2~11
Competition	<ul style="list-style-type: none"> <li>◆ OEPC is outside the framework of wide-area power interchange because it has an isolated system.</li> <li>◆ OEPC has voluntarily released power of 10,000kW supplied by J-Power.</li> </ul>	12
Electric Power Generation Facilities	<ul style="list-style-type: none"> <li>◆ Reliant on fossil fuels only due to difficulties to develop nuclear or hydraulic power generation</li> <li>◆ A sufficient supply capacity is secured after Yoshinoura Thermal Power Plant has started operations.</li> <li>◆ A high reserve supply capacity is required due to an isolated system</li> </ul>	13~15
Fuel	<ul style="list-style-type: none"> <li>◆ Having introduced LNG, OEPC now provides total energy services.</li> </ul>	16~18
Remote Islands	<ul style="list-style-type: none"> <li>◆ OEPC supplies power to 11 isolated systems including those in the main island.</li> <li>◆ The region has a high cost structure because it has small islands and also because the scale of the economy is small. This leads to constant loss recording.</li> </ul>	19
Renewable Energy	<ul style="list-style-type: none"> <li>◆ Reducing fuel consumption and cost is highly effective on remote islands, where fuel unit price is high.</li> <li>◆ Since the system in the main island of Okinawa is small and independent, the limit of connection volume is likely to occur when using renewable energy.</li> </ul>	20~21

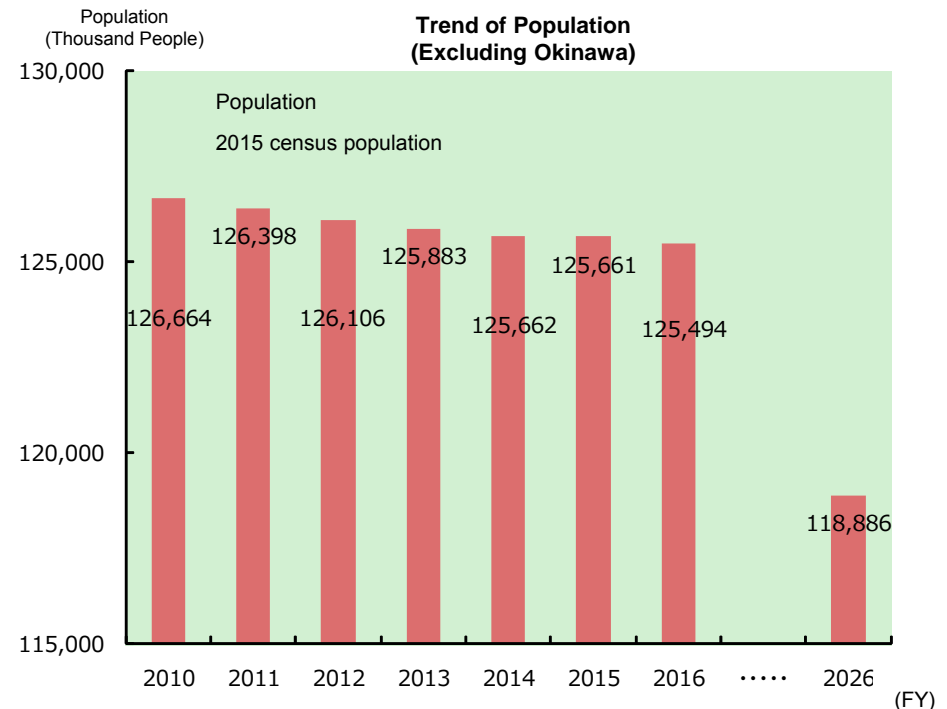


# Okinawa Prefecture Demographics (1/2)

- While the national population has started decreasing in Japan, the population has been increasing in Okinawa. Although the population in Okinawa is projected to decline in the future, it is expected to grow moderately for the time being.
- Demand for lighting is expected to increase as the number of households (number of contracts) increases in the future.



Source: Population: The actual results are from the Ministry of Internal Affairs and Communications.  
The figures for FY2026 are OCCTO.  
No. of households are based on the number of household electric lighting (actual results and estimate)



Source: Population: The actual results are from the Ministry of Internal Affairs and Communications.  
The figures for FY2026 are OCCTO.



# Okinawa Prefecture Demographics (2/2)

- The total fertility rate of Okinawa Prefecture in FY2016 was 1.95, the highest among all prefectures in Japan (nationwide:1.44)
- While the number of the national population decreased by -1.3 persons per 1,000 people in FY2016, that of Okinawa increased by 4.0 people.

## Okinawa Prefecture Demographics

(People)

		2012	2013	2014	2015	2016
The total fertility rate (Per Thousand people)	Nationwide	1.41	1.43	1.42	1.45	1.44
	Okinawa	1.90	1.94	1.86	1.96	1.95
	Ranking	(1)	(1)	(1)	(1)	(1)
The Increase of population (Per Thousand people)	Nationwide	-1.9	-1.4	-1.4	-1.1	-1.3
	Okinawa	6.5	5.2	4.9	5.6	4.0
	Ranking	(1)	(2)	(2)	(2)	(2)
The Natural Increase of population (Per Thousand people)	Nationwide	-1.6	-1.8	-2.0	-2.2	-2.3
	Okinawa	4.7	4.4	3.8	3.9	3.8
	Ranking	(1)	(1)	(1)	(1)	(1)
The Social Increase of population (Per Thousand people)	Nationwide	-0.6	0.1	0.3	0.7	1.1
	Okinawa	0.9	0.1	0.2	0.8	0.2
	Ranking	(4)	(10)	(8)	(7)	(11)

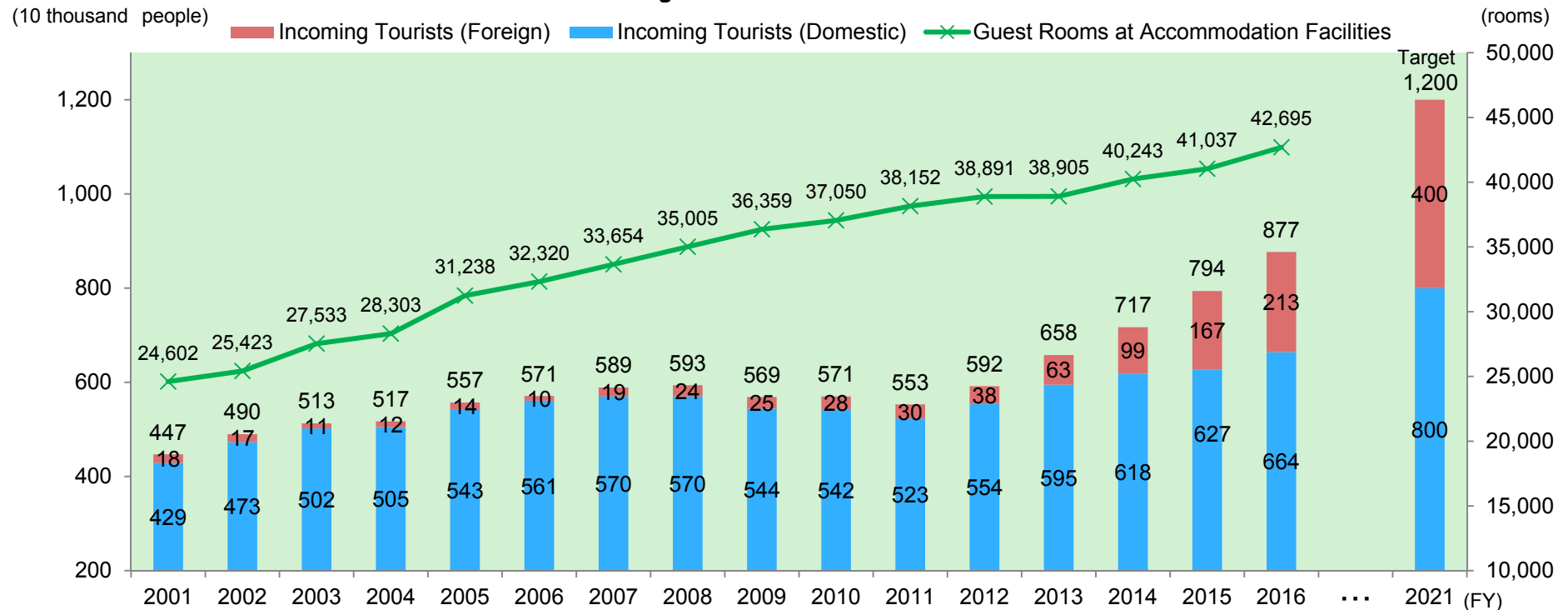
Source: "Vital Statistics" by Ministry of Health, Labour and Welfare  
The figures in brackets in the chart show Okinawa Prefecture's national ranking



# Number of incoming tourists (1/6)

- Target for the number of tourists to visit the region for FY2021 is 12 million visitors.
- Demand for power is expected to rise due to an increase in the number of tourism-related facilities (including hotels).  
 [Incoming tourists]  
 FY2016 : 8.77 million people (Growth rate of 10.5% year-on-year)  
 FY2017 [target] : 9.50 million people (Growth rate of 8.3% year-on-year)  
 [1st half]: 5.05 million people (Growth rate of 9.3% year-on-year)

**Trends of the Numbers of Incoming Tourists and Guest Rooms at Accommodation Facilities**



Source: "Tourism Guidebook", "Summary Statistics on Incoming Tourists to Okinawa", "2016 Accommodations Fact-finding Survey Result", "Okinawa Prefecture Basic Plan for Tourism Promotion (Fifth Plan) (revised edition, March 2017)" and "FY2017 Visit Okinawa Plan" published by Okinawa Prefectural Government



# Number of incoming tourists (2/6)

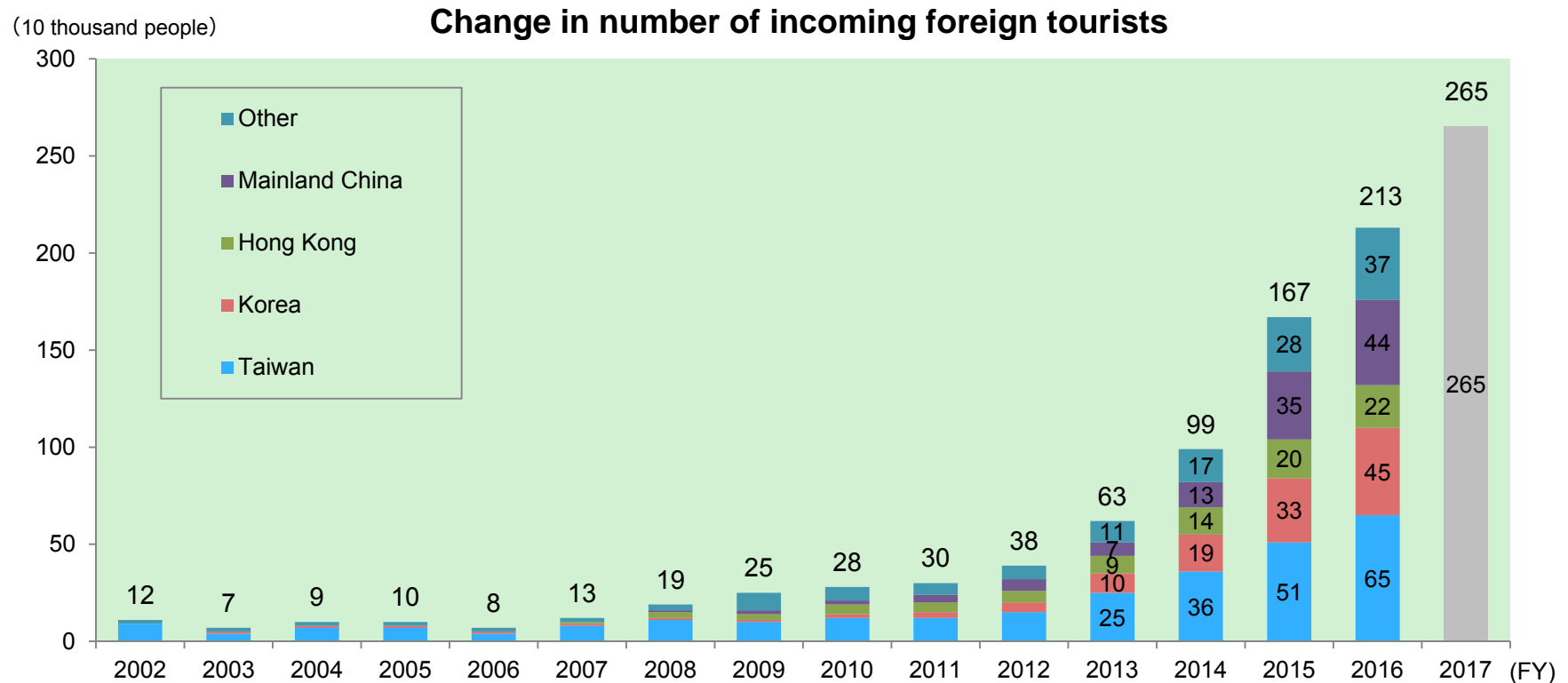
- Tourism still remains strong due to the continuing increase in the number of tourist arrivals from Taiwan, South Korea, mainland China, and Hong Kong.

[Incoming tourists]

FY2016 : 2.13 million people (Growth rate of 27.5% year-on-year)

FY2017 **[target]** : 2.65 million people (Growth rate of 24.4% year-on-year)

**[1st half]**: 1.50 million people (Growth rate of 21.1% year-on-year)



Note: The numbers between 2002 and 2008 are based on the calendar year, and those after 2009 are based on the fiscal year.

Source: "Tourism Guidebook", "Summary Statistics on Incoming Tourists to Okinawa" and "FY2017 Visit Okinawa Plan" published by Okinawa Prefectural Government

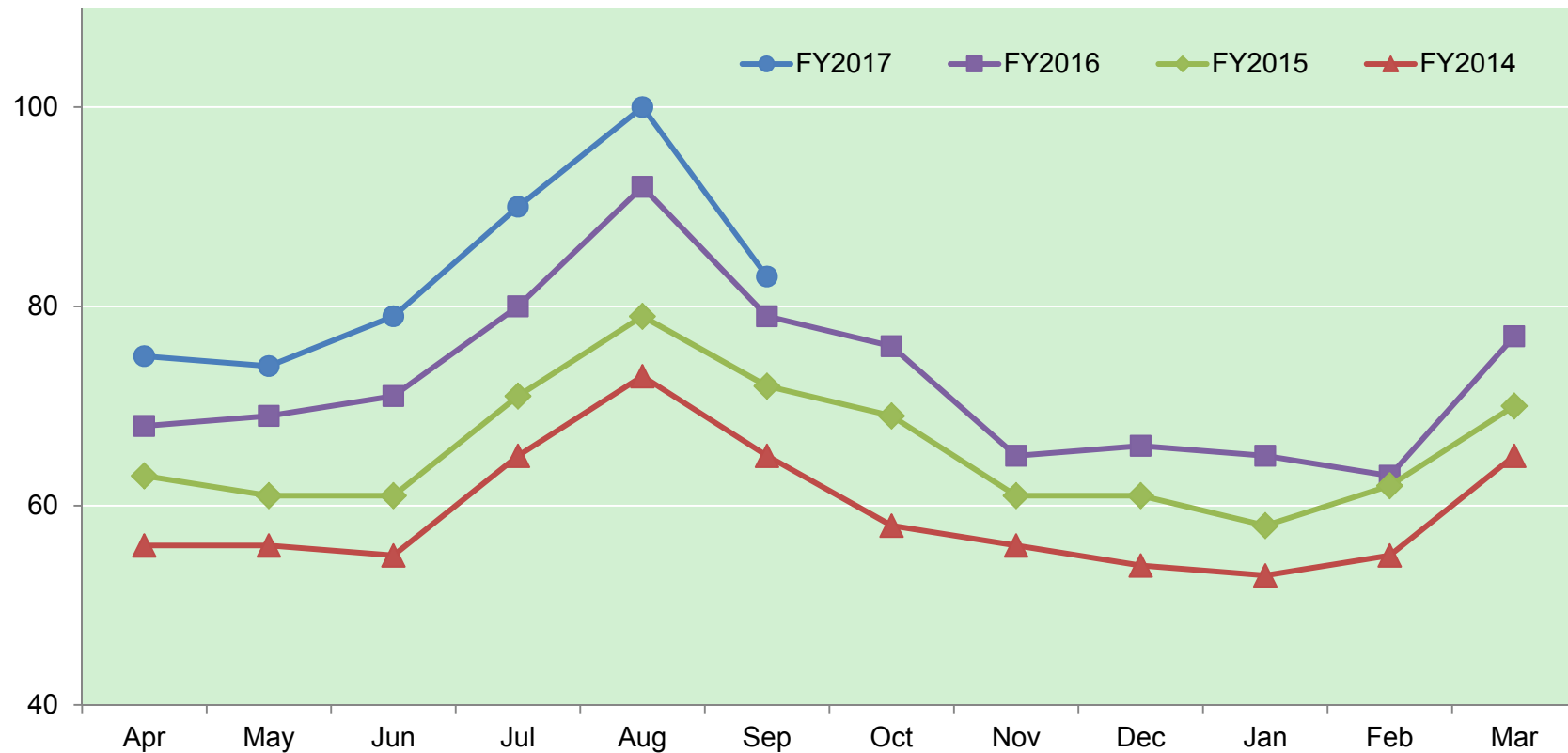


# Number of incoming tourists (3/6)

- Okinawa saw a record high of 8.77 million tourists visiting the region in FY 2016.
- Not only the number of tourists who visited the region increased year-on-year for 60 consecutive months but also the past 47 straight months set records in the number of tourists for their respective months.

