

# Management Reference Materials

**November 2019**



The Okinawa Electric Power Company, Inc.

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## ■ Q&A contents

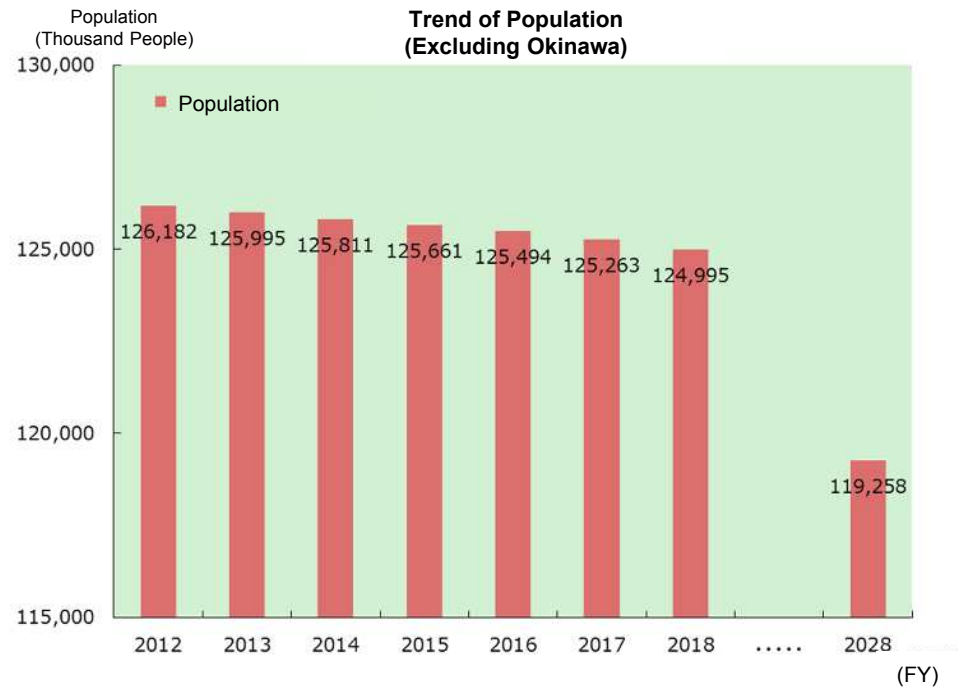
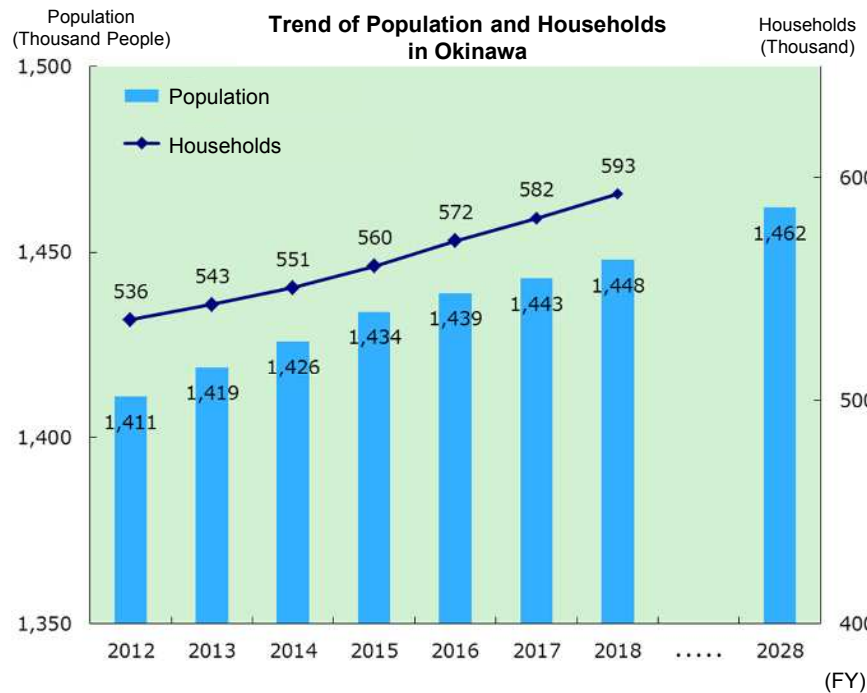
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# Characteristics of the Business Bases

Item	Overview	Reference Page
Demand for Energy	<ul style="list-style-type: none"> <li>◆ Increasing demand for energy 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 for demand for Electric power.</li> <li>◆ Potential demand due to large-scale urban development projects</li> </ul>	2~10
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> <li>◆ Competition is advancing due to the entry of energy suppliers.</li> <li>◆ Power producer and supplier is currently implementing plans to construct power plants.</li> </ul>	11
Total Energy Services	<ul style="list-style-type: none"> <li>◆ Started selling gas with the introduction of LNG.</li> <li>◆ Developing Total Energy Services by taking advantage of our ability to sell electricity and gas.</li> </ul>	12~15
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>	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 in Okinawa is expected to grow moderately for the time being.
- Demand for lighting is expected to increase as the population and number of households increases in the future.



Source:

Population: The actual figures are based on the data provided by the Ministry of Internal Affairs and Communications (MIC).

The figures for FY2028 are based on estimated data provided by the Organization for Cross-regional Coordination of Transmission Operators, JAPAN (OCCTO).

No. of households: The figures are based on the data provided by the Okinawa Prefecture Government.

Source: The actual figures are based on the data provided by MIC.

The figures for FY2028 are based on estimated data provided by OCCTO.

# Okinawa Prefecture Demographics (2/2)

- The total fertility rate of Okinawa Prefecture in FY2018 was 1.89, the highest among all prefectures in Japan (nationwide:1.42)

While the number of the national population decreased by -2.1 persons per 1,000 people, that of Okinawa increased by 3.1 people.

## Okinawa Prefecture Demographics

(People)

		2014	2015	2016	2017	2018
The total fertility rate (Per Thousand people)	Nationwide	1.42	1.45	1.44	1.43	1.42
	Okinawa	1.86	1.96	1.95	1.94	1.89
	Ranking	(1)	(1)	(1)	(1)	(1)
The Increase of population (Per Thousand people)	Nationwide	-1.4	-1.1	-1.3	-1.8	-2.1
	Okinawa	4.9	5.6	4.0	2.6	3.1
	Ranking	(2)	(2)	(2)	(3)	(2)
The Natural Increase of population (Per Thousand people)	Nationwide	-2.0	-2.2	-2.3	-3.0	-3.4
	Okinawa	3.8	3.9	3.8	2.9	2.6
	Ranking	(1)	(1)	(1)	(1)	(1)
The Social Increase of population (Per Thousand people)	Nationwide	0.3	0.7	1.1	1.2	1.3
	Okinawa	0.2	0.8	0.2	-0.3	0.5
	Ranking	(8)	(7)	(11)	(17)	(11)

Source: "Vital Statistics" by Ministry of Health, Labour and Welfare

The total fertility rates for FY 2018 are an approximate figure based on the annual total of monthly reports.

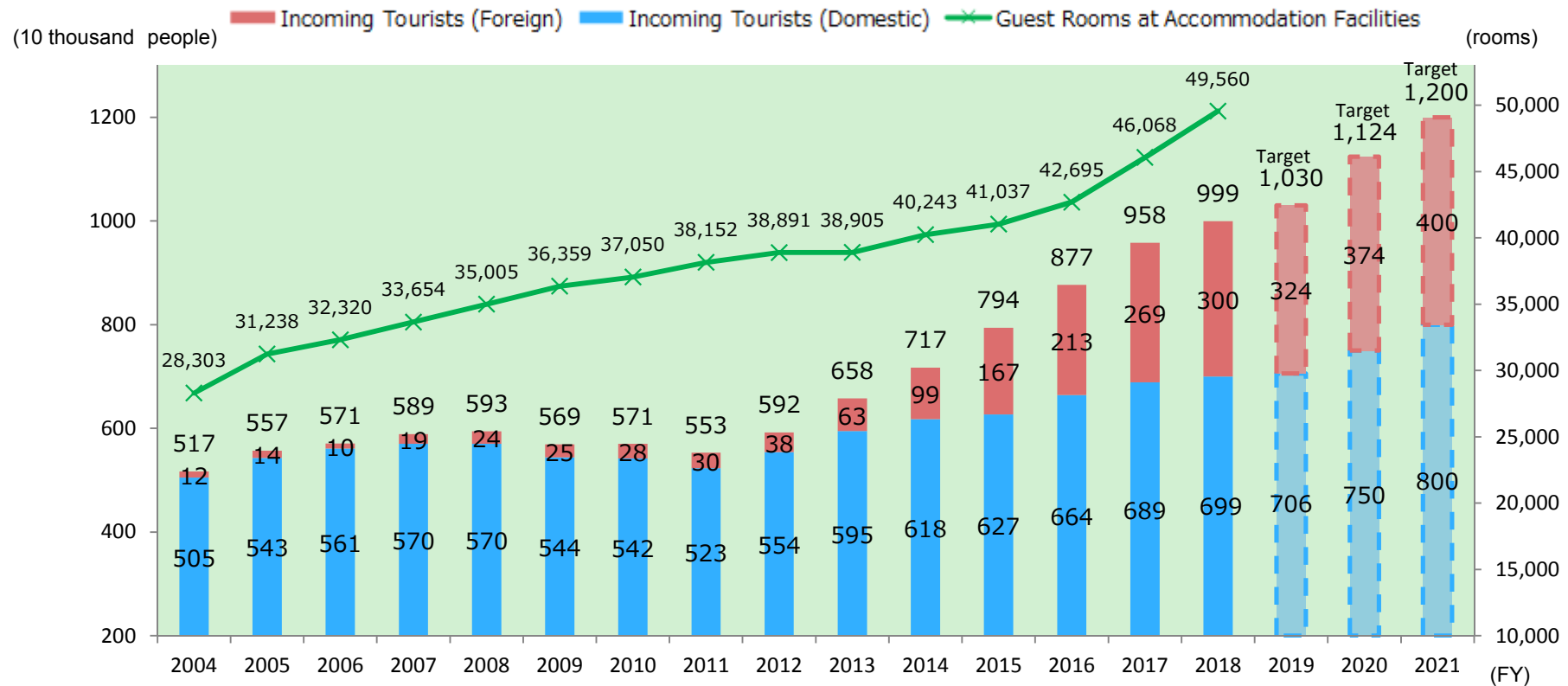
The figures in brackets in the chart show Okinawa Prefecture's national ranking

# Number of incoming tourists (1/6)

- Okinawa saw a record high of 9,999 thousand tourists visiting the region in fiscal 2018.
- Demand for power is expected to rise due to an increase in the number of tourism-related facilities (including hotels).

[Incoming tourists] FY2018 : 9,999 thousand people (Growth rate of 4.4% year-on-year)  
 FY2019 [target] : 10,300 thousand people (Growth rate of 3.0% year-on-year)  
 [1<sup>st</sup> half] : 5,350 thousand people (Growth rate of 2.9% year-on-year)

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



Note: The breakdown and total values do not match sometimes due to rounding decimals.

Source: "Tourism Guidebook", "Summary Statistics on Incoming Tourists to Okinawa", "2018 Accommodations Fact-finding Survey Result", "FY2019 Visit Okinawa Plan" and "Road map for promoting tourism in Okinawa (revised edition, March 2019)" published by Okinawa Prefectural Government

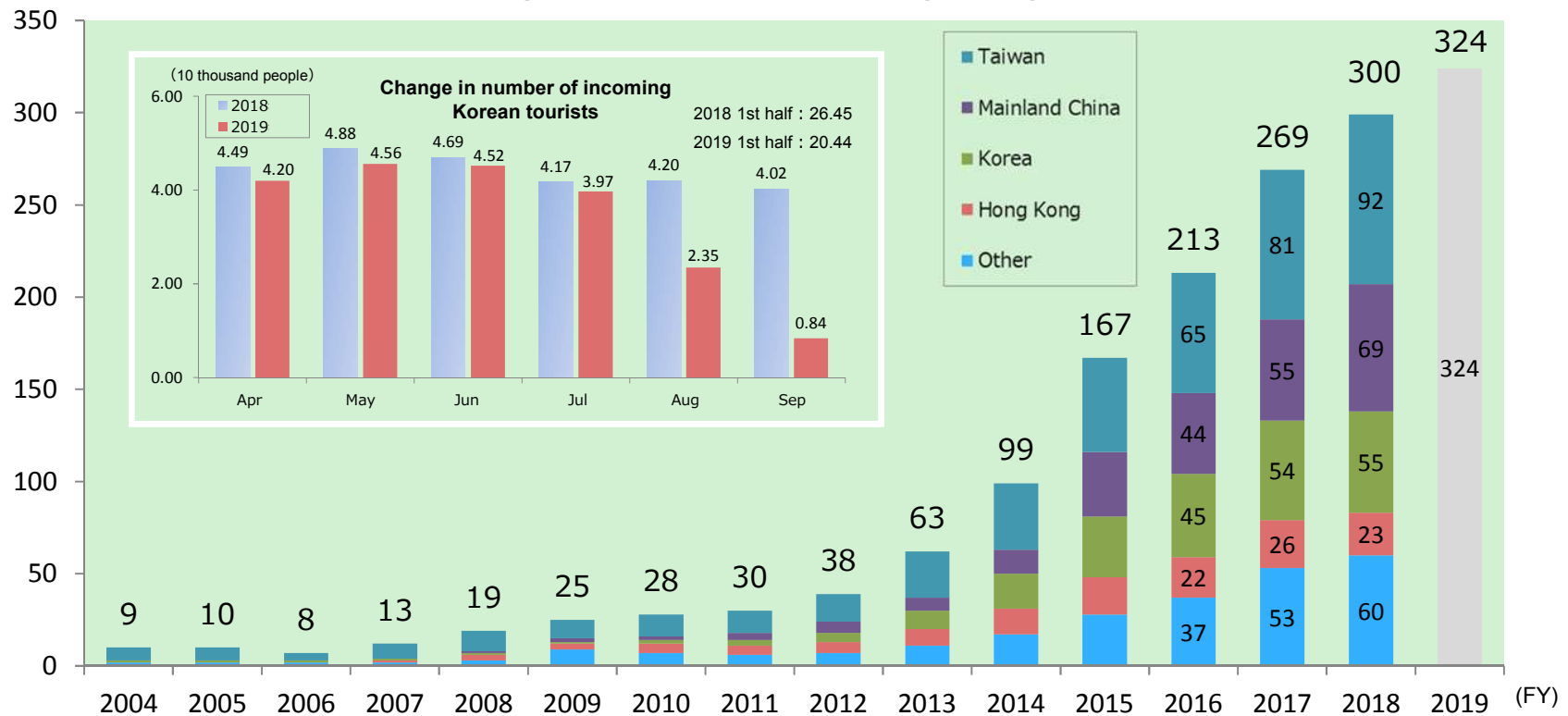
# Number of incoming tourists (2/6)

- Okinawa saw a record high of 3,000 thousand incoming foreign tourists visiting the region in fiscal 2018.
- In the first half of FY 2019, the year-on-year decline was due to the movement of self-restraint to travel to Japan in Korea.