(10 thousand people)

## Monthly trend of the number of incoming tourist



Source: "Tourism Guidebook" and "Summary Statistics on Incoming Tourists to Okinawa" published by Okinawa Prefectural Government

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# Number of incoming tourists (4/6)

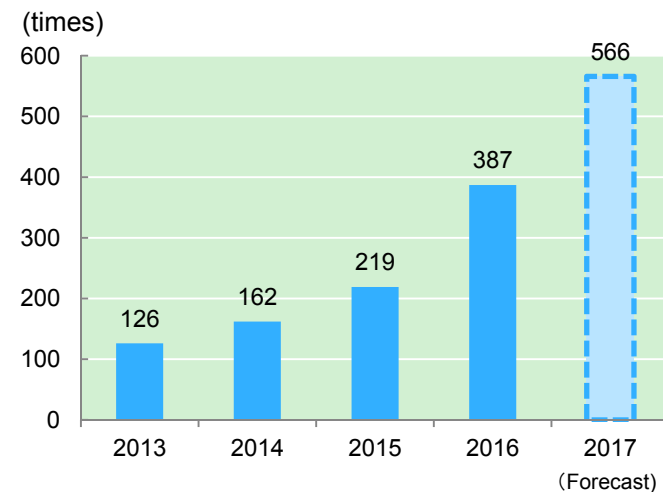
- With more and more cruise ships calling at the region, the number of cruise ship calls is expected to reach 566 times (up 46%) in 2017, making a new record.
- Aim to strengthen attraction and acceptance system by deploying new berth to ports within Okinawa Prefecture.

Scene of 3 ships calling at Naha Port at the same time (July 28, 2015)



Provided by Naha Port Authority

Trend in Number of Cruise Ship Calls in Okinawa Prefecture (Calendar year)



Source: Okinawa General Bureau



# Number of incoming tourists (5/6)

- A second runway is under construction in Naha Airport and is scheduled to be operational at the end of March 2020.

Operation start: Scheduled for the end of March 2020

Number of landings and takeoffs:

about an annual increase of 50,000 times (185,000 times a year)

\*excluding helicopters and midnight flights

Reclaimed land area: about 160 ha

Total construction cost: about 199.3 billion yen



Source:Okinawa General Bureau



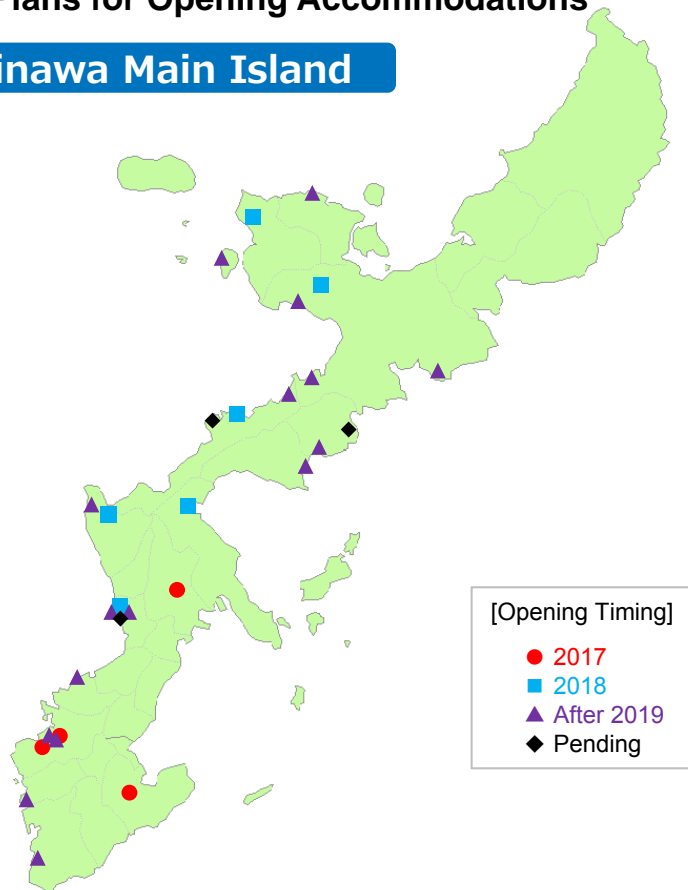
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# Number of incoming tourists (6/6)

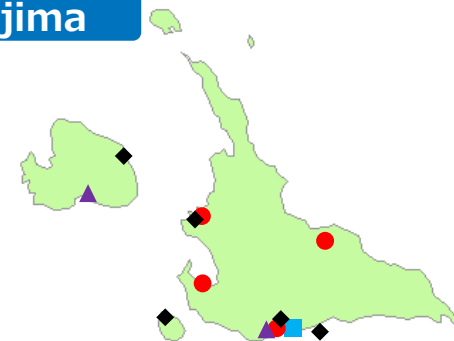
- Accompanying an increase in tourists visiting the region, the numbers of accommodation facilities and guest rooms have kept increasing in Okinawa Prefecture.
- Going forward, multiple accommodation facilities are planned to open.

## Major Plans for Opening Accommodations

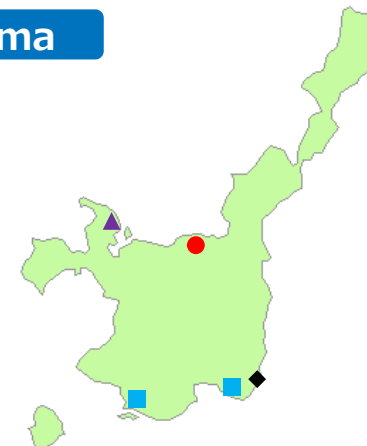
### Okinawa Main Island



### Miyakojima



### Ishigakijima



Source: Compiled by OEPC based on newspaper reports, etc. \*Including projects still pending



# Large-Scale Urban Development Projects

- In Okinawa Prefecture, a series of large-scale development projects are planned, which take advantage of former base sites. These will generate new energy demand.

Development Project	Area	Scheduled open year	Outline
① around Tedako-uranishi station Smart City development project (Urasoe-shi)	Approx. 20ha	FY2019	➤ Development around Tedako-uranishi monorail station
② Large-scale MICE project (Yonabaru-cho, Nishihara-cho)	Approx. 14ha	FY2020	➤ Overall development including Meetings, incentives, conferences, and exhibitions (MICE) facilities and accommodations by the prefecture
③ Nishi-futenma residential area Former base site utilization project (Ginowan-shi)	Approx. 46ha	Development starts in FY2019	<ul style="list-style-type: none"> <li>➤ Planning of “international medical base zone”, “residential zone”, etc.</li> <li>➤ Ryukyu University Hospital plans to move to the international medical base zone (FY2024).</li> </ul>
④ Urasoe west coast development project (Urasoe-shi)	Approx. 200ha	FY2019	<ul style="list-style-type: none"> <li>➤ Development of large-scale commercial complex</li> <li>➤ The project may have the second and third phases in future.</li> </ul>

【 Reference 】

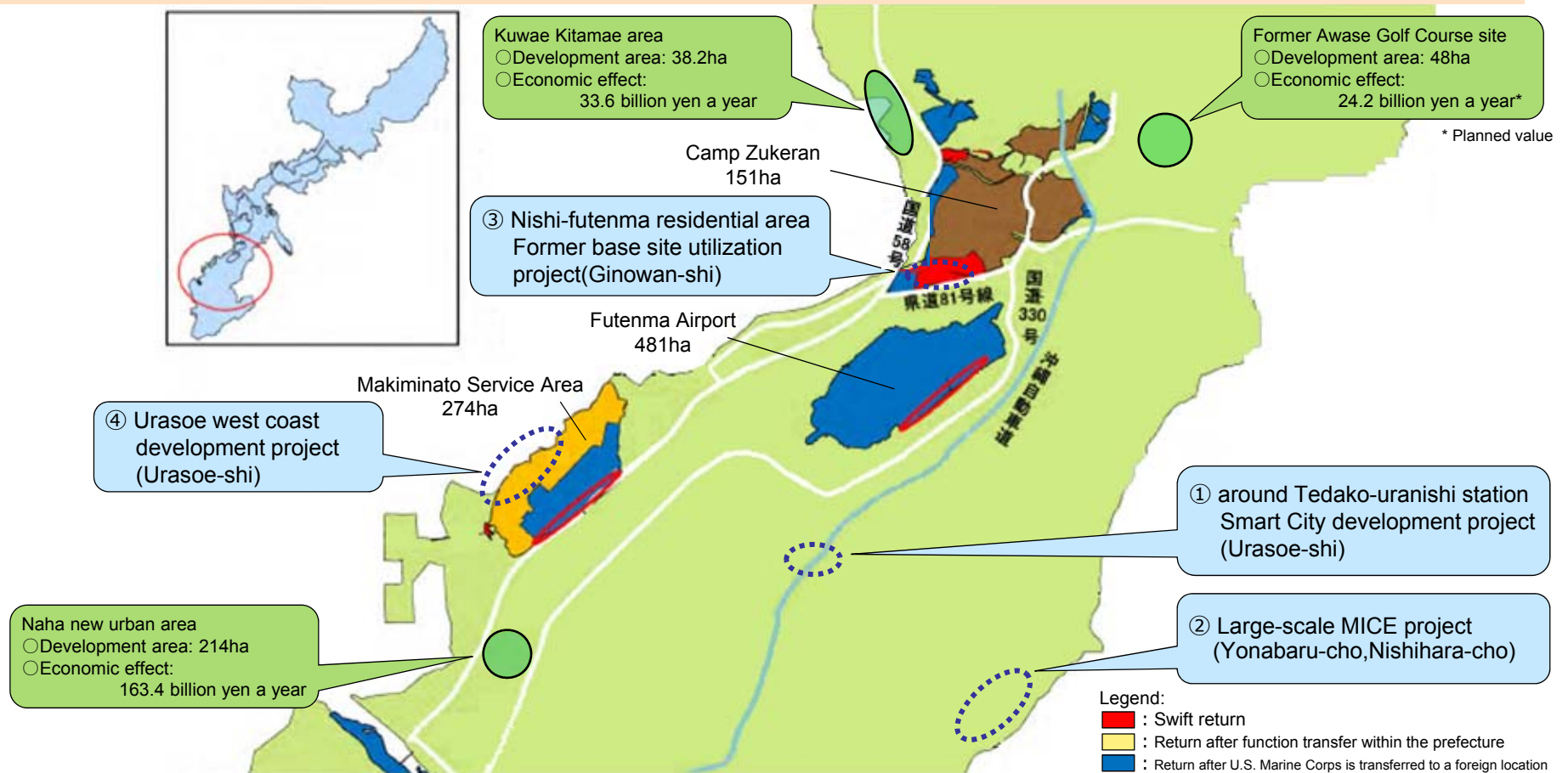
Development results	Area	Year of return	Electricity demand results (FY2016)	Description
Naha new urban area	Approx. 214ha	1987	155,745MWh (1.97%)	➤ Development of homes, large-sized commercial facilities and public facilities
Former Awase Golf Course site	Approx. 48ha	2010	29,631MWh (0.38%)	➤ Development of large-sized commercial facilities and hospitals

Figures in brackets represent the percentages in the total electricity demand



# Use of returned former U.S. military base sites

- If the US military facilities are returned, demand is expected to decrease temporarily. However, demand will subsequently increase on the strength of revitalization of the local economy following redevelopment of the US military facilities sites.



\* Source: The material of the Okinawa Revitalization Council Chair and Specialized Committee Meeting (third session) presented on the Cabinet Office website, and Survey of Consideration of Ripple Economic Effects from Utilization of Former U.S. Forces Sites posted on the Okinawa Prefectural Government website

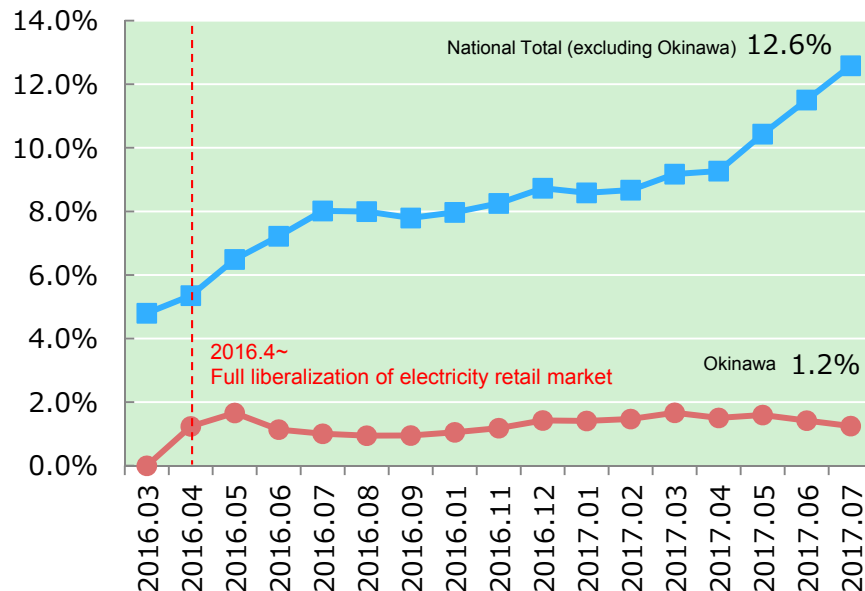


# Impacts of Full liberalization of the Electricity Market

- The electricity market was fully liberalized in April 2016.
- Okinawa Prefecture too has seen new suppliers, officially called power producer and suppliers (PPS), which use a power supply from J-POWER's Ishikawa Coal Thermal Power Station or the feed-in tariff system, enter the market.
- Working on establishing “wholesale electric power menu for demand-supply adjustment” as a further voluntary efforts aiming for revitalizing wholesale electric power market (The supply to be launched in April 2018).
- PPS's share in the electricity sales volume in the Okinawa region in July 2017 is 1.2% in the total of all voltages.  
(Extra high voltage: 1.2%, High voltage: 3.0%, Low voltage: -%) Source : Electricity Trading Report for July 2017 (flash report)  
Switching: 0.1 thousand cases (as of October 31, 2017) Source : Organization for Cross-regional Coordination of Transmission Operators, Japan

## State of PPS's Entry in Okinawa \*based on media reports

Trend of PPS's Share in Electricity Sales Volume (All power sources)



Source : Compiled by OEPC based on Survey of Electric Power Statistics and Electricity Trading Report.



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### ITOCHU Corporation

ITOCHU Corporation develops a retail electricity business to hotels and supermarkets, and other large industrial consumers.

### Okinawa Gas New Power Co.

(joint venture between Okinawa Gas and eREX co., Ltd.)

Launched in October 2016 the supply of electricity to hotels and other establishments by purchasing electricity from solar power plant operators

### Okinawa Uruma New Energy Co., Ltd. (100% subsidiary of eREX co., Ltd.)

Announced construction of biomass power plant (49,000kW) which uses PKS etc.

Plans to supply the entire volume to Okinawa Gas New Power Co. (The operation to be commenced in FY2020)

### Koyo Electric Co.

Began supply to the food factory by power source such as biomass power and solar power in the prefecture from December 2016.

### Okinawa CO2 Reduction Promotion Council

Plans to sell electricity to households using power supplied from solar power generation facilities.