[Incoming tourists] FY2018 : 3.00 million people (Growth rate of 11.5% year-on-year)  
 FY2019 【target】 : 3.24 million people (Growth rate of 8.0% year-on-year)  
 【1<sup>st</sup> half】 : 1.62 million people (Growth rate of -4.0% year-on-year)

(10 thousand people)

## Change in number of incoming foreign tourists



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

The breakdown and total values do not match sometimes due to rounding decimals.

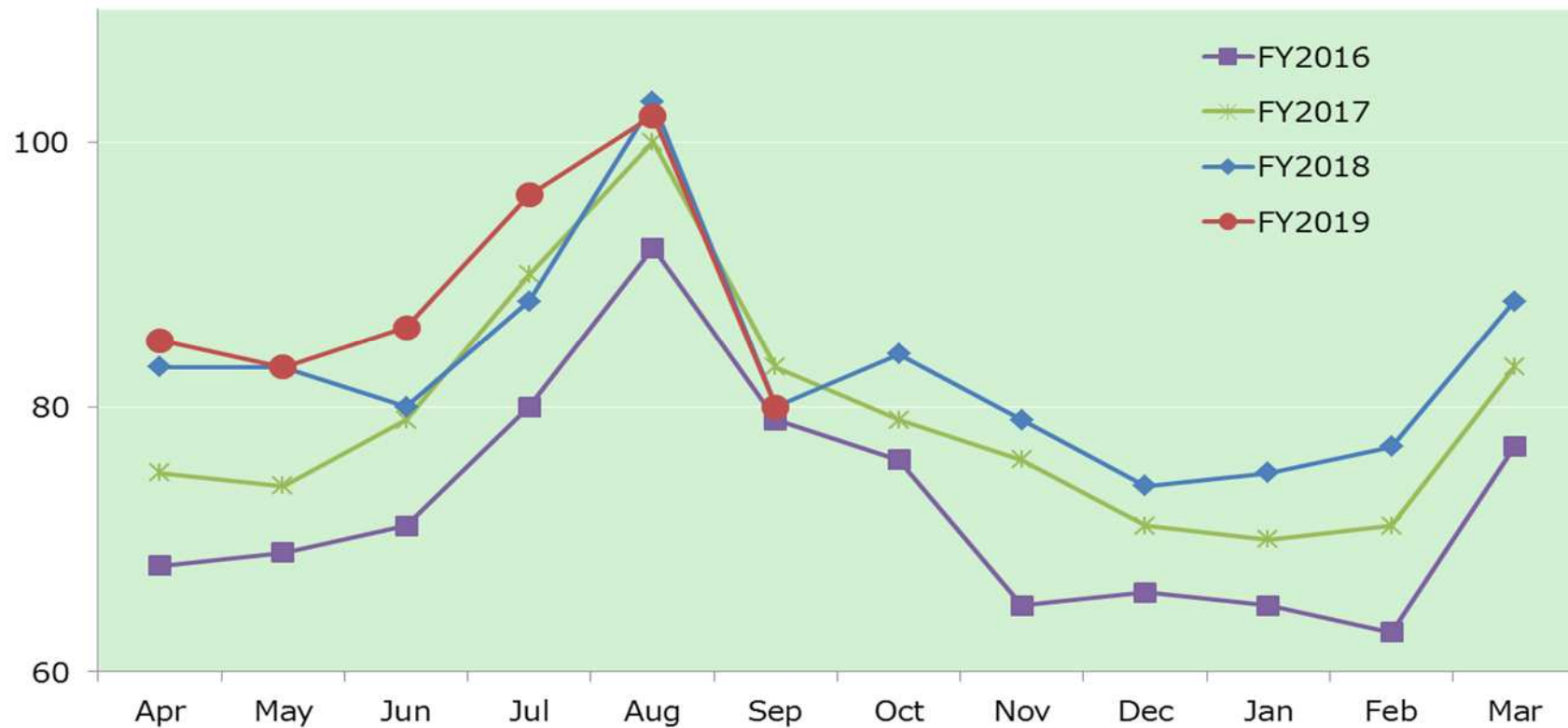
Source: "Tourism Guidebook", "Summary Statistics on Incoming Tourists to Okinawa" and "FY2019 Visit Okinawa Plan" published by Okinawa Prefectural Government

# Number of incoming tourists (3/6)

■ In the first half of FY 2019, the number of incoming tourists was strong, with record highs in each month from April to July.

(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



# Number of incoming tourists (4/6)

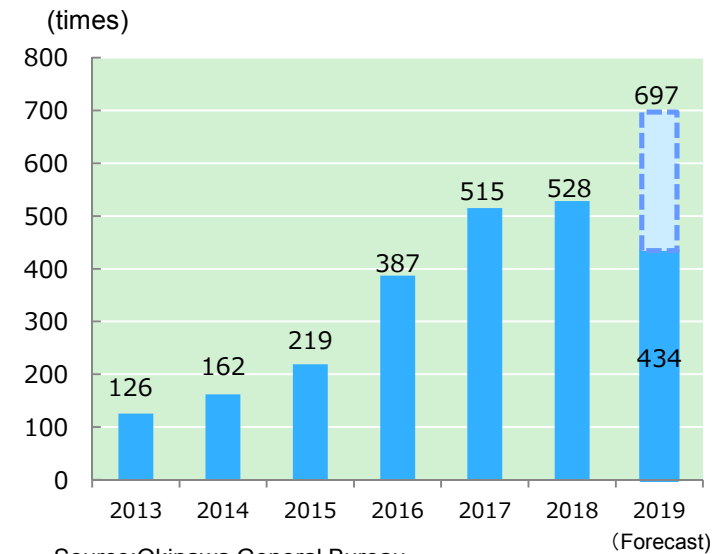
- The number of cruise ships calling at the port has been increasing, and marked a record high of 528 times (up 2.5%) in 2018.
- The number is likely to mark a record high of 697 times (up 32%) in 2019 as well.
- Aim to strengthen attraction and acceptance system by deploying new berth to ports within 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)



# 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 135,000 times a year → about 240,000 times a year  
(an annual increase of 105,000 times)  
\*excluding helicopters and midnight flights

Reclaimed land area: about 160 ha

Total construction cost: about 207.4 billion yen



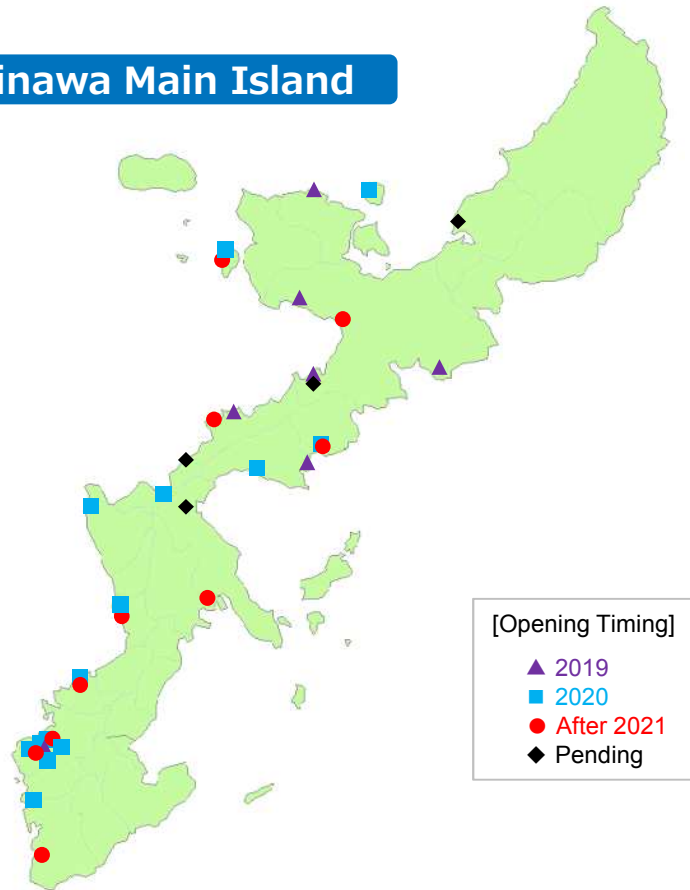
Source : Provided by Okinawa General Bureau ( It was taken on September 2019 )

# Number of incoming tourists (6/6)

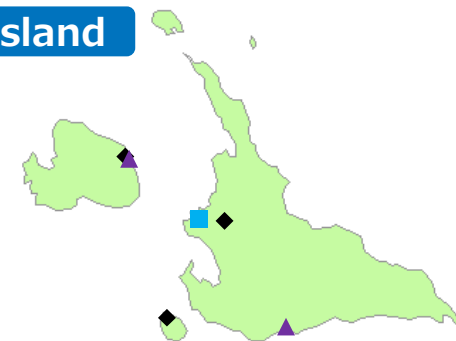
- Accompanying an increase in tourists visiting the region, the numbers of accommodation facilities and guest rooms have kept increasing in Okinawa Prefecture.
- Going forward, multiple accommodation facilities are planned to open.

## Major Plans for Opening Accommodations

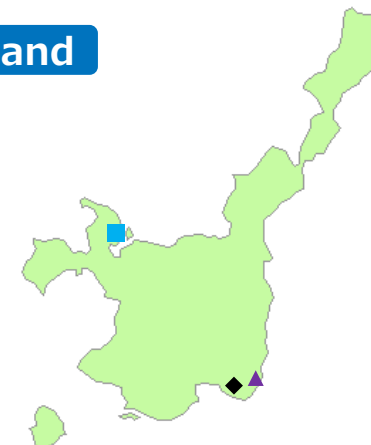
### Okinawa Main Island



### Miyako Island

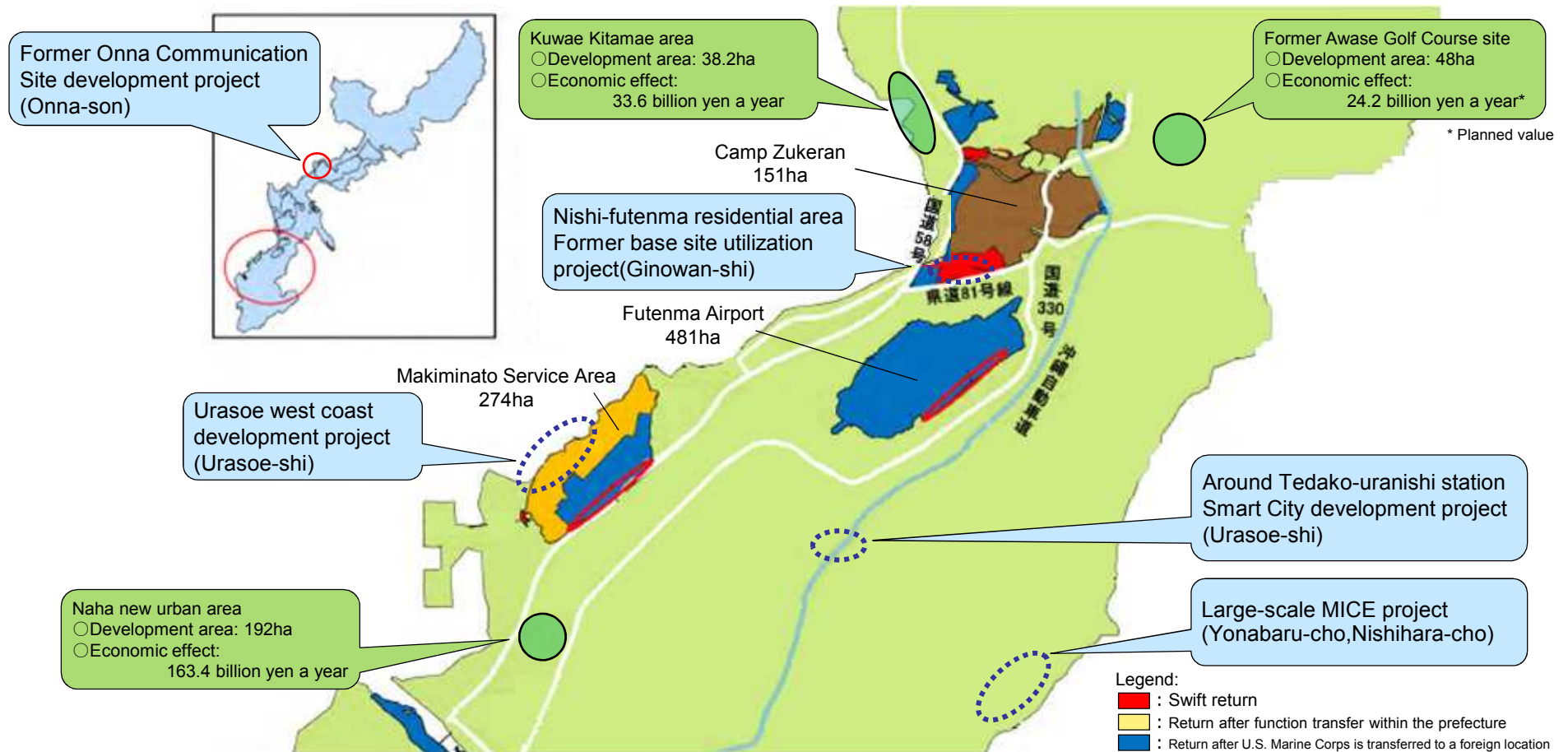


### Ishigaki Island



# 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

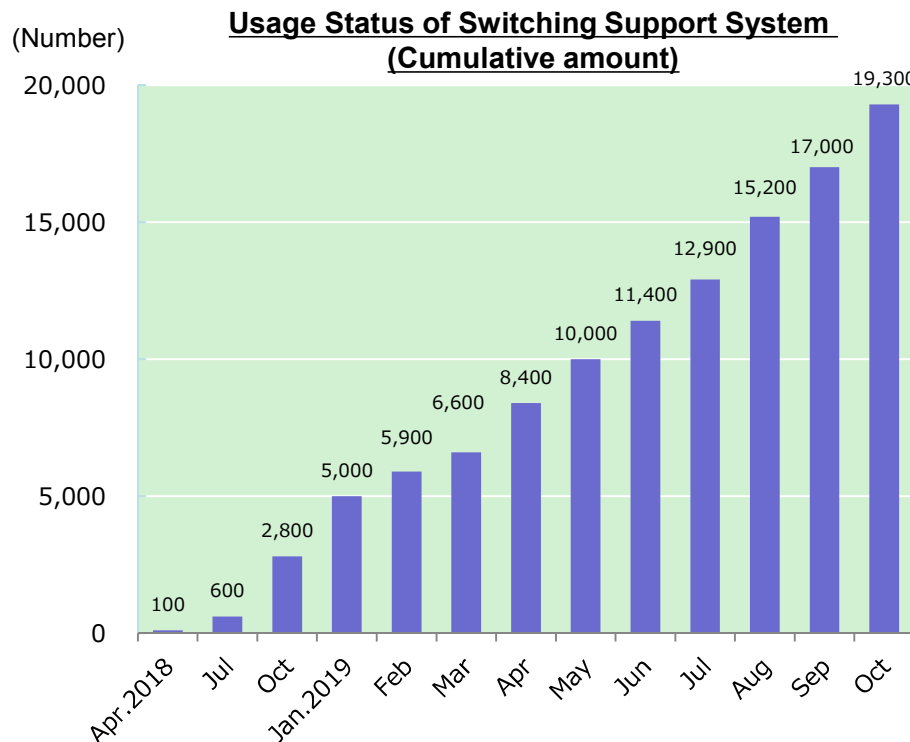
# Full liberalization of the Electricity Market

- After the Full liberalization of the Electricity Market in April 2016, PPS\* that use power supply from J-POWER's Ishikawa Coal Thermal Power Station or the feed-in tariff system have been entering the market. As a result, Okinawa area has also beginning full-scale competition.
- The number of cases of switching increased to 19,300 cases in cumulative total (as of October 2019) due to partly the entry of PPS that take advantage of “the wholesale electricity menu for supply-demand adjustment”, which has been on offer since April 2018. As a result, PPS' share in the electricity sales volume in Okinawa area reached 6.3% in the total of all voltages (as of July 2019).

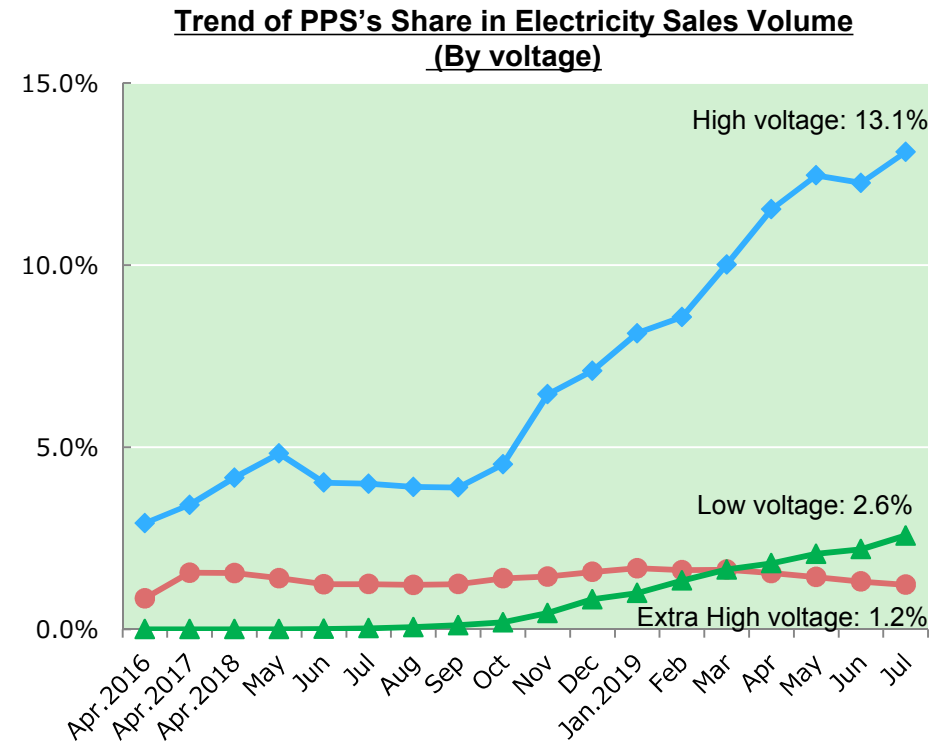
[PPS's share in electricity sales volume]

Extra High voltage: 1.2%, High voltage: 13.1%, Low voltage: 2.6%

\* new suppliers, officially called power producer and suppliers



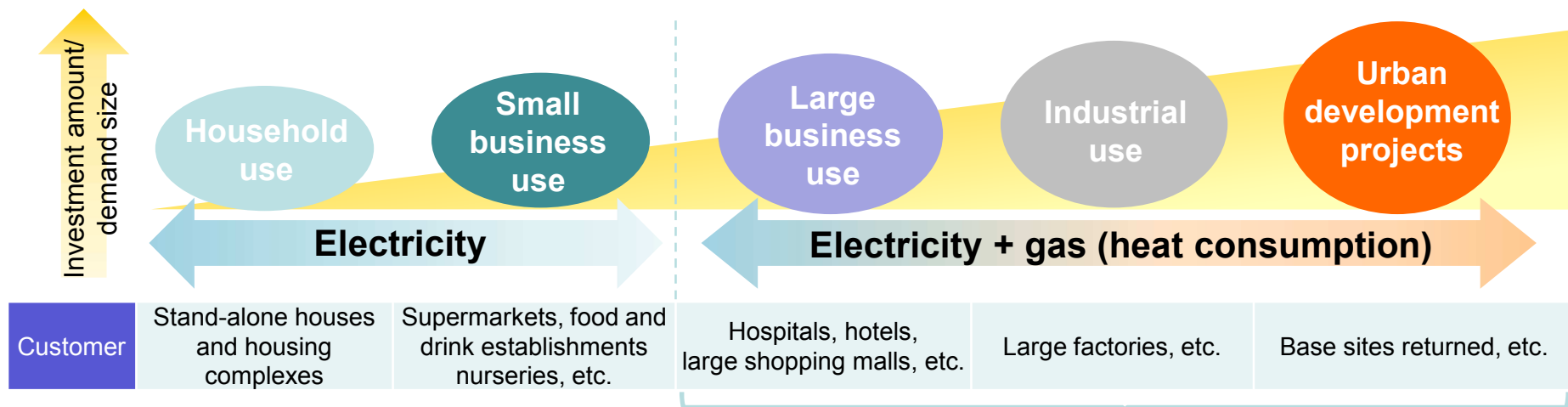
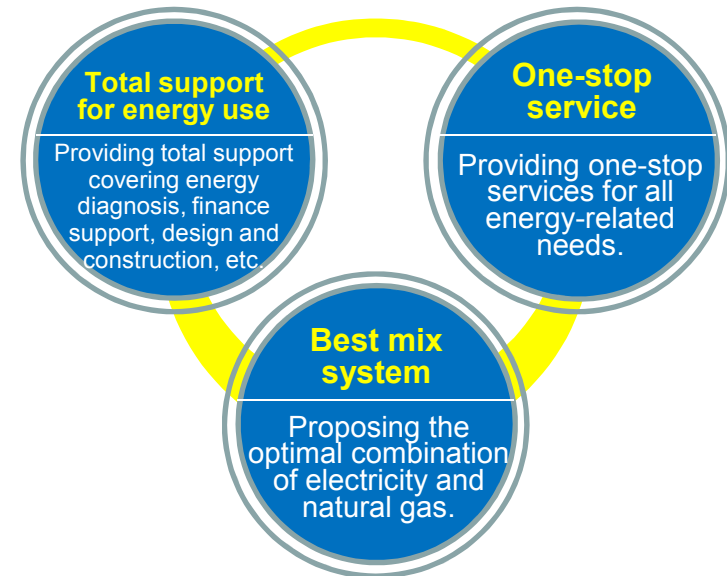
Source : “Usage Status of Switching Support System”.



Source : “Electricity Trading Report”.

# Development of Total Energy Services

- The OPEC 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 OPEC Group aims to expand sales of electricity and gas by accurately identifying customer needs and generating synergy effects of electricity and gas.
  - Promoting ESP business
  - Efforts in the energy sector to the large-scale urban development projects
  - Sell LNG to customers in remote locations through satellite facilities according to their needs
  - Expand the sale of gas supplied through pipelines that are installed near the pipelines owned by OPEC Group

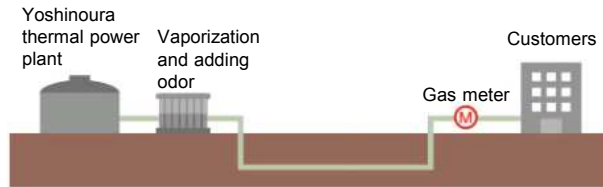


# Gas supply business

- Commenced gas supply business in May 2015
- The OEPC Group will expand to supply to broad areas through pipelines, based on PEC's\*1 satellite facilities.

## Pipeline supply (5 cases)

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



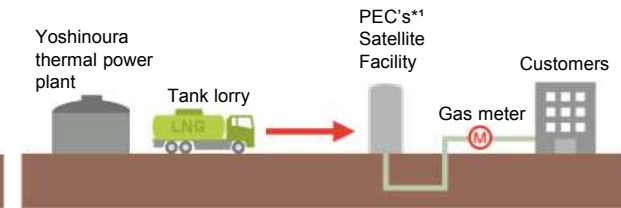
## Lorry supply (7 cases)

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



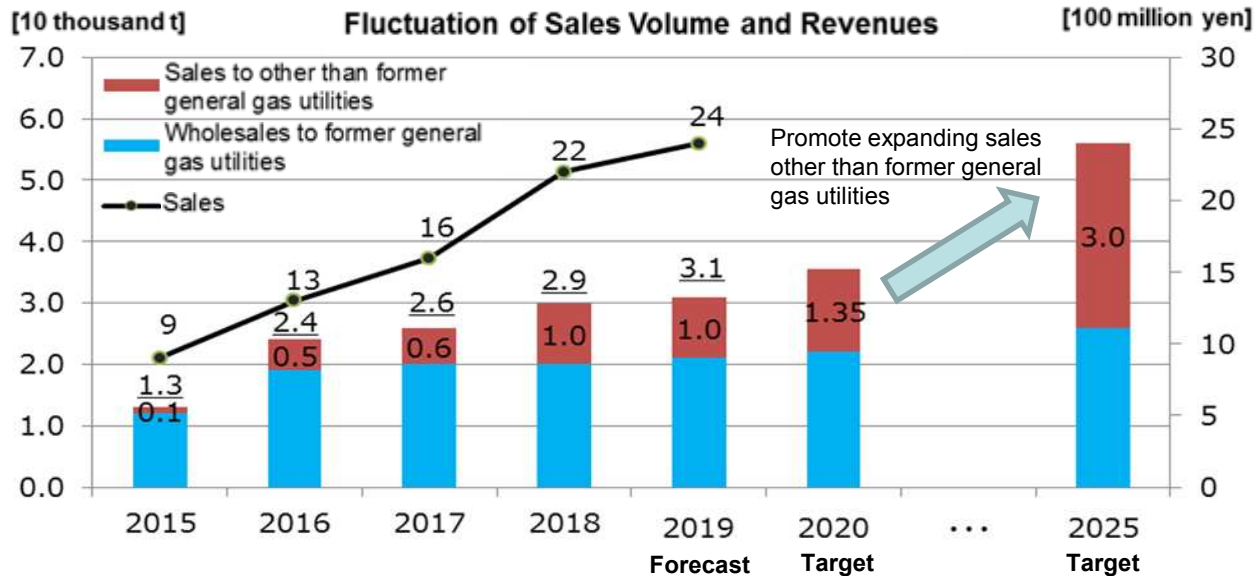
## PEC Supply Center (7 cases)

At former U.S. military base site and industrial parks, PEC\*1 constructs supply centers\*2 and supplies gas through pipelines.



\*1: Progressive Energy Corp.

\*2: Awase Natural Gas Supply Center, Suzuki Natural Gas Supply Center and Makiminato Natural Gas Supply Center (Supply started in May)



Principal customers
Okinawa Gas Co. (Wholesale)
TAKUNAN STEEL CO., LTD
Okinawa Watakyu shingu Co.
ORION BREWERIES, LTD
Chubu Tokushukai Hospital
ITO EN, LTD.

\*Customers to whom we supply over 500t of gas per year

# Energy Service Provider (ESP) Business (1/2)

- We have established a new company called The Reliance Energy Okinawa, Inc., which is an energy service provider (ESP) on December 2017.
- We own electric and heat source facilities on behalf of customers, and process and supply energy.