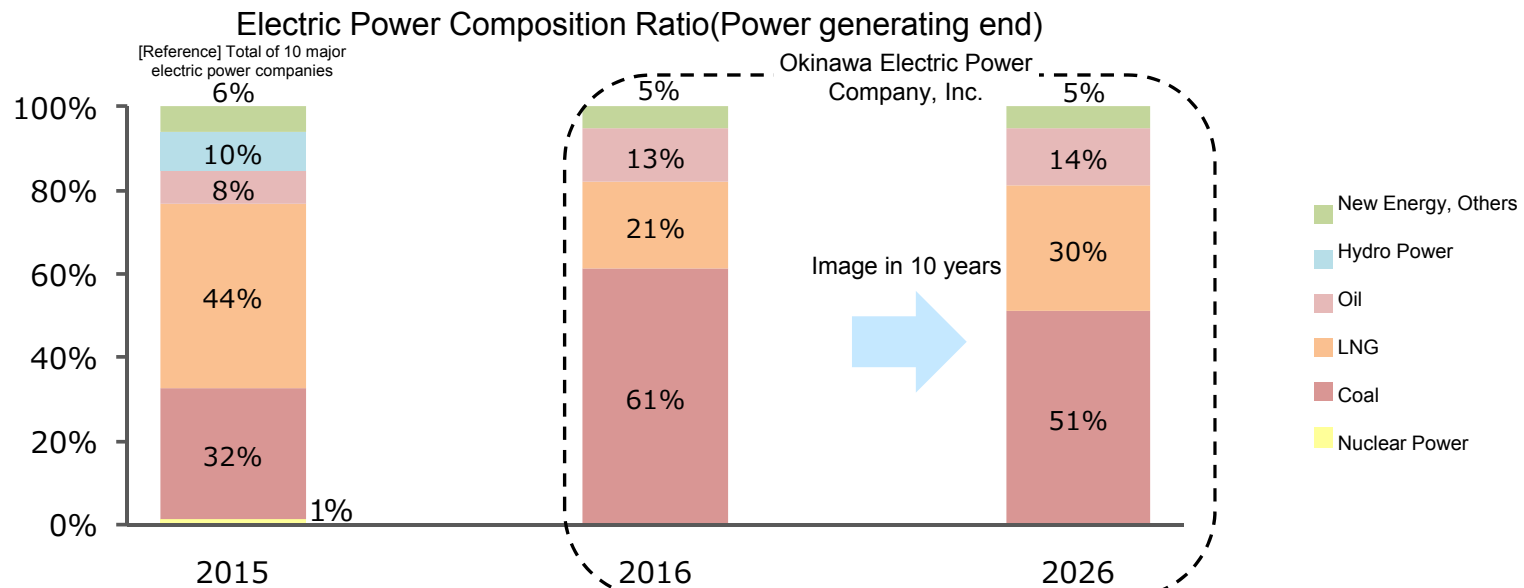
### CO-OP Okinawa

The CO-OP established a new company jointly with Miyama Smart Energy Co., Ltd. (from Fukuoka Prefecture) and aims to start supplying electricity to CO-OP stores and CO-OP members through power generation methods including one that uses waste cooking oil or lubricating oil.

# Power Generation Facilities (Power Supply Composition)

- The composition of electric power source is highly reliant on fossil fuel, as developing nuclear or hydroelectric power generation is difficult in Okinawa due to the reasons of geographic condition and the small scale of demand. Accordingly, fossil fuels; petroleum, coal and LNG, are the only source for the composition.

- We have secured long-term power supply capacity, the improvement of energy security, and effective countermeasures for global warming issues by commencing the operation of Yoshinoura Thermal Power Plant, our first plant using LNG.



Source: The Federation of Electric Power Companies of Japan

Note 1: The figures include other companies (but excluding demand shifted to new power suppliers)  
 Note 2: The figures include both the main land and remote islands.  
 Note 3: The figures is generator output.



# Power Generation Facilities (Yoshinoura LNG Thermal Power Plant)

- Yoshinoura Thermal Power Plant was constructed as OEPC first LNG thermal power plant from the viewpoints of securing stable supply of electricity, increasing energy security, environmental measures and venturing into gas-related business.
- Yoshinoura Multi Gas Turbine Power Plant was constructed mainly for the purposes of starting power grids in case that the entire main island of Okinawa loses all electricity sources, dealing with the electricity peak of normal time.

## [Outline of the Power Plant]

Name	Yoshinoura Thermal Power Plant	Yoshinoura Multi-Gas Turbine Power Plant
Location	Nakagusuku-son, Okinawa Prefecture	
Power generation capacity	251,000kW×2 power generators	35,000 kW × 1 plant
Fuel	Liquefied natural gas (LNG)	LNG, kerosene, bio-ethanol (The normal fuel to be used is LNG.)
Storage facilities	140,000kl × 2 stations	
Start of commercial operation	Generator No.1:November 27, 2012 Generator No.2:May 23, 2013	March 20, 2015
Fuel procurement	Contractor: Osaka Gas Co., Ltd. Contract period: 27 years from FY2012 (main source of supply: Gorgon Project in Australia) Contracted quantity: About 400,000 t/year Terms of delivery: Delivery on ship's arrival (EX-Ship)	





# Demand - Supply balance

- A high generation reserve margin is necessary because of OEPC's isolated system and the responsibility to provide stable supply as a public utility.
- The reserve capacity exceeding of the largest unit is secured so that it is possible to provide stable supply even if the largest unit breaks down.



- We would ensure long-term and stable supply.

## Demand-supply balance of maximum electric power (August)

(Unit : Thousand kW, %)

		2016 (Results)	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026
Demand-supply balance	Supply capacity	2,146	2,178	2,230	2,232	2,184	2,188	2,250	2,263	2,263	2,253	2,243
	Peak load	1,461	1,448	1,453	1,460	1,466	1,472	1,479	1,485	1,491	1,498	1,504
	Reserve supply capacity	685	730	777	772	718	716	771	778	772	755	739
	Reserve supply rate	46.9	50.4	53.5	52.8	49.0	48.7	52.2	52.4	51.8	50.4	49.1

Note: Based on FY2017 Supply Plan Notification. (general transmission / distribution business)

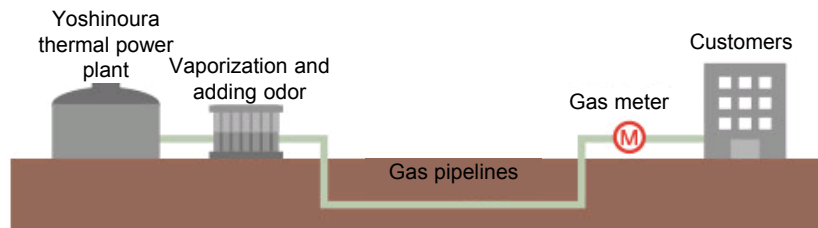


# Gas supply business

■ Commenced gas supply business in May 2015

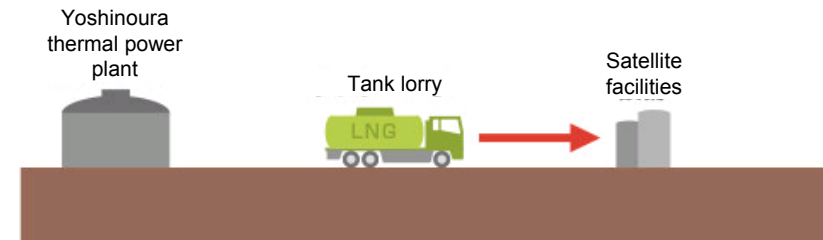
## Pipeline supply

Supplies gas to customers in the vicinity of the Yoshinoura thermal power plant through gas pipelines after vaporizing and odorizing liquefied natural gas (LNG)



## Lorry supply

Supplies LNG by tank lorry to customers in areas where pipelines are difficult to be developed



	FY2015 results	FY2016 results	FY2017 estimate
New supply contracts	6	4	—
Supply volume	Approx. 12,000 tons	Approx. 23,000 tons	Approx. 25,000 tons
Revenues	Approx. 900 million yen	Approx. 1,300 million yen	Approx. 1,700 million yen
Principal customers	<ul style="list-style-type: none"> <li>•Okinawa Gas Co.</li> <li>•Okinawa Watakyu shingu Co.</li> <li>•Chubu Tokushukai Hospital</li> <li>•AEON MALL Okinawa Rycom</li> </ul>	<ul style="list-style-type: none"> <li>•ORION BREWERIES,LTD</li> <li>•Okinawa Kariyushi Beach Resort Ocean Spa</li> </ul>	

[Reference] Profile of Okinawa Gas Co.

Founded: July 22, 1958

Paid-in capital: Approx. 250 million yen

Operating revenues: Approx. 7,603 million yen (2016)

Supply areas: Almost entire Naha-shi

Urasoe-shi\* Tomigusuku-shi\*

Haeburu-cho\* Nishihara-cho\*

Nakagusuku-son\* (\*Part of local municipalities)

Sales volumes of ordinary gas: 1,136,660×10<sup>3</sup>MJ (2016)

Volume translated into LNG volume:

Approx. 20,000 tons/year

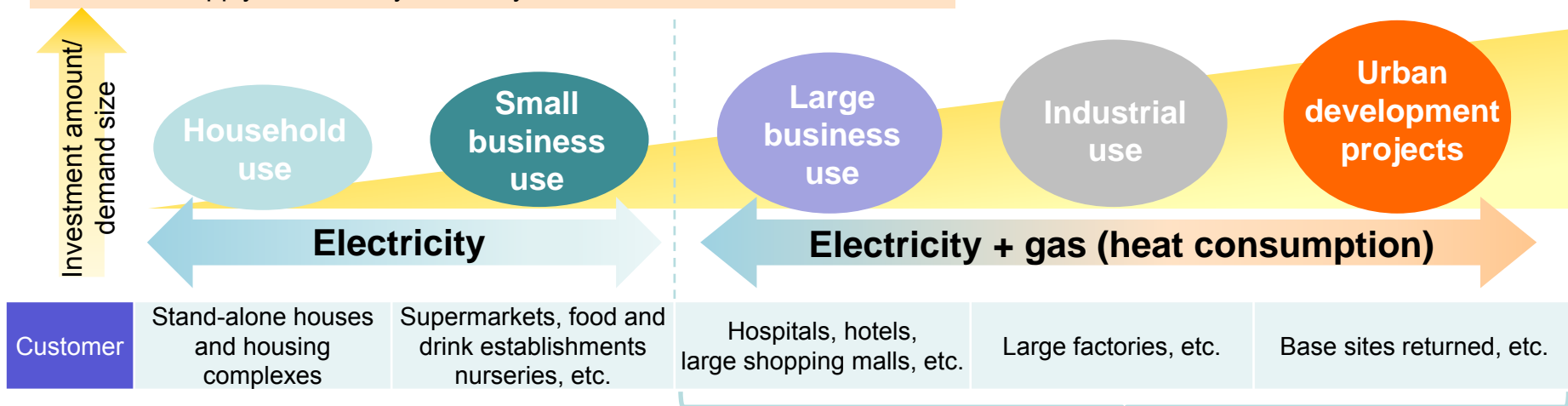
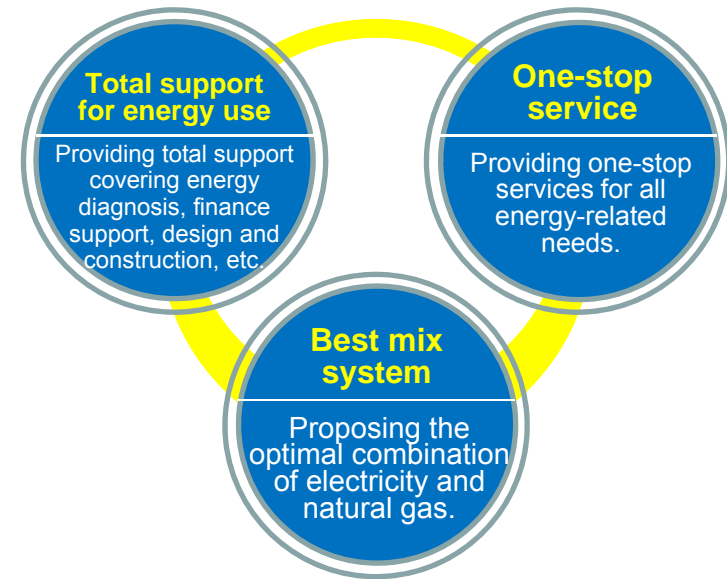
Number of customers: Approx. 57,000 (ordinary gas)

Approx. 22,000 (LP gas) (2016)



# Development of Total Energy Services

- The OEPC Group has been promoting the initiatives for the Total Energy Services, focusing on three core services:
  - 1) Total support for energy use
  - 2) Proposal of best mix system
  - 3) One-stop services
- The OEPC Group aims to expand sales of electricity and gas by accurately identifying customer needs and generating synergy effects of electricity and gas.
- Focus on the following initiatives based on the power and gas system reform
  - Promoting ESP business
  - Efforts in the energy sector to the large-scale urban development projects
  - Expand sales by the gas pipeline supply business and LNG supply business by tank lorry



strengthen these domain through total energy services



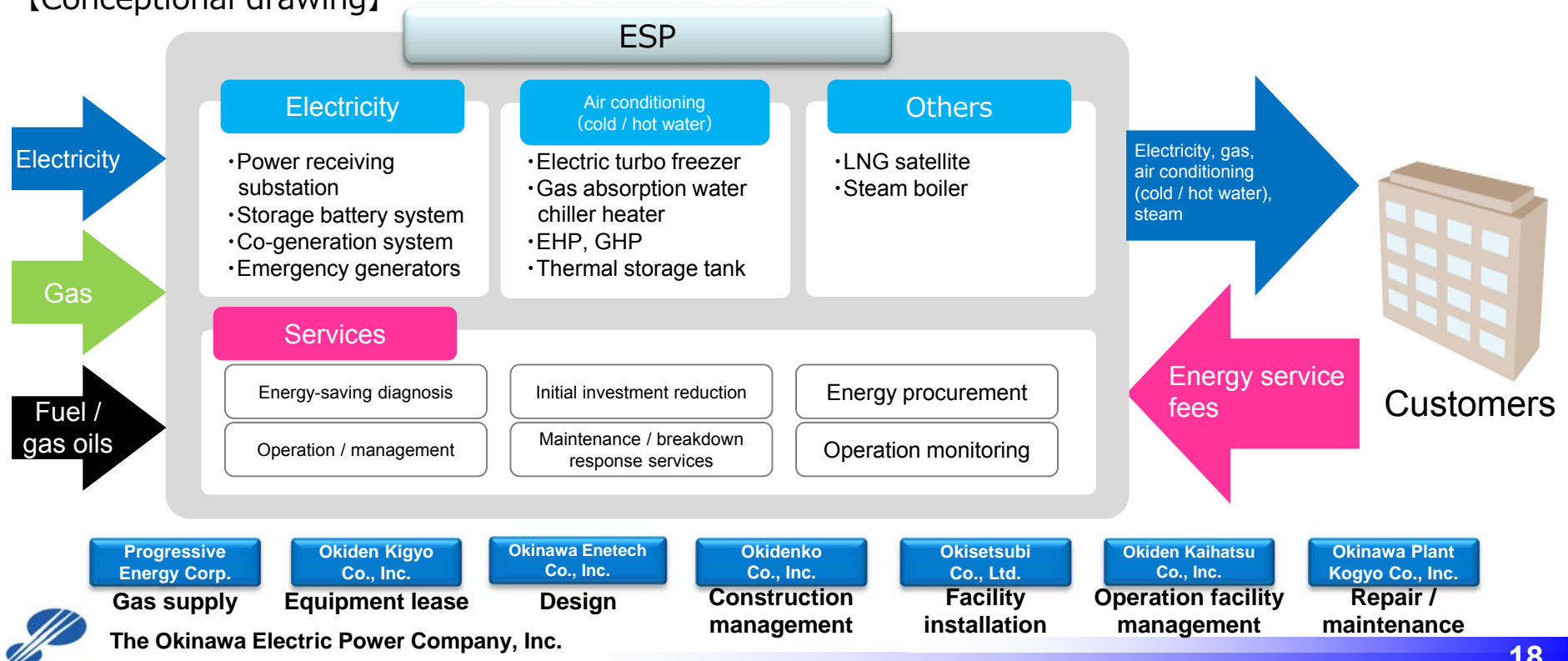
# Energy Service Provider (ESP) Business

- ESP business is to propose optimal energy use tailored to customer needs, own facilities, supply energy and provide operation and management services.
- Currently, discussion is underway with several companies to obtain contracts.
- It is expected to account revenue in 2019.

## 【Business Content】

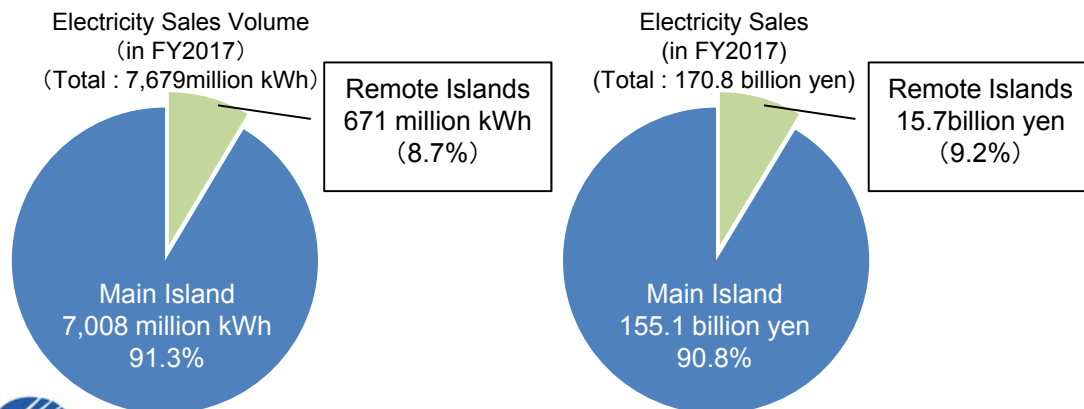
- ① Identify necessary energy tailored to customer needs and propose energy-saving options using optimal energy system.
- ② Construct, own and operate proposed energy system, and process electricity and gas to supply electricity, cold water, hot water and steam for customers' use.
- ③ Provide maintenance and repair services, and manage and analyze energy data collected after installation to support customers with cost reduction.