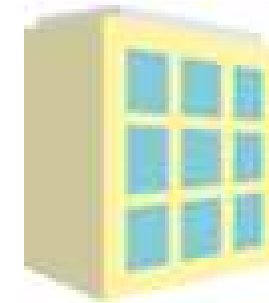
## [Increase in new energy demand]

- Large-scale development of urban areas (e.g. former U.S. military bases)
- Construction of hotels in response to an increase in the number of tourists
- Construction of large-scale retail stores

## [Advancement and diversification of energy needs]

- Initial investment in energy use (e.g. electricity and gas)
- Burdens involved in facility operation/maintenance and emergency response

Okinawa  
Prefecture



Customer



**The Reliance Energy Okinawa, Inc.,**

- It owns energy facilities on behalf of customers.
- It provides electricity and gas in the forms of, for example, air-conditioning water (cold / hot), hot-water supply and steam.



# Energy Service Provider (ESP) Business (2/2)

- In June 2019, a service for the “SAN-A Urasoe West Coast PARCO CITY”, was launched.
- We are looking to development of Total Energy Services for broad areas mainly from the energy center that will be built on the premises of the OEPC.  
For example, we are looking to supplying to buildings on the premises, and supplying to multipurpose building that is planned to be constructed nearby.

## < Examples of businesses adopting ESP >

### SAN-A Urasoe West Coast PARCO CITY

- Service launch date: June 2019

### Lab 4 of the Okinawa Institute of Science and Technology Graduate University

- Scheduled service launch date: April 2020

### A new hospital of Yuuaikai Tomishiro Central Hospital

- Scheduled service launch date: April 2020

### San-A Nishihara City (Existing renovation)

- Scheduled service launch date: April 2020

### San-A Ishikawa City

- Scheduled service launch date: June 2020

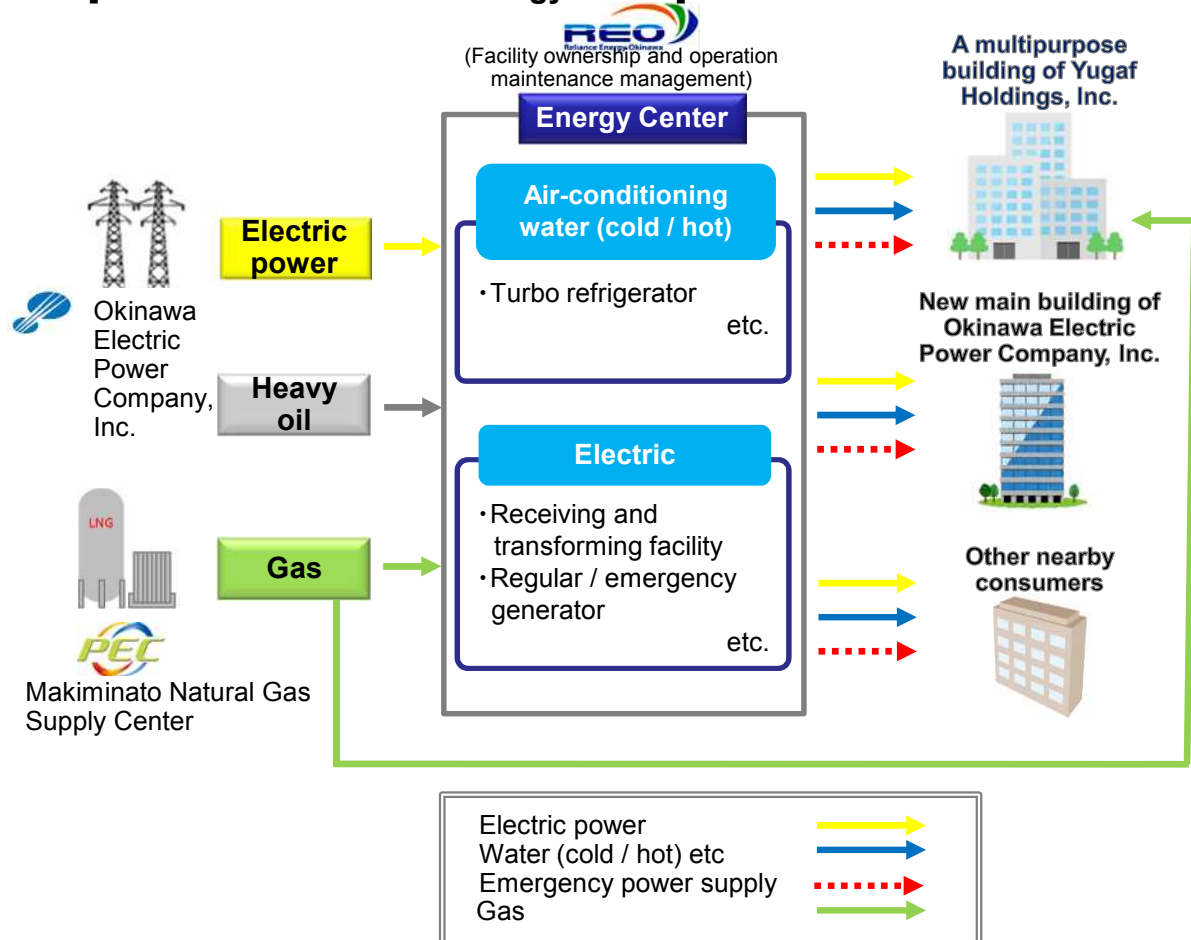
### Yugaf Holdings, Inc. (hotels, offices, etc.)

- Scheduled service launch date: November 2021

### New main building of Okinawa Electric Power Company, Inc.

- Scheduled service launch date: May 2022

## [Schematic Overview of Energy Center]



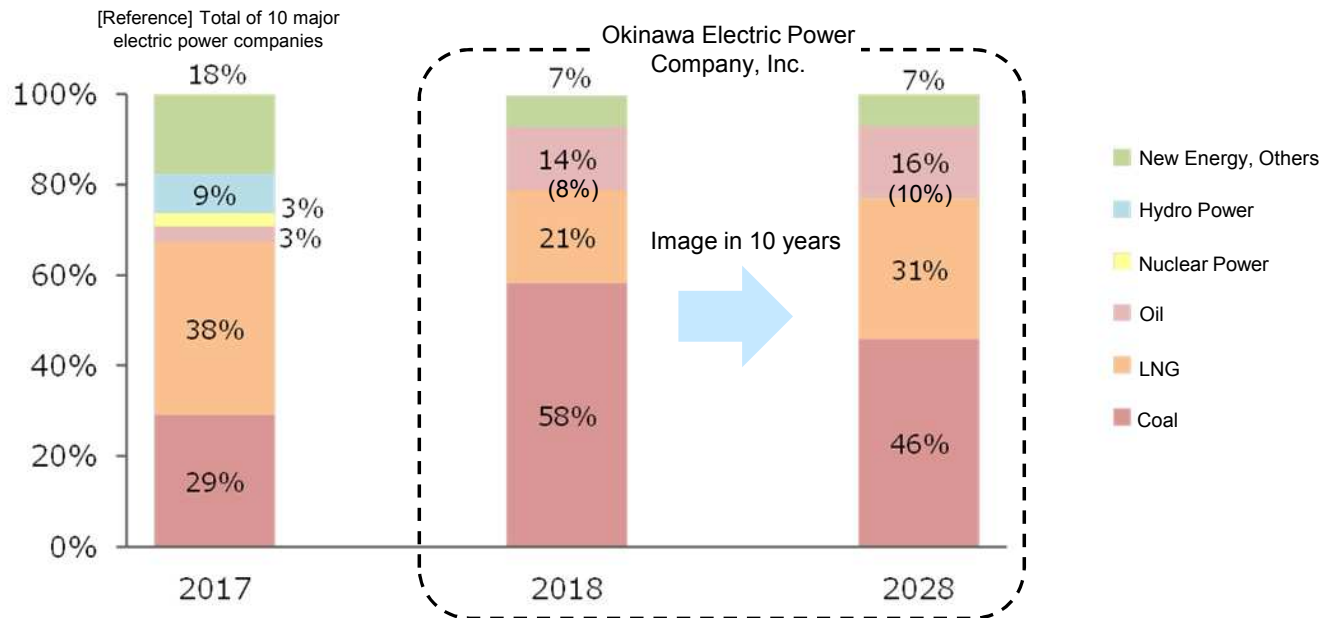
# Power Generation Facilities (Power Supply Composition)

- 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.

Electric Power Composition Ratio(Power generating end)



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.  
 Note 4: The percentage in brackets ( ) for oil refers to the percentage for remote islands stated again.

# 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 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)

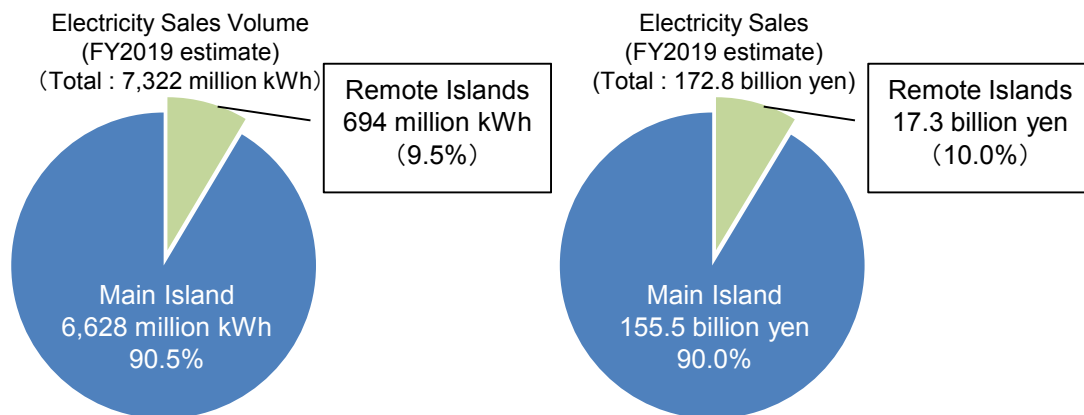
(Unit : Thousand kW, %)

		2018 (Reference)	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028
Demand-supply balance	Supply capacity	1,871	2,060	2,169	2,093	2,139	2,078	2,198	2,201	2,200	2,203	2,206
	Peak load	1,500	1,493	1,502	1,510	1,516	1,522	1,529	1,535	1,541	1,547	1,554
	Reserve supply capacity	371	567	667	583	623	556	669	666	659	656	652
	Reserve supply rate	24.7	38.0	44.4	38.6	41.1	36.5	43.8	43.4	42.8	42.4	42.0

Note: Based on FY2019 Supply Plan Notification. (general transmission / distribution business)

# 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 (Tiltable 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

■ The OEPC Group has new energy facilities with total output of 27,868kW (wind power: 22,130kW, solar power: 5,738kW).

## 【 OEPC 】

	Name	No. of Units	Output	Remark
Wind Power	Ogimi Wind Power	2	4,000 kW	
	Yonaguni Wind Power	1	600 kW	
	Aguni Tilttable Wind Power	1	245 kW	*1
	Minamidaito Tilttable Wind Power	2	490 kW	*1
	Tarama Tilttable Wind Power	2	490 kW	*1
	Hateruma Tilttable Wind Power	2	490 kW	*1
	<b>subtotal (6)</b>	<b>10</b>	<b>6,315 kW</b>	
Solar Power	Abu Mega Solar Power	—	1,000 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 (8)</b>	<b>—</b>	<b>5,530 kW</b>	

(As of September 30, 2019)

## 【 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 Tilttable Wind Power>

- Wind power generators can be tilted nearly 90 degrees so that damages by strong winds from typhoons can be avoided by tilting 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)

# 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.
- 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

## [Connection of renewable energies]

### ■ Main island of Okinawa

(MW)

	30-day output control limit			Total
		Amount already connected	Connection application amount	
Solar	495	346	107	453
Wind	183	14	7	21

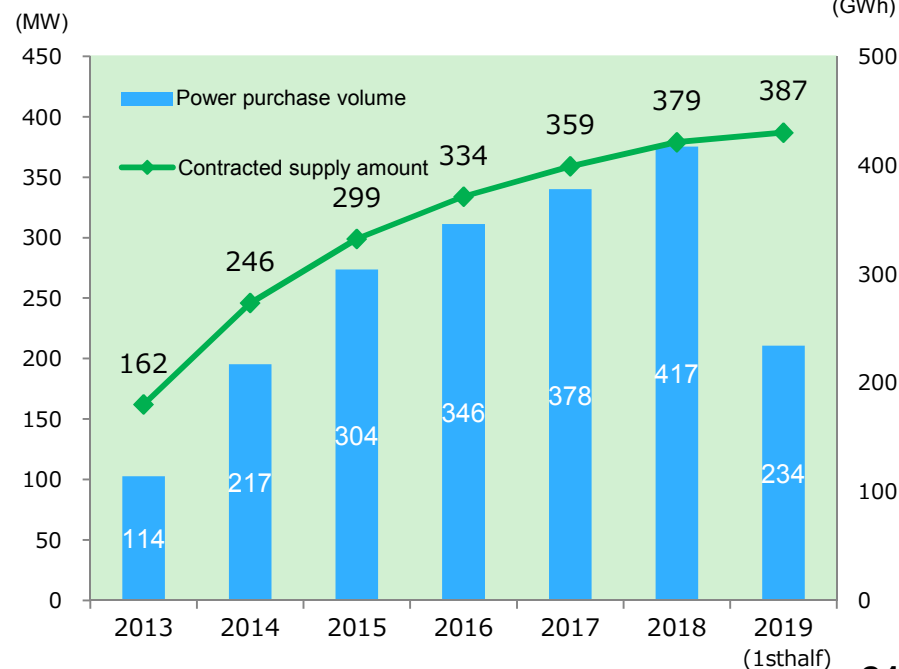
### ■ Remort islands

(kW)

	30-day output control limit			Total
		Amount already connected	Connection application amount	
Miyako	24,101	27,168	10,097	37,265
Ishigaki	21,991	17,516	9,109	26,625
Kume	2,719	2,499	194	2,693

\* As of September 30, 2019

## [Purchase of solar power]





# 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

(%)

Indicators	FY2018													FY2019						
	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	2.1	1.2	3.9	-0.1	6.9	-2.3	6.3	2.1	1.4	1.1	2.2	4.3	2.4	3.8	3.4	3.9	4.2	2.5	8.7	4.4
No. of new car sold	36.9	20.8	-0.1	2.8	-1.9	5.6	13.9	10.7	-2.8	-2.9	5.6	4.6	7.1	3.4	6.0	-11.3	-6.6	8.2	12.8	0.6
No. of incoming tourists	9.7	12.2	1.4	-2.6	3.5	-4.3	6.3	4.2	4.0	7.0	8.5	5.6	4.4	2.2	0.5	7.2	9.0	-1.6	1.0	2.9
Value of public works contracts	26.3	-4.5	-24.9	-40.6	-11.5	59.2	-26.8	-30.7	-39.7	-72.6	12.8	-25.9	-22.6	-24.3	30.4	-18.1	94.2	-17.8	-12.5	5.3
New residential Construction starts	-23.4	9.5	28.8	-11.7	-5.9	22.2	6.8	-29.7	8.3	-14.2	-32.1	6.9	-4.6	-1.5	-38.4	-20.6	-16.0	25.5	10.7	-6.8
Total unemployment rate	3.1	4.2	3.5	2.8	3.3	3.9	3.8	3.1	2.6	2.6	2.1	3.1	3.1	2.5	2.7	3.0	2.8	2.9	3.2	2.8
Job Opening Ratio	1.17	1.14	1.16	1.16	1.20	1.21	1.17	1.18	1.20	1.23	1.21	1.18	1.18	1.18	1.18	1.18	1.19	1.21	1.19	1.16

Note 1: The figures for 'Sales by large-scale retailers' are calculated from the values given in preliminary figures for September 2019 on an all-store base.

Note 2: The figures for 'Total unemployment rates' are raw data, whereas The figures for 'Job Opening Ratio' are a seasonally adjusted value for the current month.  
(Please note that the values for the fiscal year are both raw data.)

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

### ■ Prospect

The prefectural economy is expected to continue to expand. Meanwhile, as risk factors, there are listed the impact of mainland and global economic trends, rising raw materials prices, and tightening labor demand affect corporate earnings and business sentiment.

# Q1. Topics of Okinawa's Economy

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

- 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's GDP posted growth rate increase of outpacing the national average growth rate.
- The prefectural economy is expected to continue to expand in the future, and accordingly it's expected that demand for electric power will increase.

### Prefectural GDP and National GDP

(billion yen)

	FY2013	FY2014	FY2015	FY2016	FY2017	FY2018
Prefectural GDP	4.2% 3,892.3	-0.3% 3,879.1	3.2% 4,004.2	3.2% 4,132.0	3.1% 4,260.4	1.6% 4,330.4
National GDP	2.6% 512,534.7	-0.4% 510,704.0	1.3% 517,419.8	0.9% 521,980.0	1.9% 531,887.0	0.7% 535,594.1

Sources: "Prefectural Accounts for FY2016", "Prefectural economic outlook for FY2019" and Cabinet Office "List of Statistical Tables" (Second Preliminary Data for the April-to-June 2019 period)

Note : Prefectural GDP's for FY2017 and FY2018 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 (nominal) in FY2021 is estimated to increase about 1.4 times compared with that in FY2010 to 5,100 billion yen.

# Q1. Topics of Okinawa's Economy

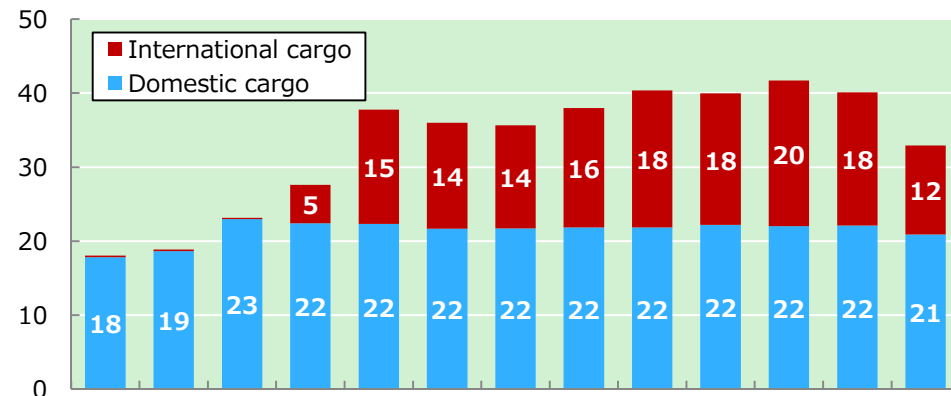
## 3 Okinawa International Logistics Hub

- 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.



- 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



2006 2007 2008 2009 2010 2011 2012 2013 2014 2015 2016 2017 2018 (FY)

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

Source: Land, Infrastructure and Transportation Ministry

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)

# Q1. Topics of Okinawa's Economy

## 4 Aviation Industry Cluster

- Aviation demand in Asia is expected to increase in the future and the total number of aircraft is expected to increase by 2.7x in the next 20years.
- Okinawa Prefecture, taking advantage of the characteristic of the center of Asia, is engaged in the aviation industry cluster focused on MRO\*.
- MRO Japan started aircraft maintenance business at Naha Airport in January 2019.

\* MRO : Maintenance, Repair, & Overhaul



**MROJapan**

MRO Japan Co., Ltd.

Established on June 2015 (Head Office: Naha City)  
Businesses: Aircraft Maintenance, Repair, & Overhaul

Paid-in Capital: 1 billion yen

Shareholder composition:

ANA Holdings Inc. 45%

JAMCO Corporation. 25%

Mitsubishi Heavy Industries, Ltd. 20%

The Okinawa Development Finance Corporation. 2%

Bank of The Ryukyus, Ltd. 2%

The Bank of Okinawa, Ltd. 2%

The Okinawa Kaiho Bank, Ltd. 2%

[The Okinawa Electric Power Company, Inc. 2%](#)

Source: The Industrial Site Promotion Guide Book 2019-2020

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

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

No. of Facilities	33
Area	187,099km <sup>2</sup>

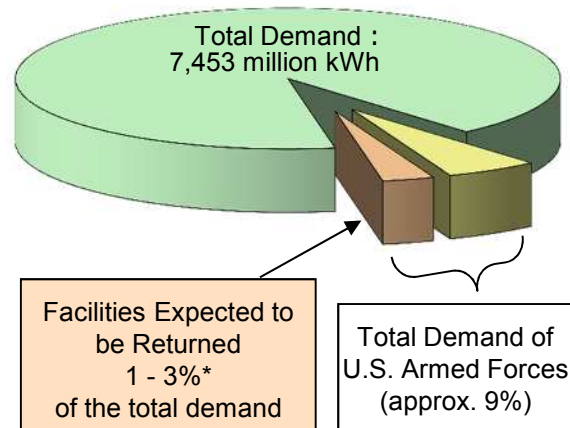
<Reference>

No. of employees working for the U.S. Armed Forces in Okinawa: 8,919

\*As of the end of March 2018.

Sources : Japan Ministry of Defense "US Forces and SDF Bases in Okinawa August 2019", Military Base Affairs Division, Executive Office of the Governor, Okinawa Prefecture

## The U.S. Armed Forces' share of total electricity demand (FY2018)



\* 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	36,590km <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	48,728km <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	4,759km <sup>2</sup>
Makiminato Service Areas [ US Marine Corps ]	Urasoe-shi	2,694km <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 )

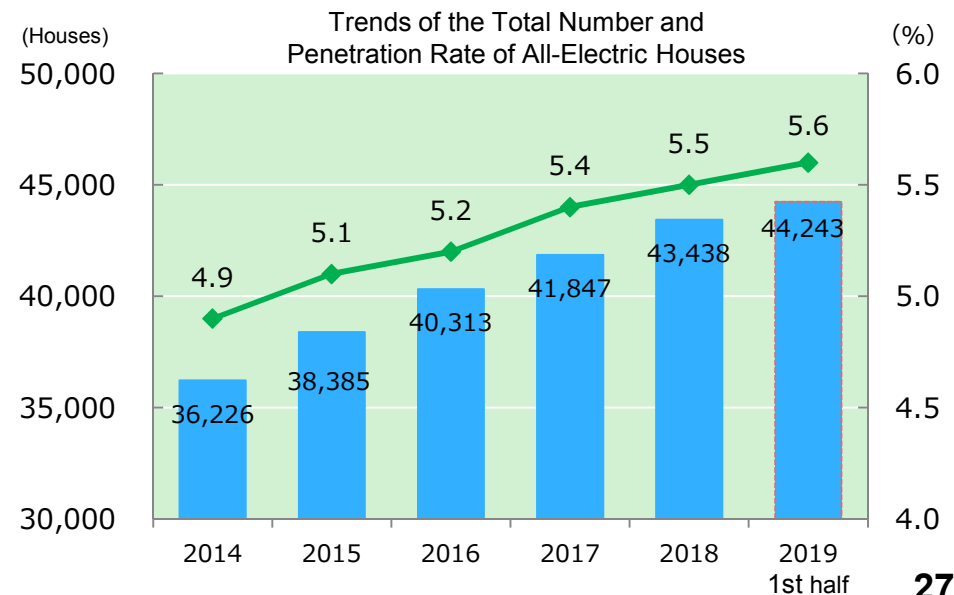
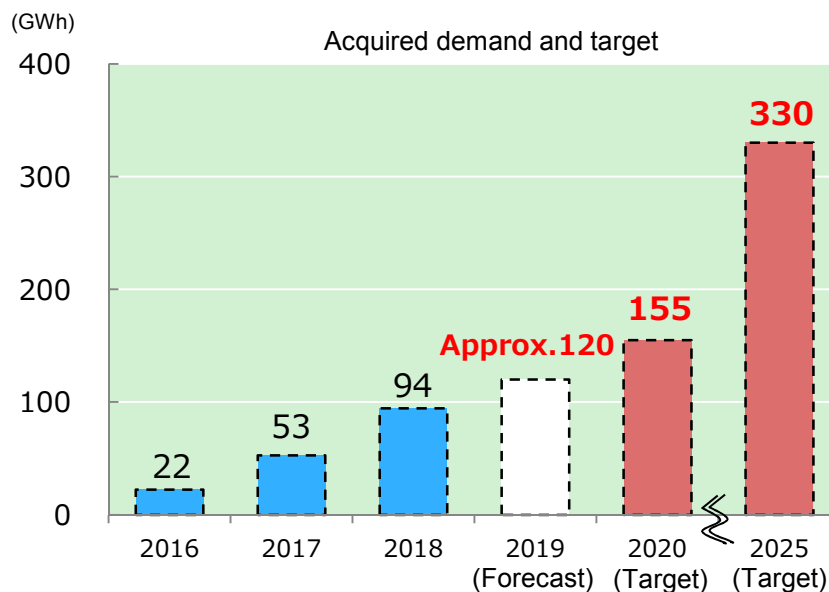
# Q3. What is the Current State of Promotion of Electrification?

## ■ Approach for the promotion and growth in the household sector

- (1) Centering on the all electrification campaign, effectively linking a series of promotion measures such as “CM”, “event”, “website”, “LINE @” and “all electrification experience facilities”, creating opportunities to directly connect with customers likely to contract
  - (2) Strengthening cooperation with local home appliance stores and housing equipment manufacturers, who are the main players delivering value directly to customers
- ◇ The ratio of all-electric houses to newly built houses in the first half of FY2019  
Stand-alone houses: 32.5%    Complex: 1.4%

## ■ Approach for sales promotion in the corporate sector

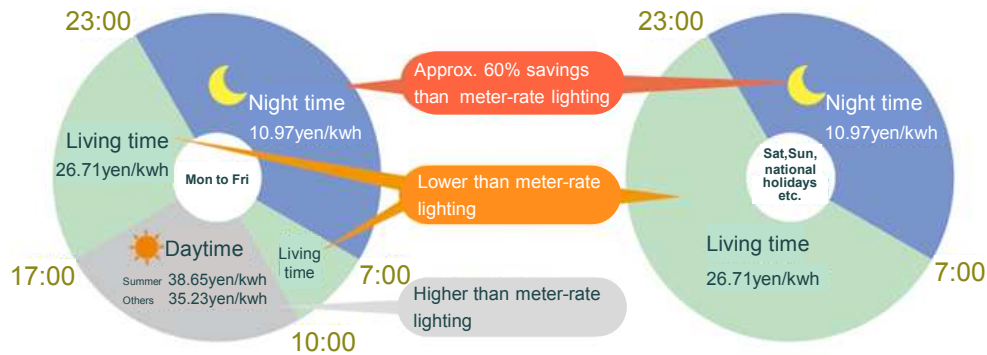
- (1) Offering customers comprehensive proposals for electrification (air-conditioning systems, kitchens, and water heaters) appropriate for their power usage
- (2) Strengthening of cooperation with sub-users including manufacturers, contractors, design offices, etc.
- (3) Utilization of public subsidy system, etc.