## 【Conceptual drawing】



# Remote Islands (Efforts to Improve Income and Expenditure)

- The region has a high cost structure because of such reasons as having small islands scattered about a vast sea area and the narrow scale of the economy.
- Remote island business occupies about 10% of electricity sales and residential, commercial and industrial use charges.



(Efforts to improve remote island income and expenditure)

- Reducing fuel consumption by introducing renewable energies (Retractable wind power generators, etc.)
- Effective utilization of waste oil
- Reducing the fuel consumption rate by introducing high-efficiency units



# Status of Wind and Solar Power Electricity Generation Facilities

■ OEPC Group has new energy facilities with total output of 28,490kW (wind power: 22,730kW, solar power: 5,760kW).

## 【 OEPC 】

	Name	No. of Units	Output	Remark
Wind Power	Ogimi Wind Power	2	4,000 kW	
	Miyako Wind Power	1	600 kW	
	Yonaguni Wind Power	1	600 kW	
	Aguni Retractable Wind Power	1	245 kW	*1
	Minamidaito Retractable Wind Power	2	490 kW	*1
	Tarama Retractable Wind Power	2	490 kW	*1
	Hateruma Retractable Wind Power	2	490 kW	*1
	<b>subtotal (7)</b>	<b>11</b>	<b>6,915 kW</b>	
Solar Power	Abu Mega Solar Power	—	1,000 kW	
	Naha Branch Solar Power	—	12 kW	
	Urasoe Branch Solar Power	—	10 kW	
	Kitadaito Daini Solar Power	—	100 kW	*2
	Miyako Mega Solar Power	—	4,000 kW	*2
	Miyako Branch Solar Power	—	10 kW	
	Tarama Solar Power	—	250 kW	*2
	Yaeyama Branch Solar Power	—	10 kW	
	Hateruma Solar Power	—	10 kW	
	Yonaguni Solar Power	—	150 kW	*2
<b>subtotal (10)</b>	<b>—</b>	<b>5,552 kW</b>		

## 【 Group company 】

	Name	No. of Units	Output	Remark
Wind Power	Sosu Wind Power	2	3,600 kW	
	Nakijin Wind Power	1	1,995 kW	
	Gushikawa Wind Power	1	1,950 kW	
	Sashiki Wind Power	2	1,980 kW	
	Iejima wind Power	2	1,200 kW	
	Iejima Daini wind Power	2	1,490 kW	
	Karimata Wind Power	2	1,800 kW	
	Sadefune Wind Power	2	1,800 kW	
<b>subtotal (8)</b>	<b>14</b>	<b>15,815 kW</b>		
Solar Power	Iejima Solar Power	—	10 kW	
	Tokashiki Solar Power	—	198 kW	
	<b>subtotal (2)</b>	<b>—</b>	<b>208 kW</b>	

\*1 <Characteristics and advantages of Retractable Wind Power>

- Wind power generators can be retracted nearly 90 degrees so that damages by strong winds from typhoons can be avoided by retracting them.
- Wind power generators do not need large-size cranes to construct and can be constructed in moderate hilly areas.
- Wind power generators are retractable so that maintenance work can be carried out on the ground.
- Wind power generators are supported by wires.

\*2 Micro grid (a combination of system stabilizing technologies such as storage batteries)

(As of March 31, 2017)

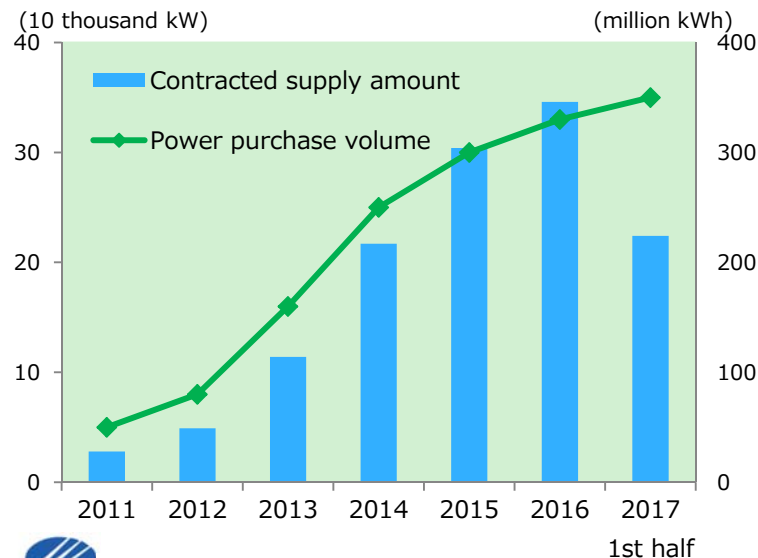


# Connection Volume of Renewable Energies

- Since the system in the main island of Okinawa is small and independent, the limit of connection volume is likely to occur when using renewable energy.
- Consequently, we determined 30-day output control limit\*1 as 495MW for solar power and 183MW for wind power, based on the assumption that, if telecom technology-based output control system becomes able to be run, output control will be done without compensation up to 360 hours for solar power and up to 720 hours for wind power.
- As for the possible volume of interconnection on remote islands, we have announced the connection volume as of the end of each month at our website.
- On the condition that stable supply is ensured, OEPC will keep on working for interconnection and further expansion of renewable energy.

\*1: The connection volume for cases where additional acceptance becomes not possible unless, due to power generator adjustment-range constraint, an electric power company conducts output control in excess of the maximum output control levels of 360 hours (solar power) and 720 hours (wind power) for 30 days

## [Purchase of solar power]



		2011	2012	2013	2014	2015	2016	2017 1st half
No of purchases (Thousand cases)	Main Island	10.2	13.4	18.8	22.1	23.7	25.1	25.7
	Remote Island	0.8	1.4	2.1	2.5	2.5	2.6	2.6
	Total	11.0	14.8	20.9	24.6	26.2	27.7	28.3
Contracted supply amount (10 Thousand kW)	Main Island	4.8	6.8	14.3	21.5	26.5	29.8	31.1
	Remote Island	0.5	0.9	2.0	3.1	3.4	3.6	3.8
	Total	5.3	7.7	16.2	24.6	29.9	33.4	34.9
Power purchase volume (Million kWh)	Main Island	25.6	43.2	99.4	188.9	267.6	306.7	198.8
	Remote Island	2.2	5.8	14.3	28.2	36.7	39.2	25.1
	Total	27.8	49.0	113.7	217.1	304.3	346.0	223.9

\* As each unit is rounded off to the second decimal place, the total amount does not exactly agree to the sum of each amount.

\* The "Feed-in Tariff System for Renewable Energy" started in July 2012.



# Q & A





# Q1. Topics of Okinawa's Economy

## 1 Current Status and Future Forecast of Okinawa's Economy

### ■ The current state

The prefectural economy has been expanded, as a whole, with private consumption staying firm, tourism-related businesses being strong, and public investment in construction-related businesses being resilient.

Trends in Main Economic Indicators of Okinawa Prefecture (Year-on-Year Comparison) (%)

Indicators	FY2016													FY2017						
	Apr.	May	Jun	Jul	Aug.	Sep.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	FY	Apr.	May	Jun	Jul	Aug.	Sep.	1st half
Sales by large-scale retailers	7.7	7.0	5.6	8.1	3.1	5.0	4.6	4.2	2.4	3.4	0.7	3.8	4.6	3.7	2.4	3.1	4.5	2.7	11.3	4.6
No. of new car sold	22.3	20.5	2.0	0.4	15.6	-5.2	4.5	6.9	-4.4	1.8	8.2	6.5	5.7	-9.2	1.9	14.1	-8.9	12.5	6.3	1.8
Wholesale shipments of Household appliance	11.1	7.0	-9.9	1.0	2.9	0.5	-13.4	7.0	2.4	-4.2	-1.5	1.1	-0.1	-5.1	-7.7	-0.5	4.2	11.5	-1.8	N.A.
Value of public works contracts	47.5	16.8	-31.8	2.0	7.0	22.8	-24.1	62.2	25.1	138.9	-38.6	14.0	4.2	0.7	18.4	43.9	31.8	66.3	-38.3	17.1
No. of inbound tourists	7.3	14.0	17.1	12.9	16.2	9.4	10.2	4.9	8.1	12.3	2.5	9.8	10.5	11.4	6.2	11.8	12.7	8.2	5.6	9.3
New residential Construction starts	20.2	-13.5	-16.0	5.1	-38.7	12.2	54.8	-19.1	32.3	-11.1	12.5	29.5	2.6	8.4	-3.4	-12.5	33.7	31.7	-29.2	2.6
Total unemployment rate	0.9	0.3	-0.5	-0.8	-1.1	-1.4	-1.3	-0.3	-1.8	-1.4	-0.3	-0.4	-0.7	-2.1	-1.8	-0.1	-0.8	-0.5	-0.3	-0.9

Note 1: The figures for 'Sales by large-scale retailers' are calculated from the values given in preliminary figures for September 2017 on an all-store base.

Note 2: The figures for 'Total unemployment rates' are raw data, and points of change of Year-on-Year are listed.

Source: Okinawa General Bureau, Okinawa Prefecture, Ryugin Research Institute, and others.

### ■ Prospect

Regarding the outlook, the prefectural economy is expected to continue to expand, with private consumption, tourism-related businesses, and construction-related businesses all staying firm, etc.



# Q1. Topics of Okinawa's Economy

## 2 Economic Growth of Okinawa Prefecture under the Okinawa Promotion Plan

- The “Okinawa Promotion Plan” was implemented during the period from FY2002 to the end of FY2011. During the period, the prefecture’s GDP posted an average increase of roughly 1.9% per annum, outpacing the nationwide average.
- With implementation of a variety of action plans under the Okinawa Prefectural government’s “Basic Plan of Okinawa 21st Century Vision (Okinawa Promotion Plan)” which started in FY2012, the prefecture expects the steady growth of its economy and an increase in demand for electric power.

### Average annual growth rate of the prefecture and gross domestic product

(billion yen)

	FY2002	FY2011	Annual Average Growth Rate FY2002-2011	FY2012	FY2013	FY2014	FY2015	FY2016
Prefectural GDP	3,519.7	4,164.4	Approx. 1.9%	1.1%	4.6%	0.2%	2.2%	2.4%
National GDP	465,681.6	495,053.6	Approx. 0.7%	0.9%	2.6%	-0.5%	1.3%	1.3%
				4,209.6	4,403.9	4,412.7	4,511.7	4,621.1
				499,633.8	512,651.5	510,302.3	516,785.9	523,473.8

Sources: “Prefectural Accounts for FY2014”, “Fiscal 2016 State of the Economy” and Cabinet Office “List of Statistical Tables” (Second Preliminary Data for the April-to-June 2017 period)

Note : Prefectural GDP's for FY2015 and FY2016 are estimates. Figures in the upper row are growth rates on a Y to Y basis.

### Basic Plan of Okinawa 21st Century Vision (Okinawa Promotion Plan)

In May 2012, the “Basic Plan of Okinawa 21st Century Vision (Okinawa Promotion Plan)” was formulated under the initiative by the Okinawa Prefectural government (revised in May 2017).

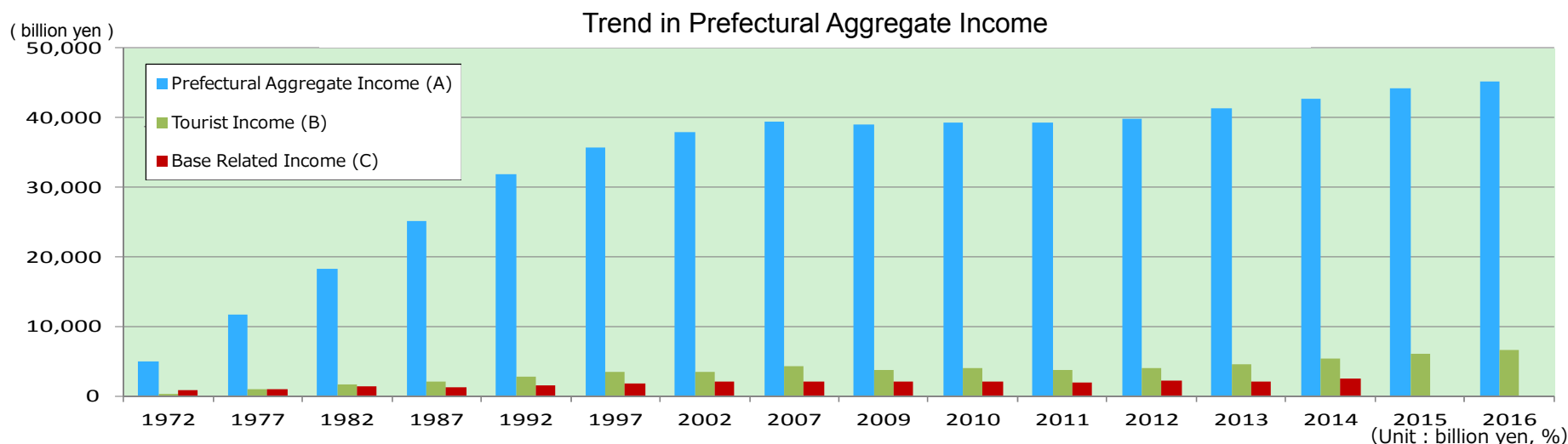
Through the implementation of various measures that are developed based on this plan to take advantage of regional characteristics of Okinawa Prefecture, gross production in Okinawa in FY2020 is estimated to increase about 1.4 times compared with that in FY2010 to 5,100 billion yen.



# Q1. Topics of Okinawa's Economy

## 3 Prefectural Aggregate Income

- The Tourist Income in FY2016 stood at 660.3 billion yen, posting a record high for four consecutive years. (increased 9.6% over year on year)
- The Prefectural Aggregate Income also has steadily increased.



	1972	1977	1982	1987	1992	1997	2002	2007	2009	2010	2011	2012	2013	2014	2015	2016
Prefectural Aggregate Income (A)*1	5,013	11,631	18,226	25,165	31,929	35,700	37,869	39,364	39,066	39,311	39,349	39,897	41,324	42,744	44,216	45,217
Tourist Income (B)*2	324	940	1,645	2,125	2,803	3,434	3,483	4,289	3,778	4,025	3,783	3,997	4,479	5,342	6,022	6,603
Base Related Income (Charges for Land Occupied by US Armed Forces) (C)	777	1,006	1,346	1,282	1,563	1,840	2,036	2,070	2,051	2,089	1,970	2,162	2,095	2,426	N.A.	N.A.

Sources: "US Forces and SDF Bases in Okinawa (Statistics) March 2017", "Tourism Guide", "Fiscal 2016 State of the Economy" published by the Okinawa Prefecture Government

\*1 Prefectural Aggregate Income for FY2015 and FY2016 are estimates.

\*2 The figures of 1972 are based on the calendar year.



# Q1. Topics of Okinawa's Economy

## 4 Okinawa International Logistics Hub

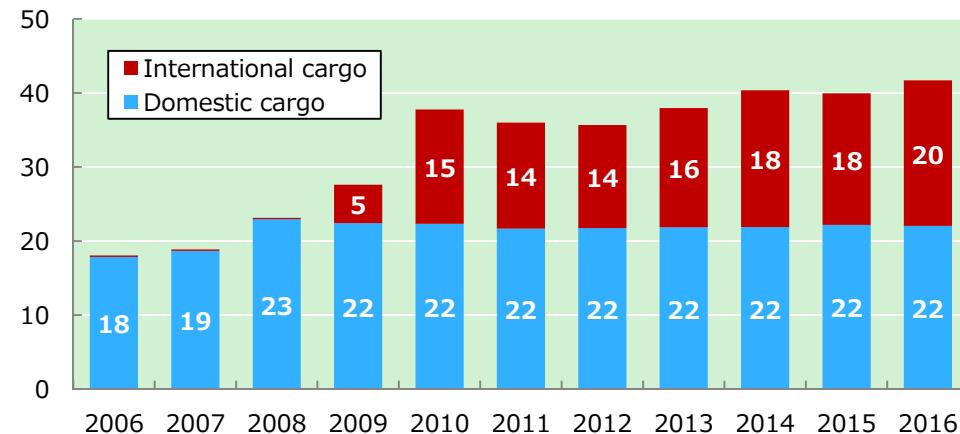
- Okinawa Prefecture is promoting the establishment of an international logistics hub through accumulating the industries at the areas peripheral to airport and harbor where new business is to be developed through utilizing Okinawa international logistics hub. In addition, Okinawa Prefecture is working hard to attract logistics companies from home and abroad.



Source: A pamphlet titled "Okinawa International Logistics Hub" (prepared by the International Logistics Promotion Division, Department of Commerce, Industry and Labor and available on the website of the Okinawa Prefecture)

- Okinawa Prefecture is located in the center of the huge market of two billion people.
- Travel time required between Okinawa Prefecture and major cities in Japan and Asia is about four hours.
- Utilizing late-night cargo flights through 24-hour operation system at Naha Airport.
- Quick transportation through 24-hour customs clearance system.