# Q4. Introduction of new electricity rate menus(1/3)

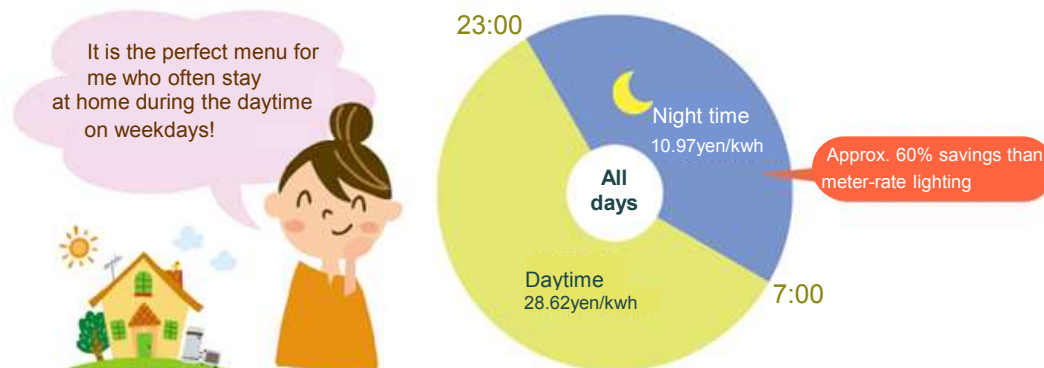
- The electricity rate menu for all electrification “Ee Life” was renewed to introduce two electricity rates for households. (From April 1, 2017)

## ◆ Ee Home Holiday Suitable for families with less electricity usage on weekdays



Recommend to customers, such as double-income households

## ◆ Ee Home Flat Suitable for families with more electricity usage during the daytime on weekdays



Recommend to customers, such as households with full-time housewives and with senior citizens alone

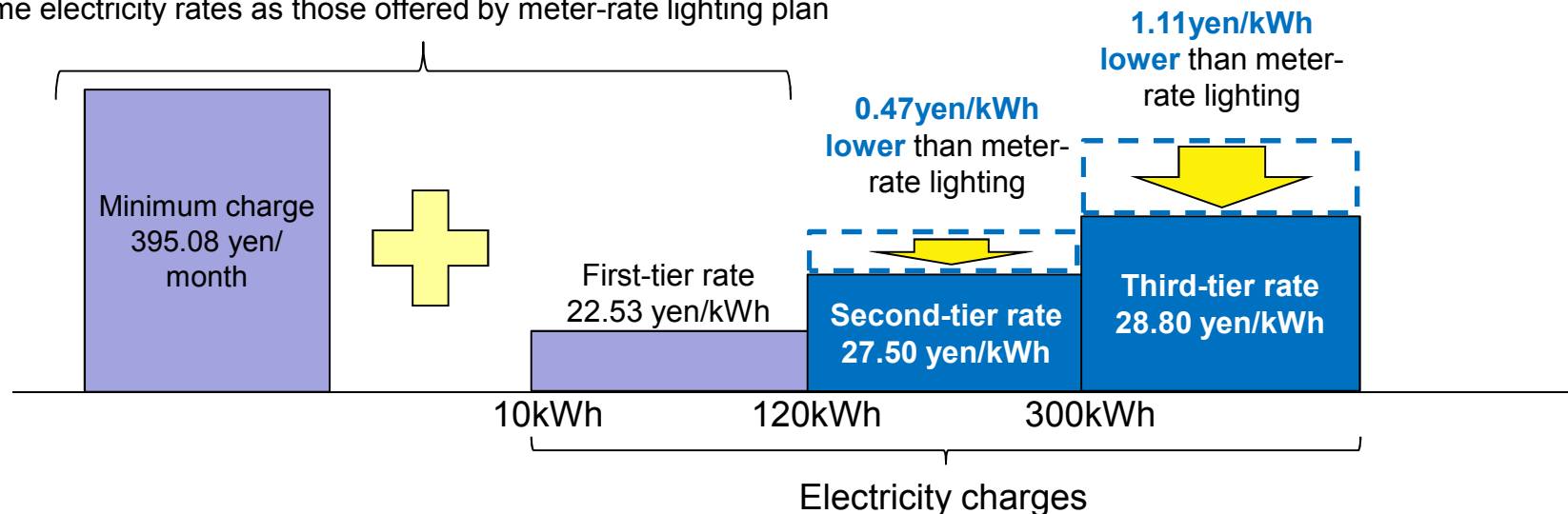
## Q4. Introduction of new electricity rate menus(2/3)

- From June 1, 2018, we will be offering the “Good Value Plan,” an electricity rate menu for households.

### Summary of Good Value Plan

- ✓ The second- and third-tier electricity rates are set lower than those of the meter-rate lighting plan.
- ✓ The pricing particularly benefits those customers who are heavy users of electricity.
- ✓ Average users of electricity (260kWh/month) can save approx. 800 yen a year on their electricity bills, compared to those on the meter-rate lighting plan.

Same electricity rates as those offered by meter-rate lighting plan





## Q4. Introduction of new electricity rate menus(3/3)

- From November 19, 2019, the “au Denki” service will be launched, which combines the electricity of Okinawa Electric Power Company, Inc. with the communication service, of Okinawa Cellular Telephone Company(hereinafter “Okinawa Cellular”).
- OEPC supplies electricity as before, and the Okinawa Cellular sells electricity to au customers on behalf of OEPC.



### Overview of the “au Denki” service

- ✓ This is a service for customers using au.
- ✓ OEPC supplies electricity as before.
- ✓ The electricity tariff is equivalent to the electricity tariff charged at the meter-rate lighting plan by OEPC.
- ✓ The au WALLET points corresponding to up to 5% of electricity tariff are returned.

# Q5. What are the efforts to fuel cost reduction?(1/3)

## ■ 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

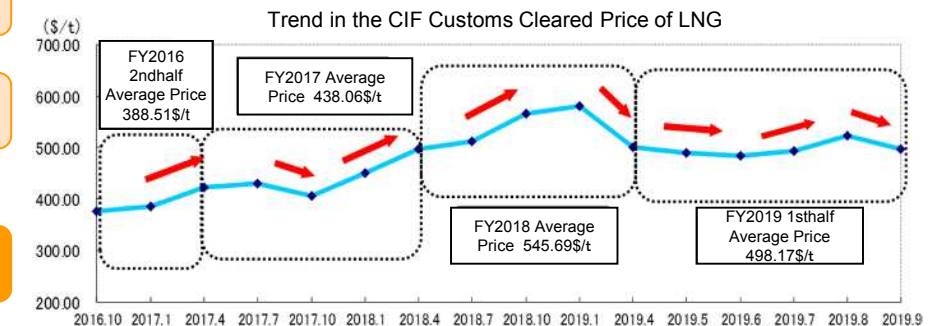
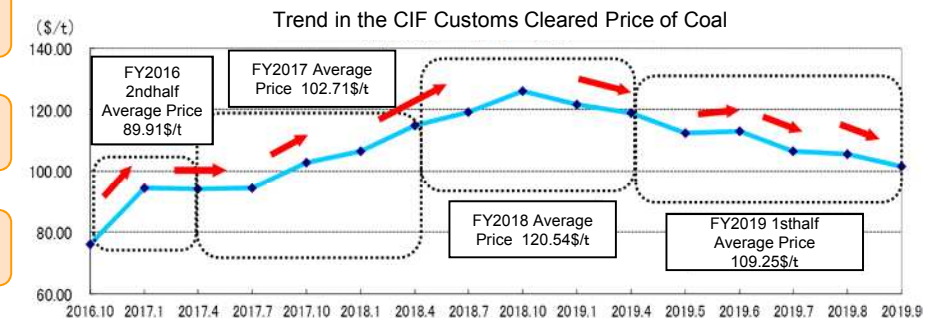
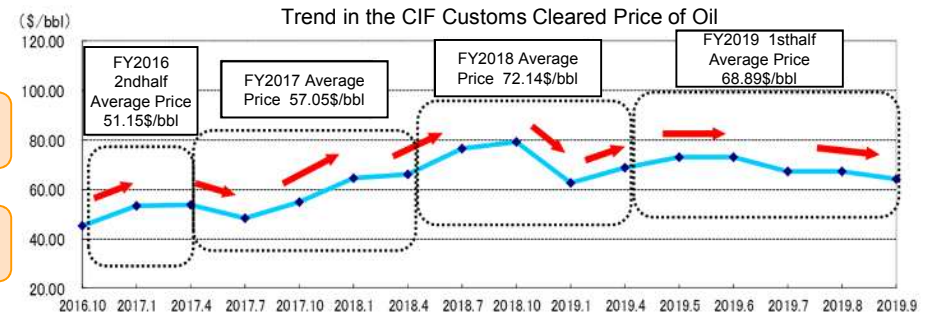
Stable procurement through long-term coal purchase contracts

Optimize the allocation of vessels by using “Shinryomaru”, a specialized coal carrier, and entering into a 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

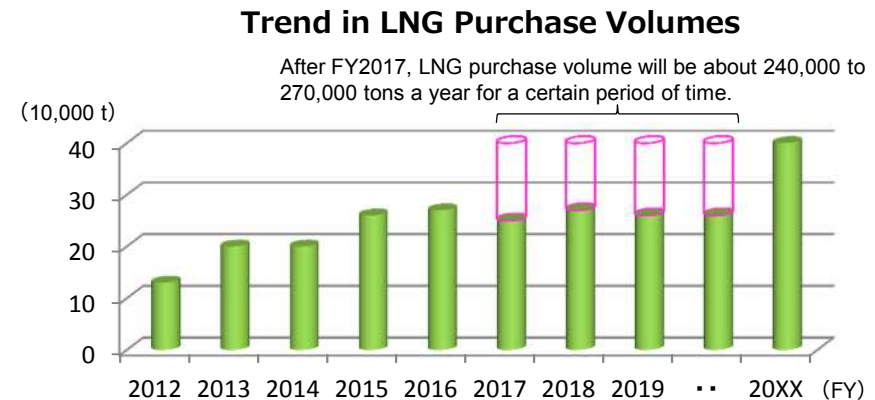
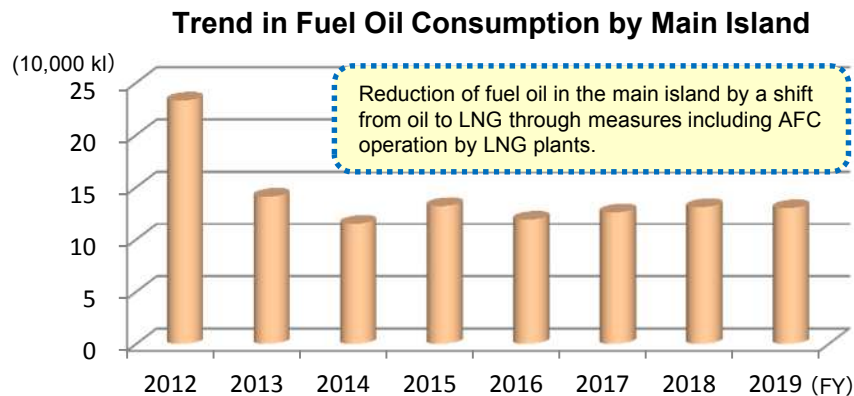
**Achieving stable fuel supply and pursuing cost reductions**



## Q5. What are the efforts to fuel cost reduction?(2/3)

### ■ 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.



### ■ Introduction of “Shinryomaru”, a second-generation specialized coal carrier

- The introduction of “Shinryomaru”, a first-generation specialized coal carrier, in 2003 has made coal transport reliable.
- Since March 2018, the operation of second-generation “Shinryomaru”, which has enhanced environmental performance and fuel efficiency, has started.

<Outline of second-generation “Shinryomaru”>

1. Total length: 234.99 meters
2. Total width: 43.00 meters
3. Summer full load draft: 12.882 meters
4. Deadweight tonnage: 92,049 tons



## Q5. What are the efforts to fuel cost reduction?(3/3)

### ■ Operation of Ishikawa Thermal Power Plant as C heavy oil distribution base to remote islands

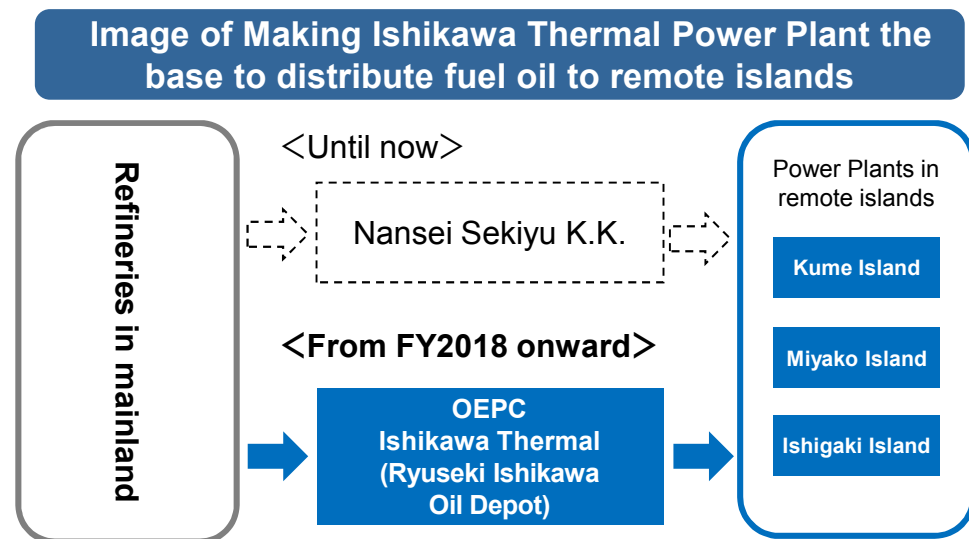
- The terminal cost was considerably increased accompanying Nansei Sekiyu K.K. converting to the terminal business.
  - The heating cost\* of fuel oil rose by the withdrawal from the petroleum refining business.

- Cost reduction by making Ishikawa Thermal Power Plant the base to distribute C heavy oil to remote islands(From May in 2018)
  - Effective utilization of existing heavy oil tank
  - Reduction of heating cost\* by using auxiliary steam of Thermal power plant

\* Cost of heating for increasing the fluidity of C heavy oil, which is highly viscous

#### Fuel cost reduction effect

- The Ishikawa Thermal Power Plant was operating in combination with Nansei Sekiyu until it could operate stably and, as a result, the fuel cost decreased by approximately JPY 800 million in first FY2018.
- Between FY2019 and FY2020, the Ishikawa Thermal Power Plant will operate alone throughout the years, and therefore the fuel cost is expected to decrease by around JPY 0.9 to 1 billion.



# Q6. What are the efforts to reduce CO<sub>2</sub> emissions?(1/2)

## 1 Efforts in electricity business

- 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 commenced operation of Yoshinoura Thermal Power Plants, which are fueled by LNG with low CO<sub>2</sub> emissions, in November 2012.
- OEPC efforts to CO<sub>2</sub> emissions reductions in cooperation with the Electricity Business Council for a Low-Carbon Society.

### [ Key measures against global warming ]

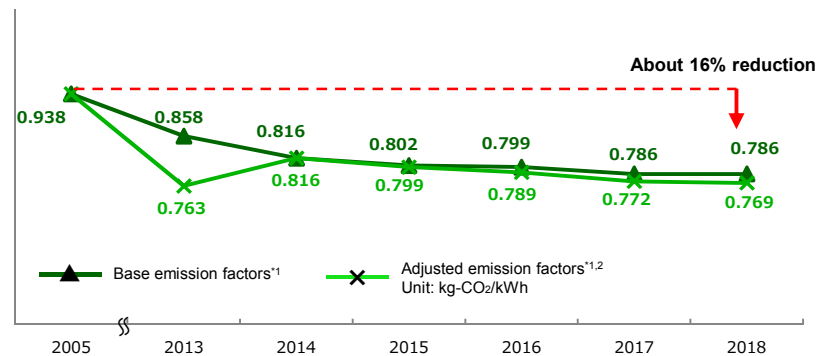
Stable operation of Yoshinoura Thermal Power Plants, which are fueled by LNG

Use of renewable energy (e.g. mixed combustion of woody biomass fuel, Tilttable wind power generators)

Improvement of efficiency of energy use

Promotion of energy-saving and CO<sub>2</sub> saving activities

### Trends of CO<sub>2</sub> emission factors

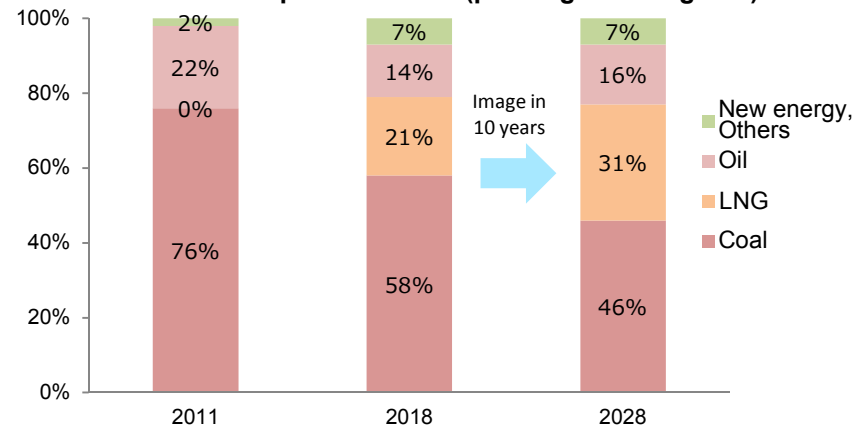


Yoshinoura Thermal Power Plant Generator No. 2 start of operations

Note 1: Electricity sales volume and CO<sub>2</sub> emission factors related to electricity retailers (the main island of Okinawa) in and after FY2016 due to the full liberalization of the electricity market. Figures in and before FY2015 are for former general electricity utilities (main and remote islands).

Note 2: Adjusted emission factors reflecting adjustments related to the feed-in tariff system and other factors.

### Electric Power Composition Ratio (power generating end)



Note 1: The figures include other companies (but excluding demand shifted to new power suppliers).

Note 2: The figures include both the main and remote islands.

Note 3: The figures are generator output.

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

## 2

### Efforts in OEPC Group

- Through the gas supply business, the OEPC Group is working to shift customers' energy sources from heavy oil to LNG, which is low in CO<sub>2</sub> emissions.
- In the overseas business, the OEPC Group contributes to promoting the wide spread use of renewable energy facilities in Pacific island states with high dependency on fossil fuels similar to Okinawa.
- The OEPC Group will make all-out efforts to reduce CO<sub>2</sub> emissions in a comprehensive manner.

#### [ Efforts in gas supply business ]

##### Orion Breweries, Ltd.

- Orion Breweries became the first brewing company in Okinawa to shift its fuels from heavy oil to natural gas.
- Introduction of natural gas is expected to reduce CO<sub>2</sub> emissions by 1,500t annually.



LNG satellite facilities ▲

#### [ Efforts in overseas business ]

##### Delivery of tiltable wind power generators to Tonga.

- Progressive Energy Corporation (PEC) received an order for ODA project involving the Kingdom of Tonga.
- PEC signed a contract with Tonga Power Limited for five tiltable wind power generators.
- On June 2019, PEC completed constructions of five tiltable wind power generators, and handed over them to the Kingdom of Tonga.



▲ Tiltable wind power generators at the Kingdom of Tonga.

## 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	0.84	1.00	1.20
Oil <sup>*3</sup>	71.5	0.79	1.00	0.70	0.84	1.00
LNG	49.5	0.55	0.69	0.38	0.45	0.54

\*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 FY2018.

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

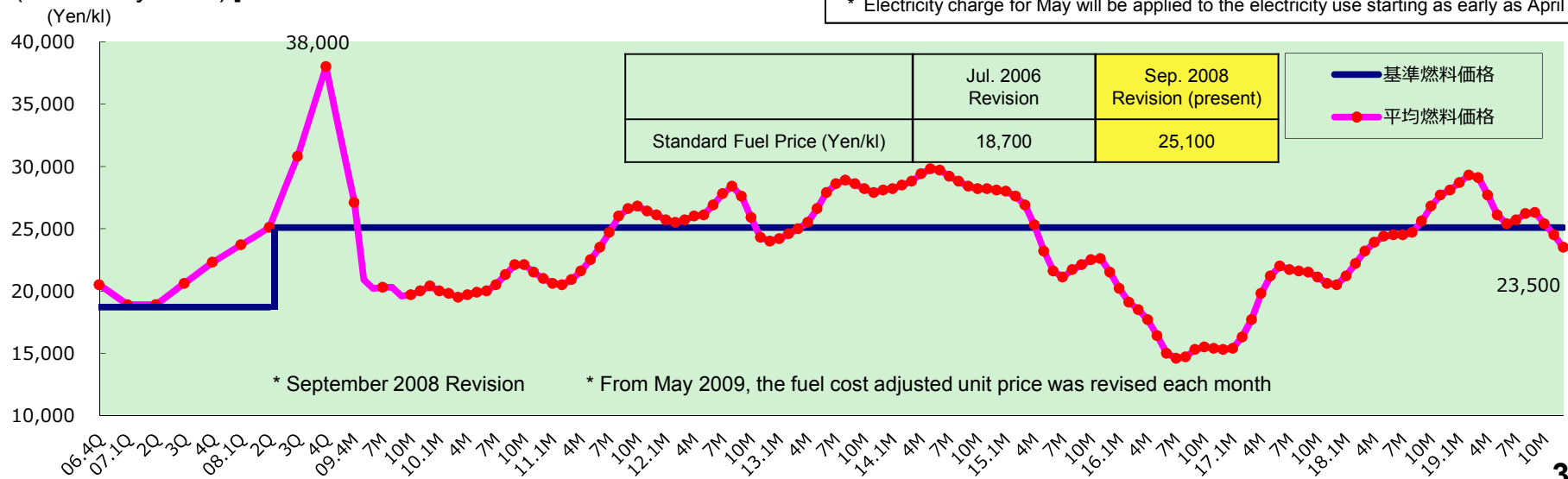
# Q8. The Fuel Cost Adjustment System

■ 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 ]

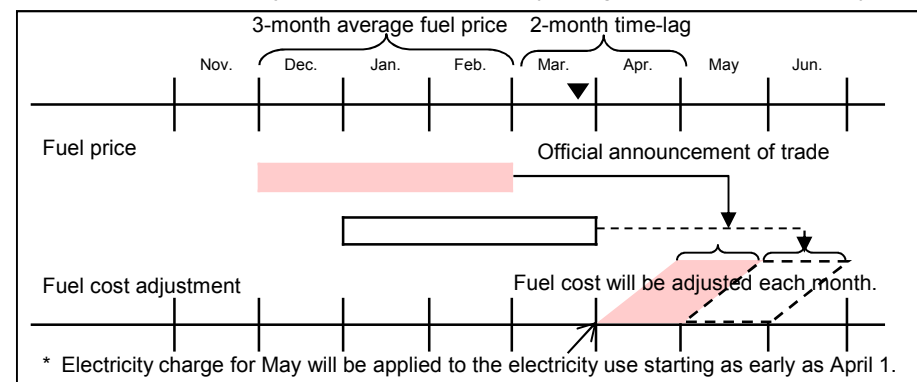
- We will calculate the average fuel price based on the prices of crude oil, coal and LNG on the trade statistics during the period between five months and three months prior to the fuel cost adjustment, and electricity charge will be automatically adjusted each month by comparing the above price with 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.

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



## [ 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.





## 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 30,2019.

### Model Unit Rates for All Companies (As of December 2019)

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

(Unit: yen/kWh)

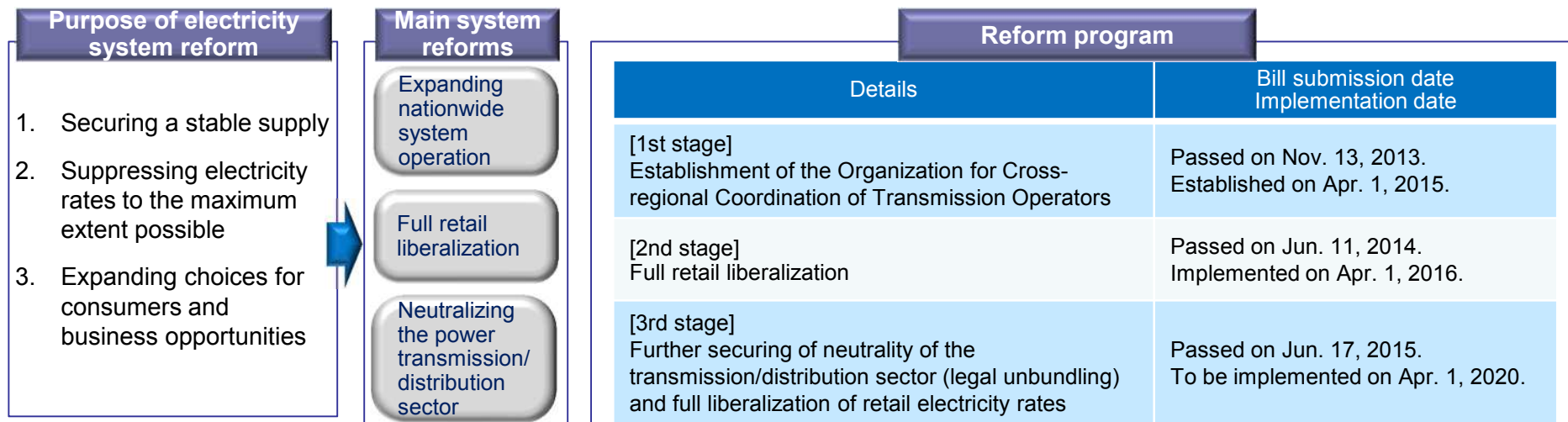
	OEPC	Co. A	Co. B	Co. C	Co. D	Co. E	Co. F	Co. G	Co. H	Co. I
Meter-rate lighting Model Basic Unit 260	29.03 ⑨	32.81 ⑩	28.24 ⑧	27.47 ⑦	26.25 ④	25.68 ①	26.23 ③	26.97 ⑤	27.04 ⑥	25.94 ②

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

- The Bill for the Act for Partial Revision of the Electricity Business Act enforced in November 2013 mentioned that Electricity System Reform was decided to implement by dividing it into three phases. 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 has started offering “the wholesale electricity menu for supply-demand adjustment” as part of making further voluntary efforts contributing to revitalizing the wholesale electricity market since April 2018.
- As the legal unbundling of the transmission/distribution sector for further ensuring neutrality of the transmission/distribution sector, on June 14 2019, the Minister of Economy approved that the OEPC concurrently would be able to engage in the general electricity transmission and distribution utility business based on the provisions in Article 22-2, Paragraph 1 of the proviso of the amended Electricity Business Act. So, the OEPC becomes the “the approved general electricity transmission and distribution utility” which can operate power retail business and power generation business. This means that the OEPC can continue maintaining the integrated system for power transmission and distribution.



\*The full-scale liberalization of electric retail prices has been postponed to after April 2020.

# Q11. What are the Special Tax Measures?

- We consider that special taxation measures are necessary for promoting business in Okinawa Prefecture and improving the lives of Okinawa residents on the grounds that disadvantages inherent in Okinawa's electricity business have remained unchanged. For example, there are many small and isolated systems and Okinawa is dependent on thermal power.
- The amount of tax exemption based on the special taxation measures is deducted from the cost of 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 FY2018 : about 3.5 billion yen.
- The value of the alleviation measures for FY2019 : expected to be 3.5 billion yen.

## Q12. Response to the Corporate Governance Code

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

- The Company has complied with all principles of the 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.

### 2. Our response to the revised Corporate Governance Code

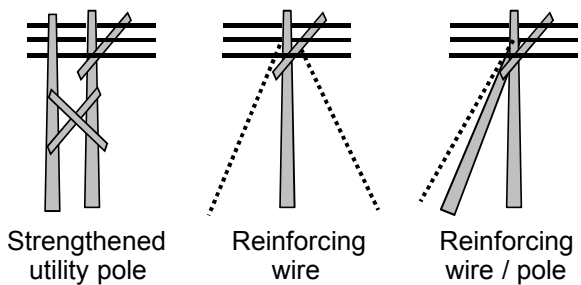
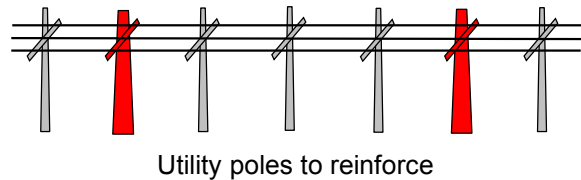
- “Nomination and Compensation Committees” has been established.