(10 thousand tons) Cargo handling volume in Naha Airport



\* From October 2009, the cargo hub project was launched by ANA.

Source: Land, Infrastructure and Transportation Ministry



# Q1. Topics of Okinawa's Economy

## 5 Stages for Establishing Okinawa Prefecture's International Logistics Hub

### Stage1

- (1) ANA International Cargo Hub (started in October 2009)
- (2) Special International Logistics Zone  
(Zone for concentration of International Logistics Industry, founded in April 2012)
- (3) Building the Infrastructure for Inbound Businesses  
(i.e. Logistics Center, etc.)
- (4) Expanding Exports of Local Okinawan Products.

### Stage2

- (1) Increasing Aerial and Maritime Routes
  - (2) Expansion the Special International Logistics Zone
  - (3) Progressing as a Hub for Exporting Domestic Specialty Goods
  - (4) Logistics Hub for Forwarders (Freight forwarding business).
  - (5) Warehouse for E-commerce and Online Shopping
  - (6) Center for Emergency Replacement Parts
- [The initiatives Okinawa Prefecture is currently addressing]

### Stage3

- (1) Become a Hub for Distribution, Storage, Exhibitions, and Third-party logistics.
- (2) Become a Logistics Hub for International Manufacturers
- (3) Add a second Runway to Naha Airport [the end of March 2020].
- (4) Strengthen Networks by Welcoming Aerial and Maritime Businesses



- Linkage between Naha Airport and Naha Port (Sea & Air)  
Developing the transport of "Sea & Air" through creating a linkage between maritime transport and air transport whose logistics bases are closely located.  
Aiming to accumulate the industries at the areas peripheral to airport and harbor through the logistics environment.
- Okinawa aims to create clusters of aircraft maintenance-related businesses making use of its geographical advantage of being close to other Asian countries.  
MRO Japan Co., Ltd. plans to start business after completion of an aircraft maintenance facility, scheduled for 2018.



# Q2. What is the Current State of U.S. Military Bases?

## Outline of the U.S. military Forces in Okinawa

No. of Facilities	32
Area	229,880km <sup>2</sup>

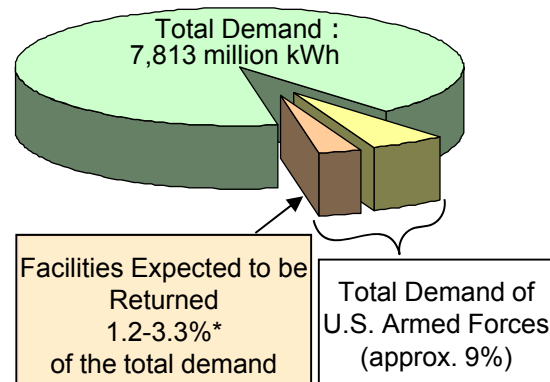
<Reference>

No. of employees working for the U.S. Armed Forces in Okinawa: 8,857

\*As of the end of March 2016.

Sources : Japan Ministry of Defense "US Forces and SDF Bases in Okinawa March 2017", Military Base Affairs Division, Executive Office of the Governor, Okinawa Prefecture

## The U.S. Armed Forces' share of total electricity demand



\* Range in figures due to planned return of facilities includes partial return.

## Principal electricity supply destination facilities \*1

Name	Location *2	Area
Camp Gonsalves [ US Marine Corps ]	Kunigamison, Higashison	78,242km <sup>2</sup>
Okuma Rest Center [ US Air Forces ]	Kunigamison	546km <sup>2</sup>
Iejima Auxiliary Air Base [ US Marine Corps ]	Ieson	8,015km <sup>2</sup>
Yaedake Communication Site [ US Air Forces ]	Motobucho, Nago-shi	37km <sup>2</sup>
Camp Schwab [ US Marine Corps ]	Nago-shi, Ginozason	20,626km <sup>2</sup>
Camp Hansen [ US Marine Corps ]	Nago-shi, Ginozason, Onnason, Kincho	49,785km <sup>2</sup>
Kadena Ammunitions Storage Area [ shared use ]	Onnason, Uruma-shi, Okinawa-shi, Kadenacho, Yomitanson	26,585km <sup>2</sup>
Camp Courtney [ US Marine Corps ]	Uruma-shi	1,339km <sup>2</sup>
Camp Mc Tureous [ US Marine Corps ]	Uruma-shi	379km <sup>2</sup>
Camp Shields [ shared use ]	Okinawa-shi	700km <sup>2</sup>
Torii Station [ US Army ]	Yomitanson	1,895km <sup>2</sup>
Kadena Airbase [ shared use ]	Okinawa-shi, Kadenacho, Chatancho, Naha-shi	19,855km <sup>2</sup>
White Beach Naval Facility [ shared use ]	Uruma-shi	1,568km <sup>2</sup>
Camp Kuwae [ shared use ]	Chatancho	675km <sup>2</sup>
Camp Zukeran [ shared use ]	Uruma-shi, Okinawa-shi, Kitanakagusukuson, Chatancho, Ginowan-shi	5,450km <sup>2</sup>
Futenma Airport [ US Marine Corps ]	Ginowan-shi	4,806km <sup>2</sup>
Makiminato Service Areas [ US Marine Corps ]	Urasoe-shi	2,727km <sup>2</sup>
Naha port facilities [ shared use ]	Naha-shi	559km <sup>2</sup>

\*1 Professional use and large-demand customers

\*2 Areas where facilities exist on a cross-area basis

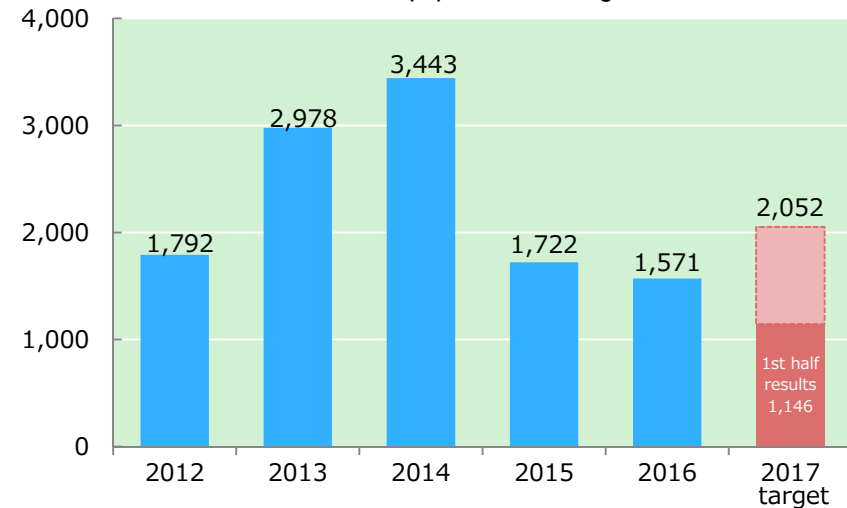
\*3 Facilities south of Kadenacho are scheduled to be returned (Partial return applies to Camp Zukeran )



# Q3. What is the Current State of Promotion of Electrification?

- Approach for sales promotion in the corporate sector
  - (1) Offering customers comprehensive proposals for electrification (air-conditioning systems, kitchens, and water heaters) appropriate for their power usage.
  - (2) Promotion of highly efficient heat-pump appliances (i.e. air-conditioning systems and water heaters)
  - (3) Strengthening of cooperation with sub-users including manufacturers, contractors, design offices, etc.
  - (4) Utilization of public subsidy system, etc.

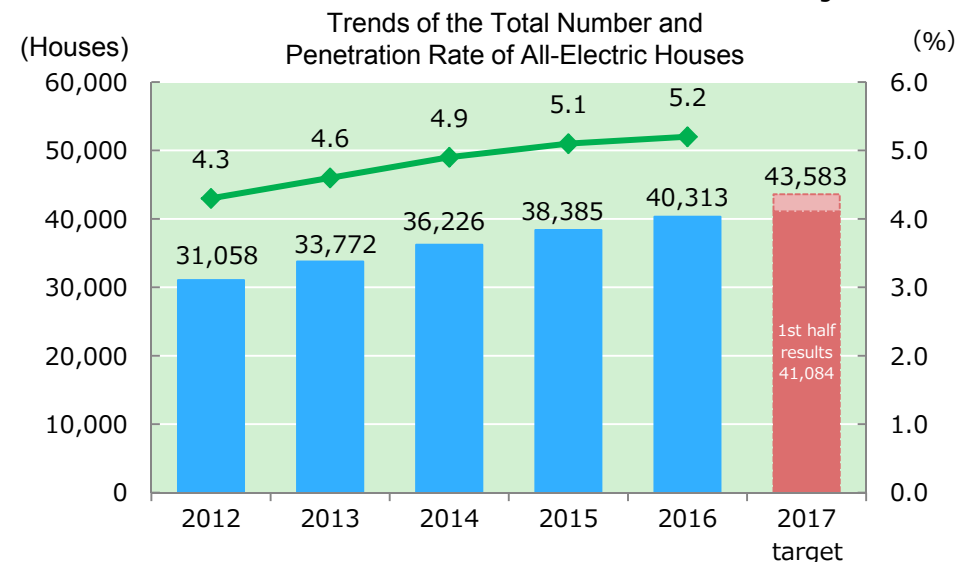
(10Thousands of kWh) Results of demand for commercial electrification equipment and target



- Approach for the promotion and growth in the household sector
  - (1) Launching effective promotion activities to seek safety, comfortability, cleanness and economic efficiency of all electrification housing brand.
  - (2) Strengthening cooperation with sub-users

◇ The ratio of all-electric houses to newly built houses in the first half of FY2017

Stand-alone houses: 39.7%  
Complex: 1.1%



# Q4. Introduction of new electricity rate menus

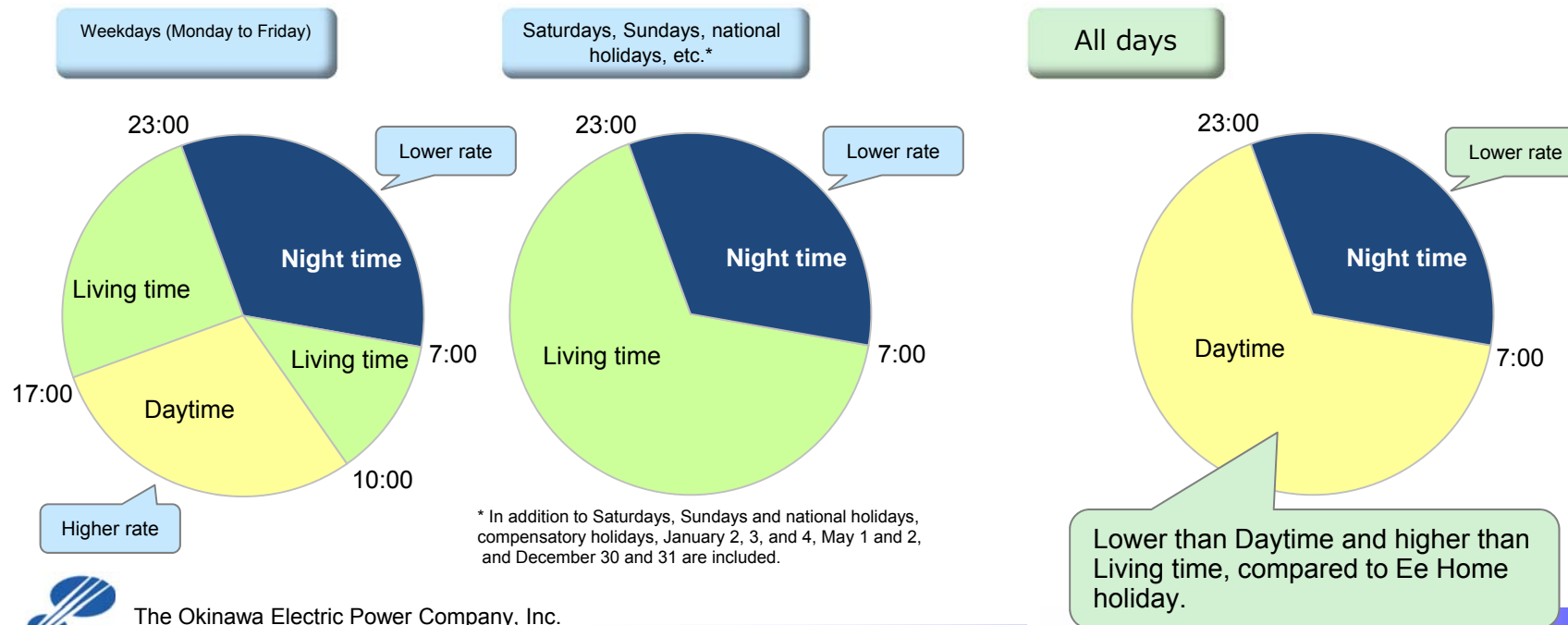
- The electricity rate menu for all electrification “Ee Life” will be renewed to introduce two electricity rates for households. Introduction date: April 1, 2017
- OEPC will make continued efforts to offer attractive electricity rate menus that can meet customer needs.

## Ee Home Holiday

A rate menu recommended to customers, such as double-income households, who use less electricity on week days.

## Ee Home Flat

A rate menu recommended to customers, such as households with full-time housewives and with senior citizens alone, who use more electricity during the daytime on week days.





# Q5. What are the efforts to fuel cost reduction?(1/2)

## ■ Efforts toward stable procurement of fuels and reduction of fuel costs.

Efficient operation of coal-fired plants by reducing consumption of fuel oil and LNG

Making Ishikawa Thermal Power Plant the base of distributing fuel oil to remote islands

Reduction of fuel costs through measures including purchasing fuel oil on the spot market and holding competitive bidding

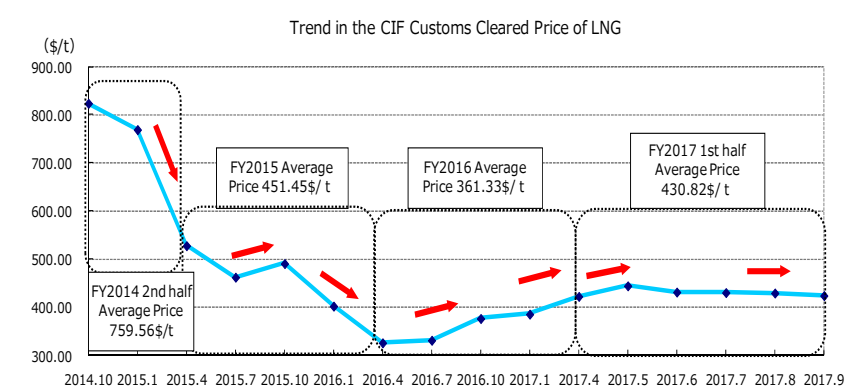
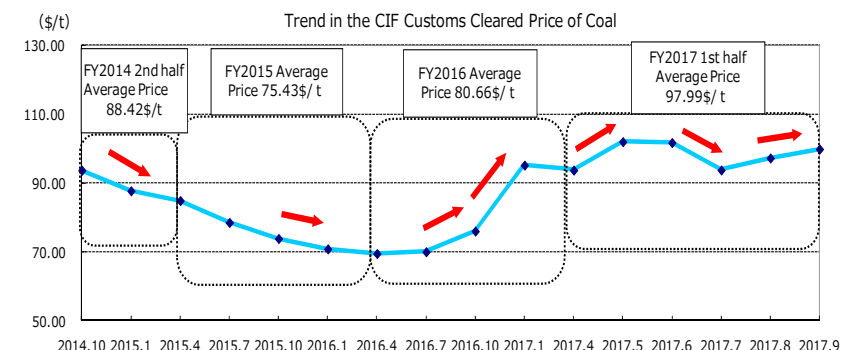
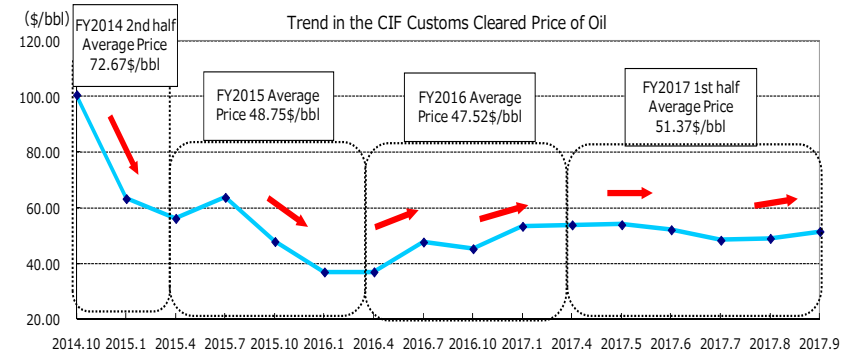
Stable procurement through long-term coal purchase contracts

Efficient use of the “Shinryo-maru” and COA (contract of affreightment)

Continued use of sub-bituminous coals that are low in not only prices but also transport costs

Stable procurement through long-term LNG purchase contracts

**Achieving stable fuel supply and pursuing cost reductions**

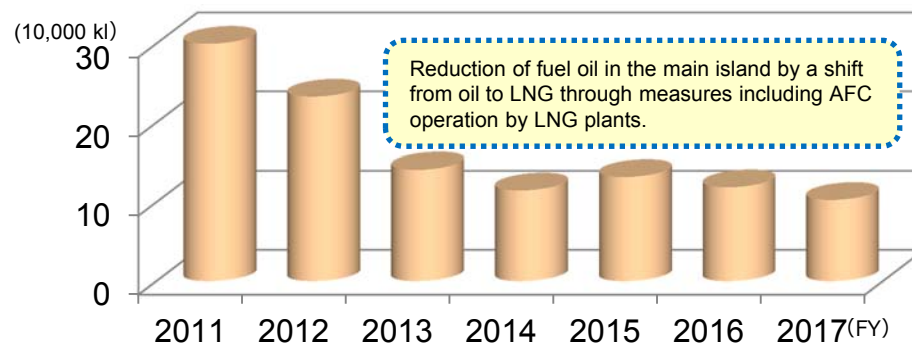


# Q5. What are the efforts to fuel cost reduction?(2/2)

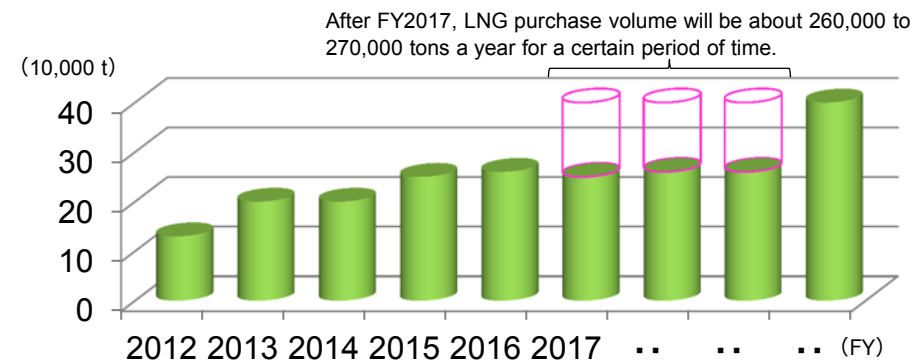
## ■ Efficient operation of coal-fired plants by reducing consumption of fuel oil and LNG

- Reduction of oil consumption by shifting AFC\* that oil-fired plants took charge of to LNG-fired plants. \* AFC=Automatic Frequency Control
- A shift to coal-fired plants that have much lower power unit costs by reducing the volume of LNG.

**Trend in Fuel Oil Consumption by Main Island**

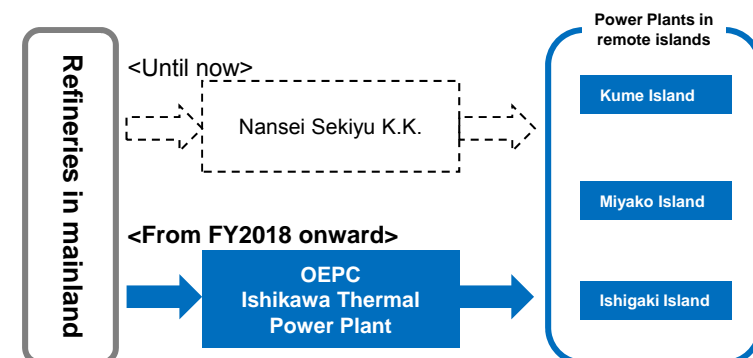


**Trend in LNG Purchase Volumes**



## ■ Plan for Making Ishikawa Thermal Power Plant the base to distribute fuel oil to remote islands

- The terminal cost was considerably increased accompanying Nansei Sekiyu K.K. converting to the terminal business.
  - The heating cost of fuel oil rose by the withdrawal from the petroleum refining business.
- Cost reduction by making Ishikawa Thermal Power Plant the base of distributing fuel oil to remote islands
  - Utilization of fuel oil tanks
  - Reduction of heating costs by using auxiliary steam



## Q6. What are the efforts to reduce CO<sub>2</sub> emissions?

- Introducing hydro or nuclear power is difficult in Okinawa Prefecture due to reasons including the region's geological and geographic characteristics and constraints on the scale of demand ⇒ Dependency on fossil fuels (oil, coal, etc.)
- OEPC belongs to the Electricity Business Council for a Low-Carbon Society and commits itself to CO<sub>2</sub> emissions reductions to meet the targets of the Action Plan of the Society.

### [Company Efforts]

Stable operation of Yoshinoura Thermal Power Plants, which are fueled by LNG with low CO<sub>2</sub> emissions

Use of renewable energy harnessing solar power, wind power and small hydro power generation

Application of mixed combustion of woody biomass fuel to Gushikawa (coal-fired) Thermal Power Plant

Implementation of operation tests toward stable operation of solar and wind power generation

Maintenance of heat efficiency of thermal power plants

Provision of energy-saving and CO<sub>2</sub> saving services (introduction of eco-friendly household bookkeeping and proposal of EcoCute and other electric appliances)

Collection of information about carbon capture and storage (CCS) technologies

### (References)

Actual CO<sub>2</sub> emission coefficient

FY2015 : 0.802kg-CO<sub>2</sub>/kWh

FY2016 : 0.799kg-CO<sub>2</sub>/kWh \*

(\*provisional figures : retail electricity suppliers(remote islands is excluded))

\*The Japanese Government aims to realize energy mix by taking advantage of sophisticated methods of energy supply structures (procurement of electricity sources by retail electricity suppliers) and energy-saving methods (improvement of efficiency of thermal power generation).



## Q7. What are the CO<sub>2</sub> Emission Volumes by Fuel Type?

- LNG (Liquefied Natural Gas) produces less carbon dioxide, a major cause of global warming, than coal or oil.

Chart: Comparison of CO<sub>2</sub> Emission Volumes by Fuel Type

Fuel Type	*1 CO <sub>2</sub> Emission Volume Per Unit Heat Value [g-CO <sub>2</sub> /MJ]			*2 CO <sub>2</sub> Emission Volume Per kWh [kg-CO <sub>2</sub> /kWh]		
	vs. Coal	vs. Oil		vs. Coal	vs. Oil	
Coal	90.6	1.00	1.27	0.85	1.00	1.08
Oil <sup>*3</sup>	71.5	0.79	1.00	0.79	0.93	1.00
LNG	49.5	0.55	0.69	0.38	0.45	0.48

\*1 The values of the Enforcement Order of the Act on Promotion of Global Warming Countermeasures. (Convert the CO<sub>2</sub> emission factors Kg-C/MJ to g-CO<sub>2</sub>/MJ)

\*2 Calculated using actual value of OEPC's Thermal Efficiency at Generation End at FY2016.

\*3 Oil comparisons were based on type C heavy oil.



## Q8.The Fuel Cost Adjustment System(1/2)

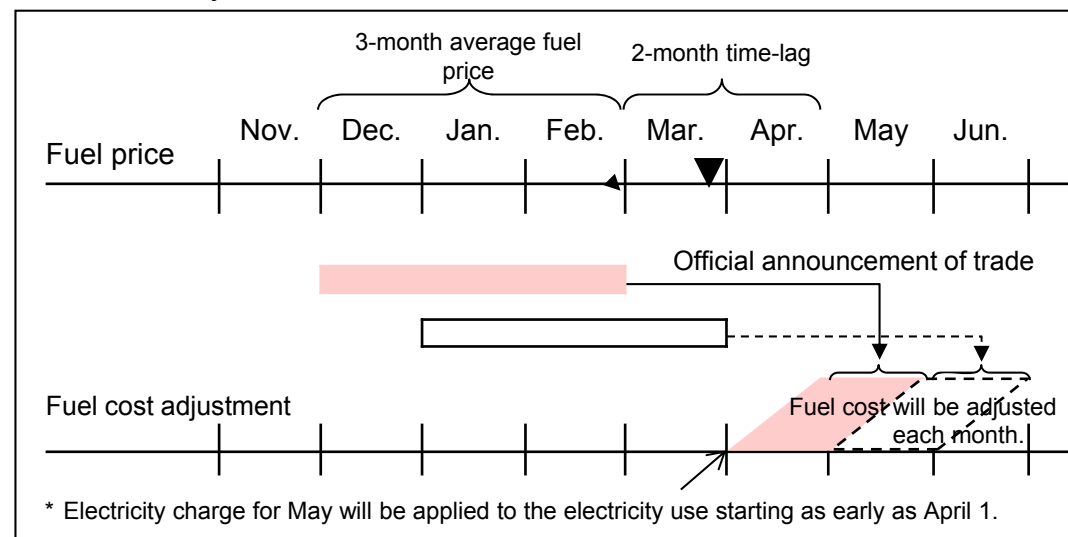
- The fuel cost adjustment system was introduced for the purpose of clarifying the “internal factors” such as the results of efforts to promote management efficiency at electric power companies and reflecting “external factors” onto electricity rates such as exchange rates and oil and coal and LNG prices that alter the economic situation.

[ Range of fuel cost adjustment ]

- We will calculate the average fuel price based on the prices of crude oil, coal and LNG on the trade statistics during the period between five months and three months prior to the fuel cost adjustment, and electricity charge will be automatically adjusted each month by comparing the above price with the standard fuel price at the time of electricity rate revision.
- The maximum level of fuel cost adjustment will be 50%.
- There will be no lower adjustment limit.

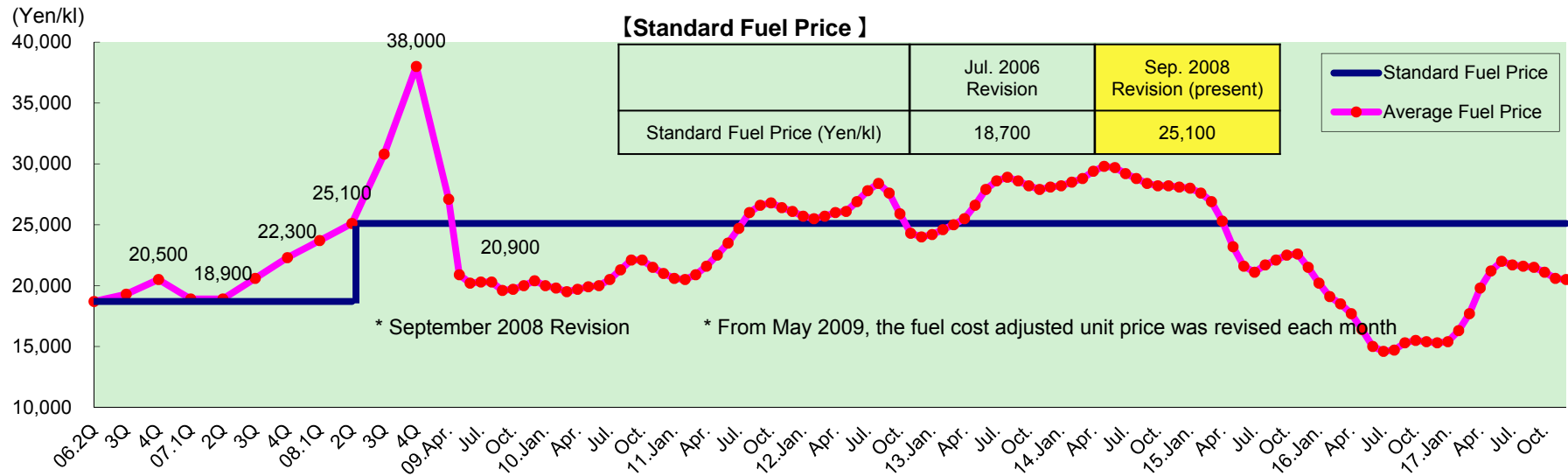
[ Conceptual drawing of the fuel cost adjustment system ]

E.g. The average fuel price during the period between December and February of the following year will be applied to fuel cost adjustment for the electricity charge for May in the following year.  
The average fuel price during the period between January and March will be applied to fuel cost adjustment for the electricity charge for June in the same year.



# Q8.The Fuel Cost Adjustment System(2/2)

[ Trend of Average Fuel Price and Standard Fuel Price (Since July 2006) ]



(Period for estimating a fuel price range) FY2017

Fuel cost adjusted unit price	Applicable period	2017.Apr.	2017.May.	2017.Jun.	2017.Jul.	2017.Aug.	2017.Sep.	2017.Oct.	2017.Nov.	2017.Dec.	2018.Jan.	2018.Feb.	2018.Mar.
	Calculation period	2016.Nov.	2016.Dec.	2017.Jan.	2017.Feb.	2017.Mar.	2017.Apr.	2017.May.	2017.Jun.	2017.Jul.	2017.Aug.	2017.Sep.	2017.Oct.
		-	-	-	-	-	-	-	-	-	-	-	-
Average Fuel Price (yen/kl)		19,800 (17,700)	21,200 (16,400)	22,000 (15,000)	21,700 (14,600)	21,600 (14,700)	21,500 (15,300)	21,100 (15,500)	20,600 (15,400)	20,500 (15,300)	Undecided (15,400)	Undecided (16,300)	Undecided (17,700)
Average Crude Oil Price (yen/kl)		34,876 (32,480)	37,112 (27,994)	39,557 (24,242)	39,127 (23,549)	38,598 (25,287)	37,317 (28,267)	36,032 (29,879)	34,803 (30,425)	34,571 (29,881)	Undecided (29,275)	Undecided (30,282)	Undecided (31,767)
Average Coal Price (yen/t)		10,092 (8,748)	10,821 (8,527)	11,059 (8,135)	10,851 (7,888)	10,936 (7,626)	11,078 (7,525)	11,035 (7,326)	10,865 (7,191)	10,747 (7,205)	Undecided (7,385)	Undecided (7,988)	Undecided (8,917)

Figures in parenthesis represent the figures from the same period of the previous year

[Method of calculating Average Fuel Price] Average Fuel Price = A × α + B × β

A: Average crude oil price per kiloliter in each quarter B: Average coal price per ton in each quarter

\* α and β are coefficients in Provisions of supply to calculate the average fuel price. (Reference α: 0.2410, β: 1.1282 Provisions of supply Sept. 2008 effective)



## Q9. How do Current Electricity Rates Compare to Rates of Other Companies?

While the detailed comparison of electricity rates is not available due to limited amount of disclosed data, the information publicly available on each company's website for comparison purposes is as follows.

\* It is based on information as of October 31, 2017.

### Model Unit Rates for All Companies (As of December 2017)

(Including fuel cost adjustments, equivalents of consumption taxes, Renewable Energy Power Promotion Surcharges)

(Unit: yen/kWh)

	OEPC	Co. A	Co. B	Co. C	Co. D	Co. E	Co. F	Co. G	Co. H	Co. I
Metered Residential Model Basic Unit 260	27.32 ⑨	30.96 ⑩	26.75 ⑧	25.58 ⑤	24.69 ③	24.49 ②	25.85 ⑦	25.52 ④	25.72 ⑥	24.47 ①

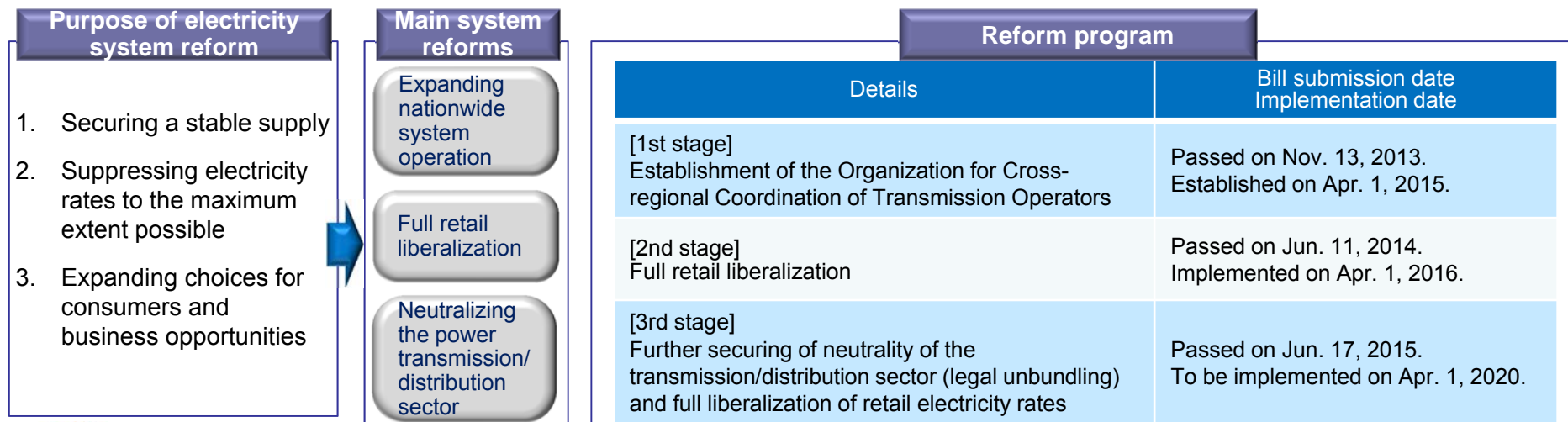
Note: Circled numbers indicate price level rankings (larger numbers indicate more expensive rates).

The simulated calculation was made by the Company after unifying basic units published by individual companies into 260kWh.



# Q10. Electricity System Reform

- In April 2013, the Cabinet decided to approve the Policy on Electricity System Reform that set the direction for the full retail liberalization and the unbundling the transmission / distribution sector.
- Based on this policy, the Cabinet decided to approve the Bill for the Act for Partial Revision of the Electricity Business Act in November 2013. The Policy also mentions that the reform focusing on these three pillars will be implemented by dividing it into three phases, while thoroughly studying the challenges to be overcome at each phase and taking necessary measures based on the results of the study, so as to advance the reform effectively. This act also sets forth that “measures based on the special nature of the electric power business in the Okinawa region” will be implemented for Okinawa.
- The full retail liberalization is scheduled to be implemented in all of Japan including Okinawa Prefecture in accordance with the “Act for Partial Revision of the Electricity Business Act, etc.” (enacted in June 2014) which related to the second stage of the Electricity System Reform.
- The OEPC started to release power of 10,000kW supplied from Ishikawa Coal-Fired Thermal Power Plant of J-Power in April 2016 for the purpose of cooperating establishment of a competitive environment in Okinawa area. In addition, the OEPC is working to commence supplying “wholesale electric power menu for demand-supply adjustment” in April 2018 as a further voluntary efforts aiming for revitalizing wholesale electric power market.
- The OEPC is exempt from the treatment of the legal unbundling which aims at further securing of neutrality of the transmission/ distribution sector. Specifically, if the OEPC is approved as the “Approved general power transmission and distribution operator” which can operate power retail business and power generation business in accordance with the “Act for Partial Revision of the Electricity Business Act, etc.” which passed through the House of Councillors and was enacted as of June 17, 2015, we can continue maintaining the integrated system for power transmission and distribution.





# Q11. What are the Special Tax Measures?

- Special treatment is necessary for industrial development and improving the living standards of people in Okinawa Prefecture given that there has been no changes to the conditions of remote islands such as bearing of deficit arising from structural disadvantage.
- The amount of reduction based on the special measures is reflected in electricity charge.

## Currently Applied Special Tax Measures

	Preferential Measure for Standard Taxable Values Relating to Fixed Property Tax	Exemption from the Oil and Coal Tax Relating to Specific Coal, etc. (Coal and LNG) Used for Power Generation in Okinawa
Details	Alleviation to 2/3 of Standard Taxable Values	(1) Exemption from the Oil and Coal Tax for coal (2) Exemption from the Oil and Coal Tax for LNG
Period	April 1, 1982 - March 31, 2020 * Extended for 5 years from April 1, 2015	(1) October 1, 2003 – March 31, 2020 * Extended for 5 years from April 1, 2015 (2) April 1, 2012 – March 31, 2020 * Extended for 5 years from April 1, 2015
Basic Law	Supplementary Provisions of the Local Tax Law (Article 15.5)	Special Measures Law for the Promotion of Okinawa (Article 65.2) Special Taxation Measures Law (Article 90.4.3.1)

## Revision of the Act on the Special Measures for the Promotion and Development of Okinawa

- The Act on the Special Measures for the Promotion and Development of Okinawa was revised in March 2012, and the revised law came into effect on April 1, 2012.
- Under the revised law, etc., OEPC receives favorable treatment based on “Preferential Measure for Standard Taxable Values Relating to Fixed Property Tax” and “Exemption from the Oil and Coal Tax Relating to Specific Coal, etc. (Coal and LNG) Used for Power Generation in Okinawa”.

## Value of Tax Alleviation Due to the Special Measures

- The value of the alleviation measures in FY2016 : about 3.9 billion yen.
- The value of the alleviation measures for FY2017 : expected to be 3.7 billion yen.



# Q12. Response to the Corporate Governance Code

## 1. Action to comply with all the principles of Japan’s Corporate Governance Code

- Basic Policy on Corporate Governance, consisting of the following five items, has been established.
  - (1) Securing the rights and equal treatment of shareholders
  - (2) Appropriate cooperation with stakeholders
  - (3) Ensuring appropriate information disclosure and transparency
  - (4) Responsibilities of the board
  - (5) Dialogue with shareholders, etc.
- The Company has complied with all principles of the Corporate Governance Code.

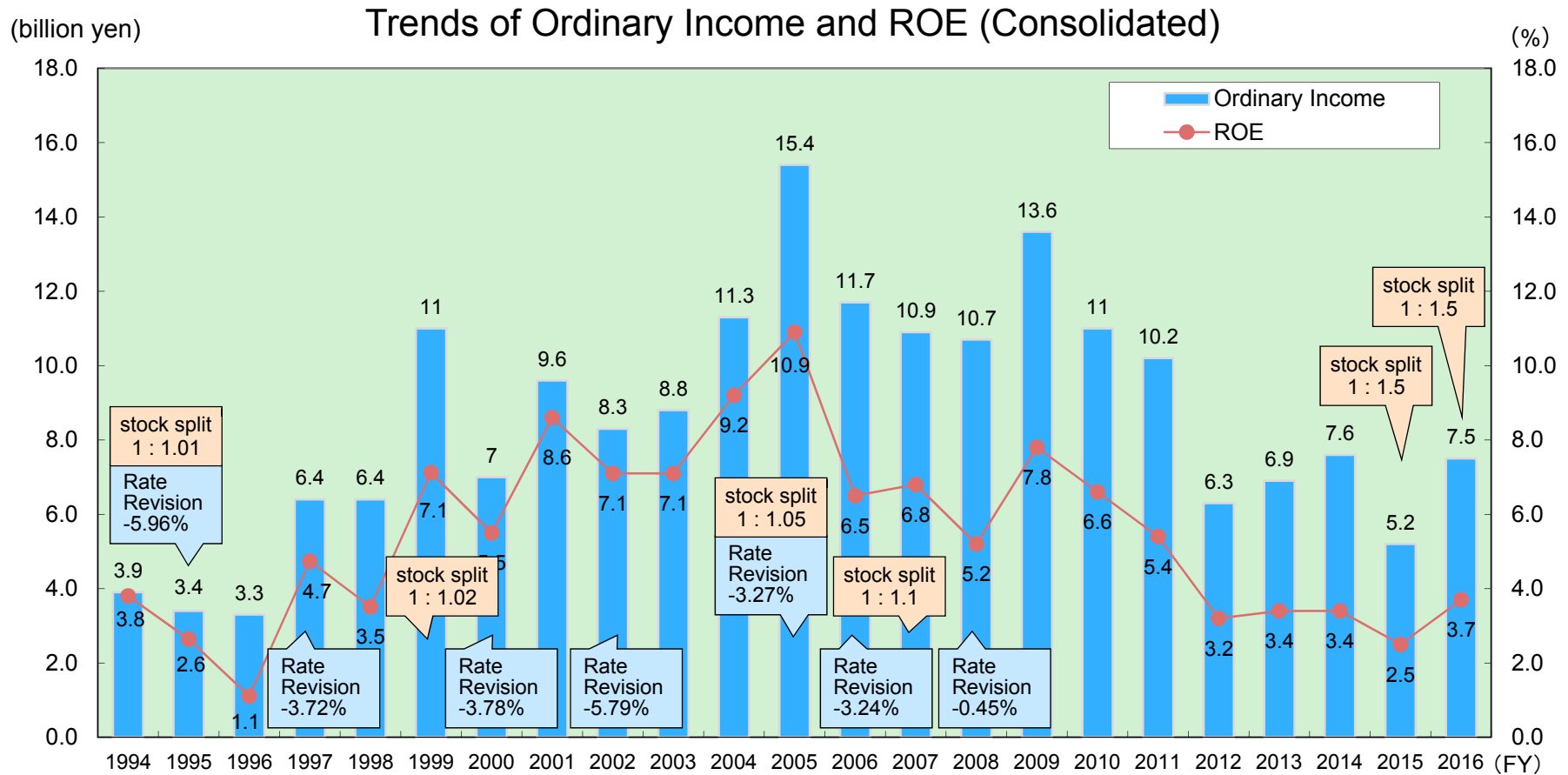
## 2. Overview of “Analysis and Evaluation of Effectiveness of the Entire Board of Directors”

- Questionnaires has been conducted with directors and auditors, and the analysis and assessment of the outcome has been reported at a board of directors meeting, ending up confirming the effectiveness.

Item	Outline of Assessment Results
(1) Composition of Board of Directors	<ul style="list-style-type: none"> <li>➢ Efforts are made to elect qualified outside directors.</li> <li>➢ The composition of the Board is well balanced to make constructive discussions.</li> </ul>
(2) Efforts to revitalize Board of Directors	<ul style="list-style-type: none"> <li>➢ Materials are distributed in advance, and explanations are made beforehand as necessary.</li> <li>➢ Ample time is set aside for deliberations, and lively discussions take place.</li> </ul>
(3) Training of directors and auditors	<ul style="list-style-type: none"> <li>➢ Efforts are made to provide sufficient opportunities for training.</li> </ul>
(4) Efforts toward business plans, etc.	<ul style="list-style-type: none"> <li>➢ Constructive discussions are held about management policies, plans and others.</li> <li>➢ Efforts and achievement levels are sufficiently analyzed toward realizing medium- and long-term management plans.</li> </ul>
(5) Information sharing with outside directors	<ul style="list-style-type: none"> <li>➢ A series of meetings are set up, and efforts are made to strengthen information sharing.</li> </ul>



# Reference 1: Trends of Ordinary Income and ROE



Gushikawa Thermal Power Plant Start of operations  
Generator No.1: FY 1993  
Generator No.2: FY 1994

Effects due to cost processing at the time of accounting standard changes in association with the introduction of retirement benefit accounting. (FY 2000)

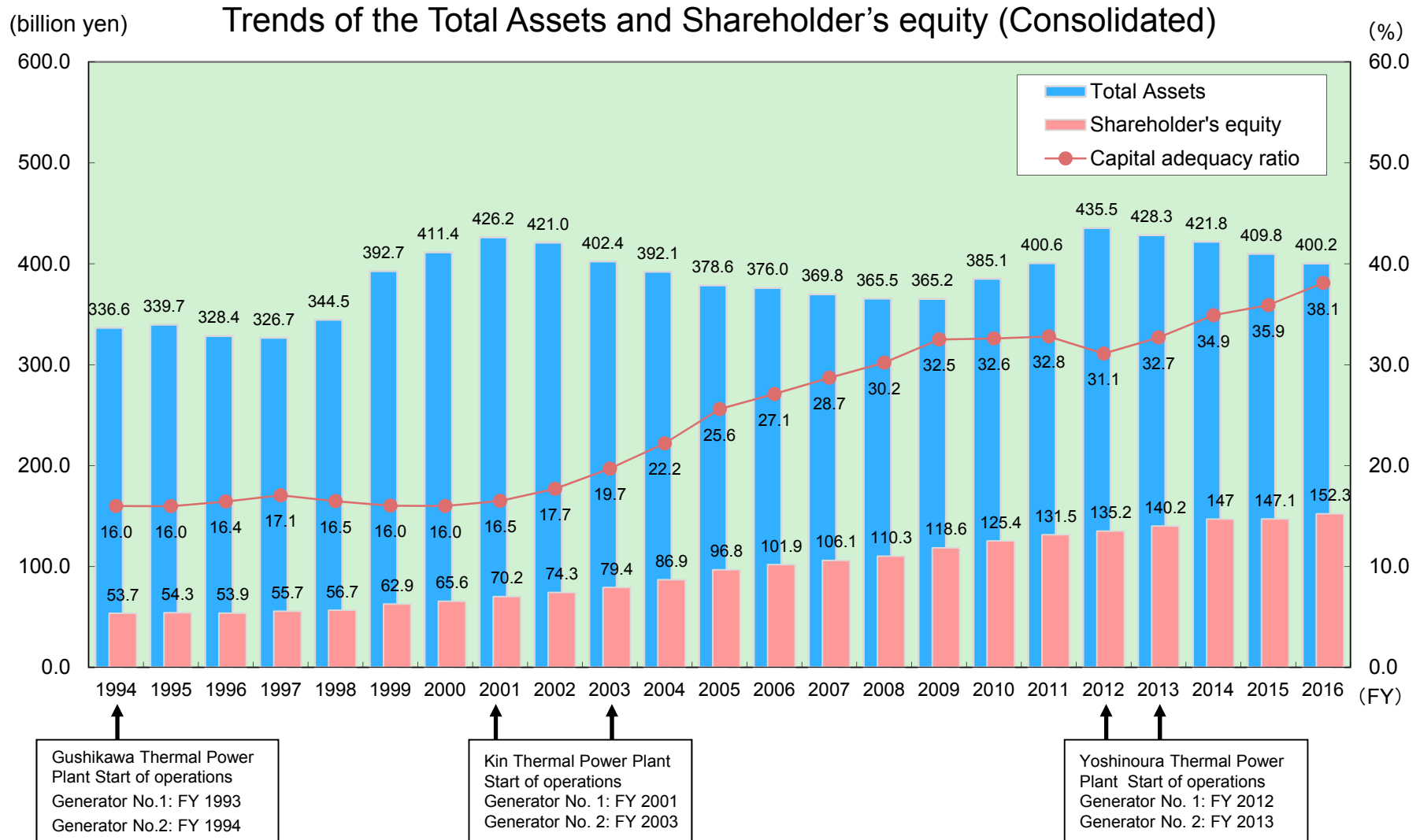
Kin Thermal Power Plant Start of operations  
Generator No. 1: FY 2001  
Generator No. 2: FY 2003

Reduction in retirement benefit costs due to revision of the retirement benefit system. (FY 2005)

Yoshinoura Thermal Power Plant Start of operations  
Generator No. 1: FY 2012  
Generator No. 2: FY 2013

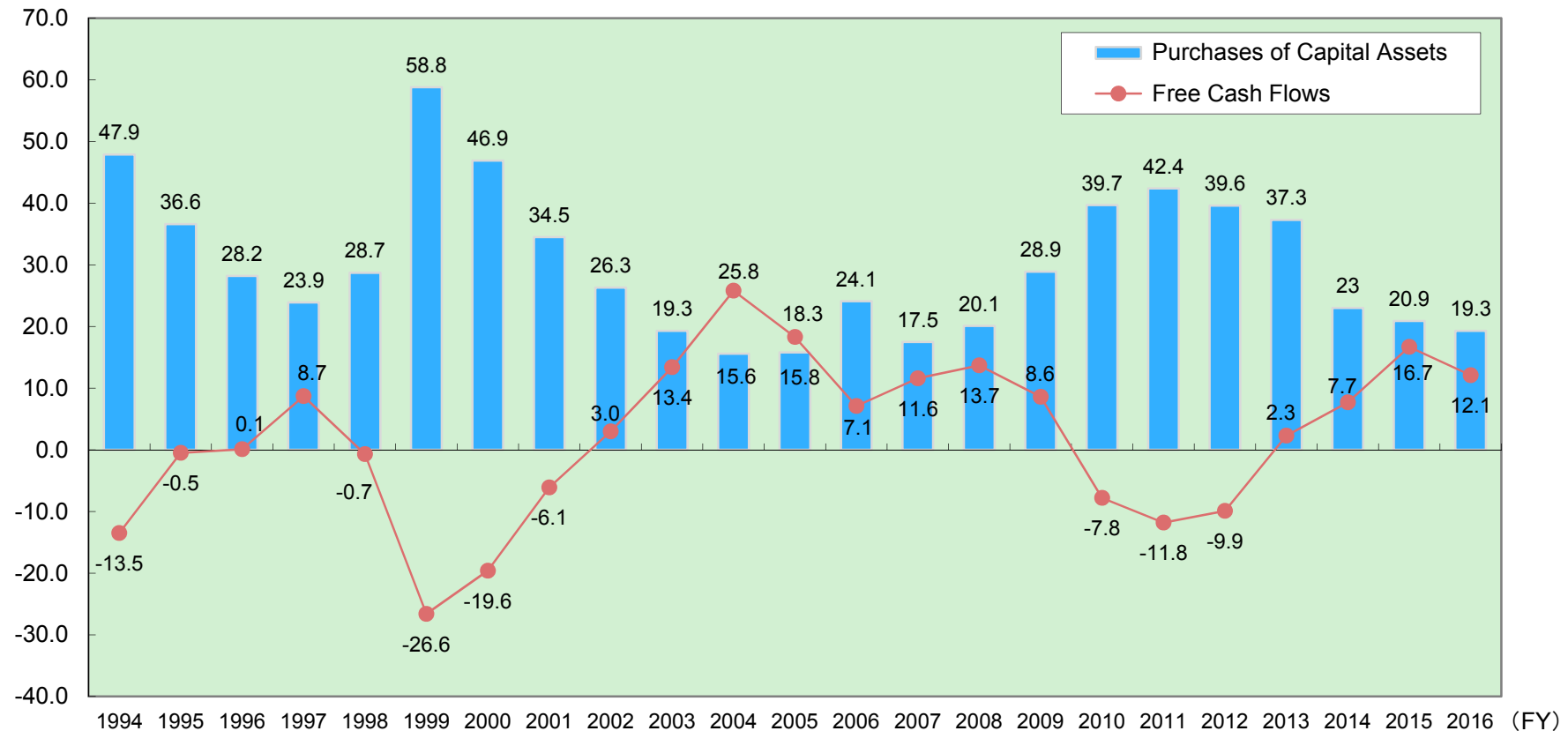


# Reference 2: Trends of the Total Assets and Shareholder's equity



# Reference 3: Trends of the Capital Expenditure and Free Cash Flows

(billion yen) Trends of the Capital Expenditure and Free Cash Flows (Consolidated)



↑  
Gushikawa Thermal Power Plant Start of operations  
Generator No.1: FY 1993  
Generator No.2: FY 1994

↑ ↑  
Kin Thermal Power Plant Start of operations  
Generator No. 1: FY 2001  
Generator No. 2: FY 2003

↑ ↑  
Yoshinoura Thermal Power Plant Start of operations  
Generator No. 1: FY 2012  
Generator No. 2: FY 2013



\* Based on "Income and Expenditure Statement (Non-consolidated)" on and before 1998, and "Statement of Cash Flow Consolidated)" on and after 1999, respectively.

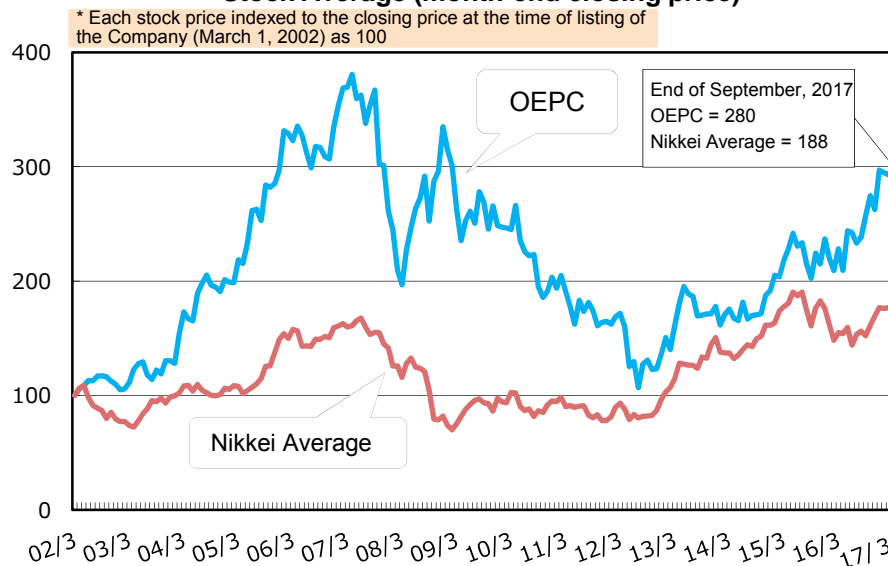
# Reference 4: Change in Okinawa Electric Power's Stock Price

Recent stock price changes: from January 4, 2017 to September 29, 2017

	Okinawa Electric Power Company, Inc.	Nikkei Average
Stock price as of January 4, 2017 (closing price)	2,437 yen	19,594 yen
All-time high (closing price)	2,764 yen (+13.4%) as of May. 25, 2017	20,398 yen (+ 4.1%) as of Sep. 25, 2017
All-time low (closing price)	2,242 yen (-8.0%) as of Apr. 14, 2017	18,336 yen (-6.4%) as of Apr. 14, 2017
Stock price as of September 29, 2017 (closing price)	2,474 yen (+1.5%)	20,356 yen (+3.9%)

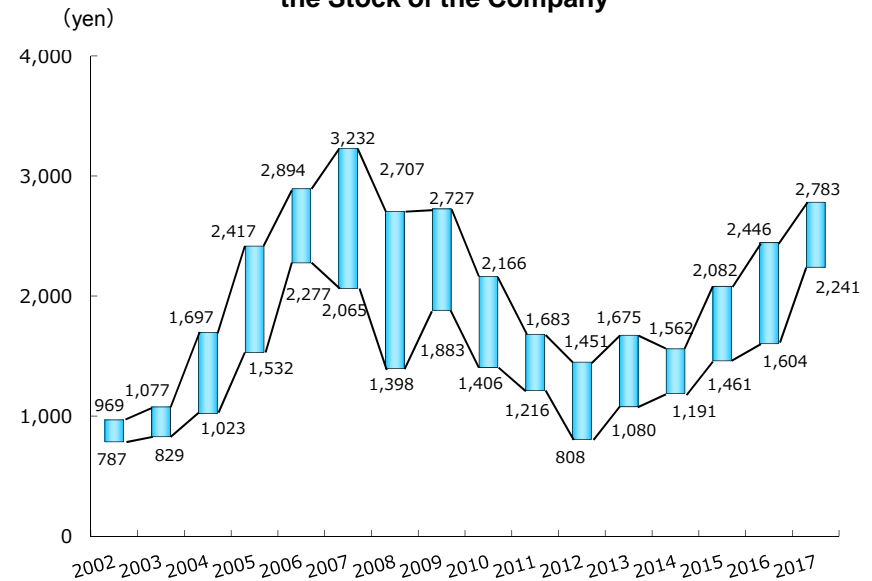
(Note) The Company implemented a stock split of 1 to 1.1 effective June 1, 2017 and its stock price prior to May 31 has been adjusted accordingly. Figures in bracket indicate percentage change in the stock price from its closing price on January 4, 2017.

**Changes in the Stock Price of the Company and the Nikkei Stock Average (month-end closing price)**



(Note) The stock split was implemented five times in the indicated period (Record date :End of March 2005, End of March 2007, End of May 2015 ,End of May 2016 and End of May 2017), and adjustment has been made for the figures before the end of May 2017.

**Changes in the Highest and Lowest Prices of the Stock of the Company**



# Reference 5: Earnings Per Share and Payout Ratio

## Earnings per Share and Payout Ratio

FY		2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
Net income <sup>*1</sup>	Million yen	7,072	5,604	8,950	8,047	6,956	4,318	4,731	4,943	3,647	5,517
Earnings per Share <sup>*1</sup> (Post-adjustment after stock split) <sup>*2</sup>	yen	404.36 (163.38)	320.54 (129.51)	512.04 (206.88)	460.58 (186.09)	398.15 (160.87)	247.20 (99.88)	270.80 (109.41)	282.99 (114.34)	139.22 (84.38)	140.41 (127.65)
Dividend per Share (Post-adjustment after stock split) <sup>*2</sup>	yen	60 (27)	60 (27)	60 (27)	60 (27)	60 (27)	60 (27)	60 (27)	60 (27)	60 (40)	60 (55)
Payout Ratio <sup>*1</sup>	%	14.8	18.7	11.7	13.0	15.1	24.3	22.2	21.2	43.1	42.7
Dividend Yield	%	1.53	1.15	1.23	1.58	1.75	1.87	1.72	1.38	1.98	2.27
Price Book-value Ratio <sup>*1</sup>	x	0.65	0.83	0.72	0.53	0.45	0.41	0.44	0.52	0.54	0.68
Price Earning Ratio <sup>*1</sup>	x	9.7	16.3	9.5	8.3	8.6	13.0	12.9	15.4	21.8	18.8

\*1 Net Income, EPS, Payout Ratio, PBR, PER are on a consolidated basis

\*2 Shown in the brackets are numbers adjusted for the effects of past stock splits including the one conducted on June 1, 2017.

### History of Stock Splits (including planned one)

Date	Issued number of shares of common stock	
Feb. 10, 1992	14,728,132	Listed
Nov. 20, 1995	14,875,413	Split 1:1.01
May. 25, 1999	15,172,921	Split 1:1.02
May. 20, 2005	15,931,567	Split 1:1.05

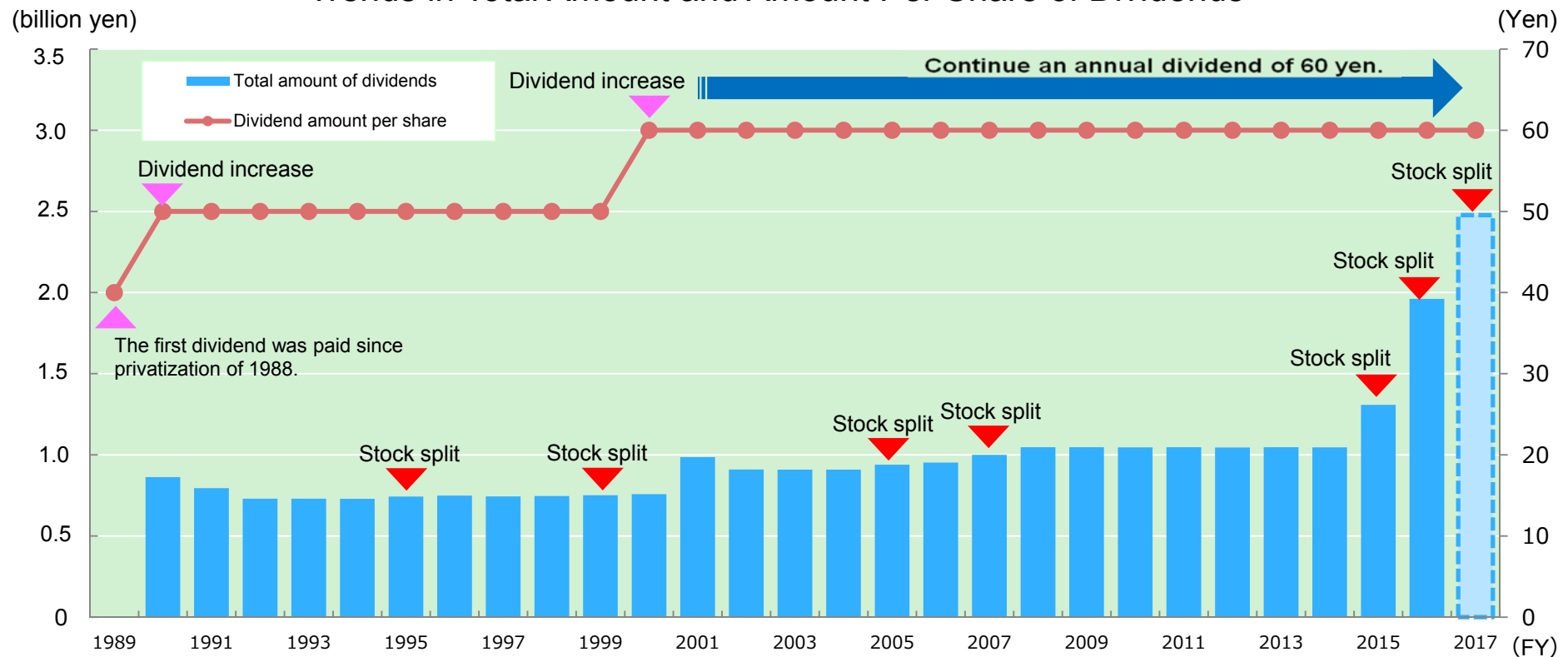
Date	Issued number of shares of common stock	
Apr. 1, 2007	17,524,723	Split 1:1.1
Jun.1, 2015	26,287,084	Split 1:1.5
Jun.1, 2016	39,430,626	Split 1:1.5
Jun.1, 2017	43,373,688	Split 1:1.1



# Reference 6: Policy for Returning Profits to Shareholders

- With the basic policy of “continuation of stable dividends,” OEPC has paid an annual dividend of 60 yen per share since 2000.
- In addition, since listing on the exchange, OEPC has conducted a total of seven stock splits (effective dividend increases).

Trends in Total Amount and Amount Per Share of Dividends



\* Total dividends are shown on an actual payment basis.





# Reference 7: Stock Split

- OEPC conducted stock splits in three years in a row with the aim of returning profits to the shareholders and improving the liquidity of the company's shares.
- To maintain an annual dividend of 60 yen per share, dividends have been increased.
- Raising dividend on equity (DOE) remains under consideration.

## 1. Method of stock split

A 1.10-for-1 stock split

## 2. Number of shares increasing as a result of the stock split

Total number of issued shares prior to the stock split :

39,430,626 shares

Number of shares increasing as a result of the stock split :

3,943,062 shares

Total number of issued shares after the stock split :

43,373,688 shares

Total number of authorized shares after the stock split :

74,250,000 shares

## 3. Stock Split Calendar

Record date: May 31, 2017

Effective date: June 1, 2017

## 4. Others

### (1) Amendment of Articles of Incorporation

Total number of authorized shares: 67,500,000 to 74,250,000 shares

### (2) Expected dividend for March 2018

End of 2nd quarter 30 yen per share

End of term 30 yen per share (forecast)

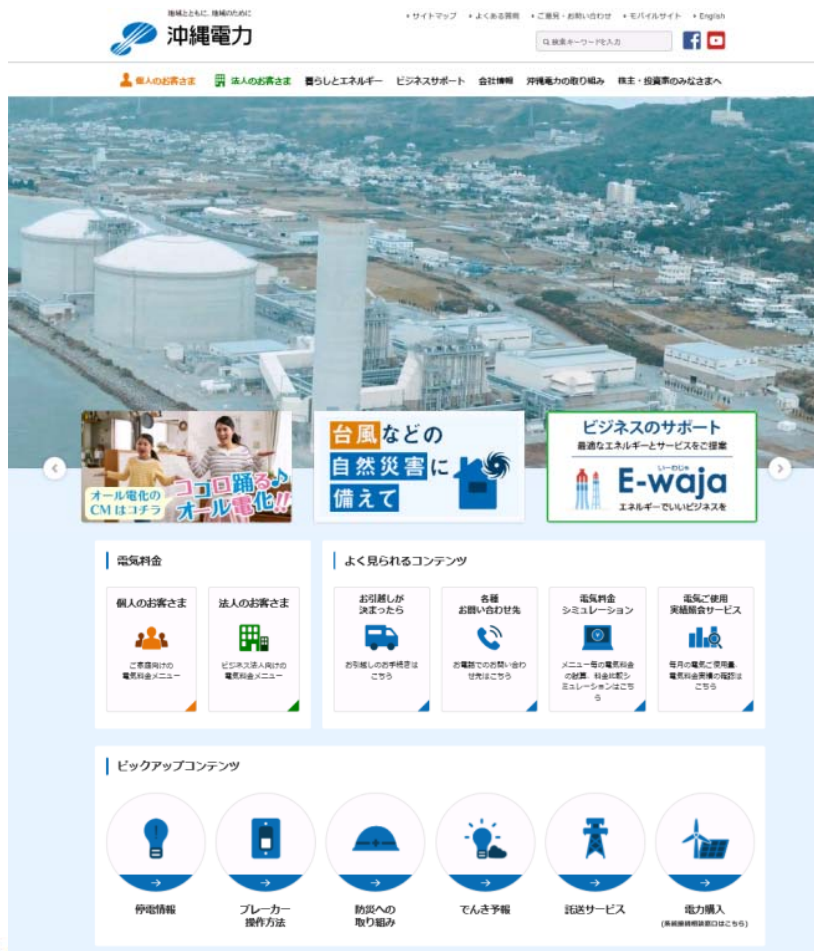
<Reference: Trend in Stock Splits>

Date	Issued number of shares of common stock	Ratio
Feb. 10, 1992	14,728,132	Listed
Nov. 20, 1995	14,875,413	1:1.01
May. 25, 1999	15,172,921	1:1.02
May. 20, 2005	15,931,567	1:1.05
Apr. 1, 2007	17,524,723	1:1.10
Jun.1, 2015	26,287,084	1:1.50
Jun.1, 2016	39,430,626	1:1.50
Jun.1, 2017	43,373,688	1:1.10



# Reference 8: Renewal of Company Website

- The hierarchical structure of information posted on the site was reviewed, and icons and photos have been added to make the content visually recognizable.
- The responsive Web design was employed to facilitate viewing even on smartphones and other mobile terminals.



RSS functions were added.

<http://www.okiden.co.jp/guideline/>

Content compatible with RSS functions

## プレスリリース

▶ <http://www.okiden.co.jp/rss/press.xml>

## お知らせ

▶ <http://www.okiden.co.jp/rss/press.xml>

## IRカレンダー

▶ [http://www.okiden.co.jp/rss/ir\\_calender.xml](http://www.okiden.co.jp/rss/ir_calender.xml)

## 決算短信・財務諸表

▶ [http://www.okiden.co.jp/rss/ir\\_financials\\_state.xml](http://www.okiden.co.jp/rss/ir_financials_state.xml)

## 決算説明資料

▶ [http://www.okiden.co.jp/rss/ir\\_library\\_desc.xml](http://www.okiden.co.jp/rss/ir_library_desc.xml)

## 個人投資家説明資料

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## アニュアルレポート

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This document includes statements concerning future results. Such statements are based on calculations and predictions and are neither definite nor guaranteed. Please be aware that future results may change in accordance with changes in assumptions related to the management environment and the like.

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