- An outside female director was appointed at the Ordinary General Meeting of Shareholders which was held in June 2019.

# Q13. What are the efforts to typhoon measures?

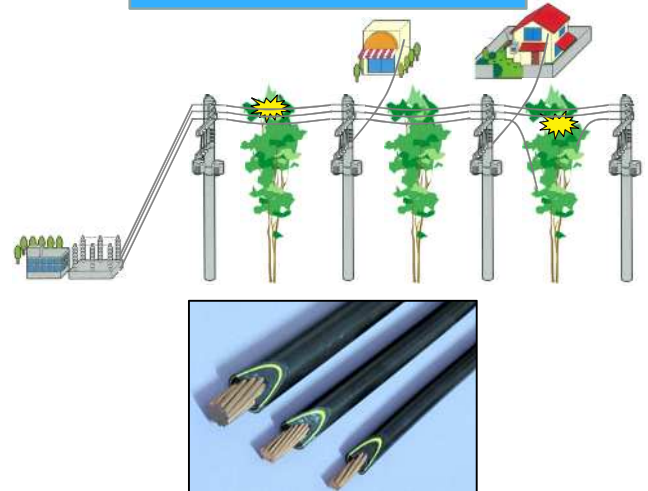
- Since many typhoons approach Okinawa every year, the OEPC is taking basic measures by thoroughly inspection patrol electricity transmission/distribution facilities and regularly cutting trees, and is also taking various other precautionary measures.

## The measures to prevent the continuous collapse of utility poles



It's possible to prevent the continuous collapse of utility poles by reinforcing utility poles.

## Replace to abrasion-resistant electric wires



Abrasion-resistant electric wires resist to damage from trees contacting them and prevent disconnection caused by abrasion.

## Use of electric wires to reduce wind pressure



Electric wire that reduces wind pressure

Reduce the wind pressure load by providing grooves on the surface of the electric wire.

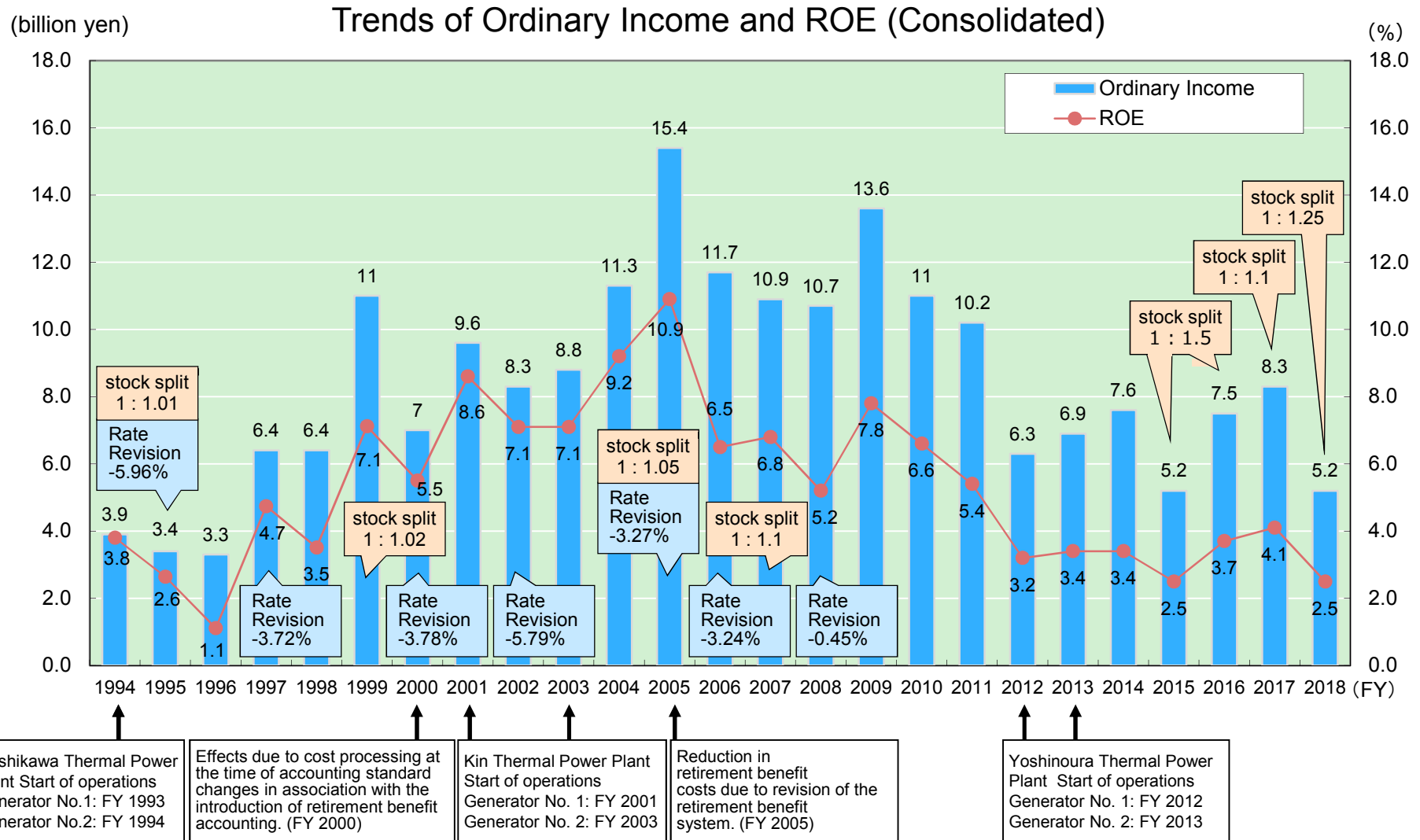
## Design standard for transmission towers

Transmission towers need to be designed to withstand a wind speed of up to 40 m/s based on the "Ministerial Order to Provide Technical Standards for Electrical Equipment (Ministry of Economy, Trade and Industry)". However, the OEPC design transmission towers that can withstand a wind speed of up to 60 m/s in consideration of the maximum typhoon wind speed in the past.

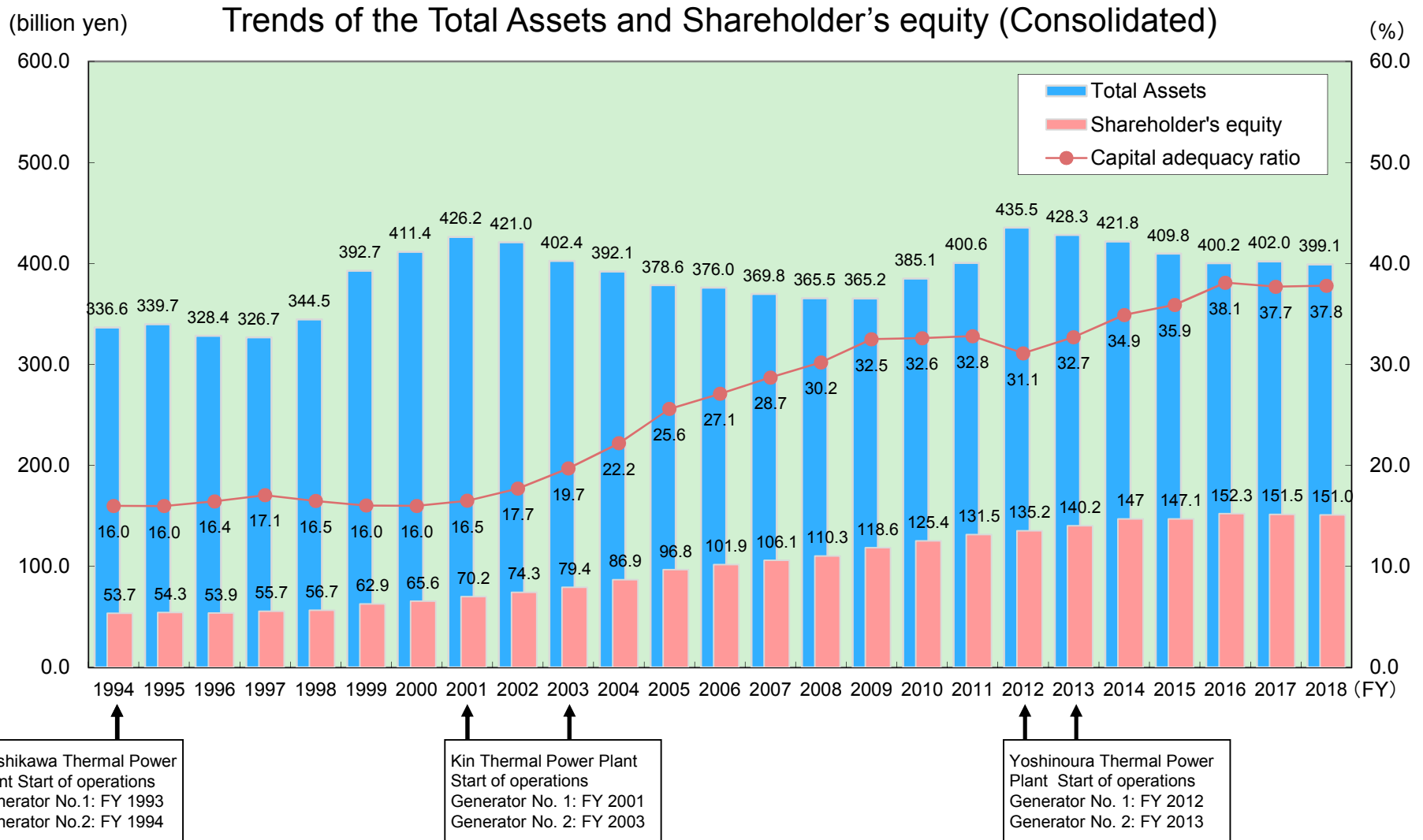
## Public relations activities

The OEPC is making an effort to prevent the spread of damage by disseminating typhoon measures at home (e.g. preventing zinc roofs, tents and signboards from flying off) on TVCM, Radio, SNS before the typhoon approaches.

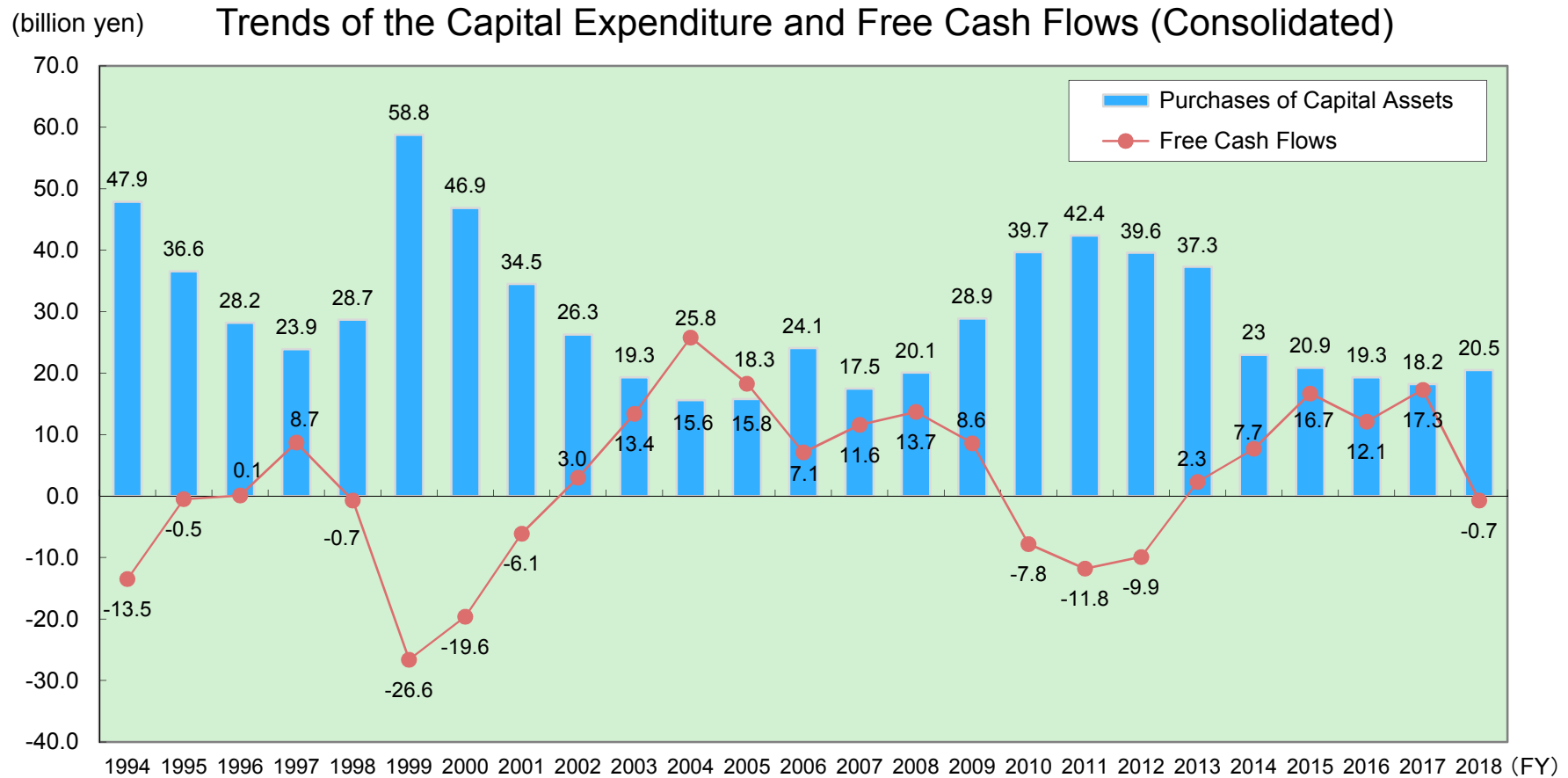
# Reference 1: Trends of Ordinary Income and ROE



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



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



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.



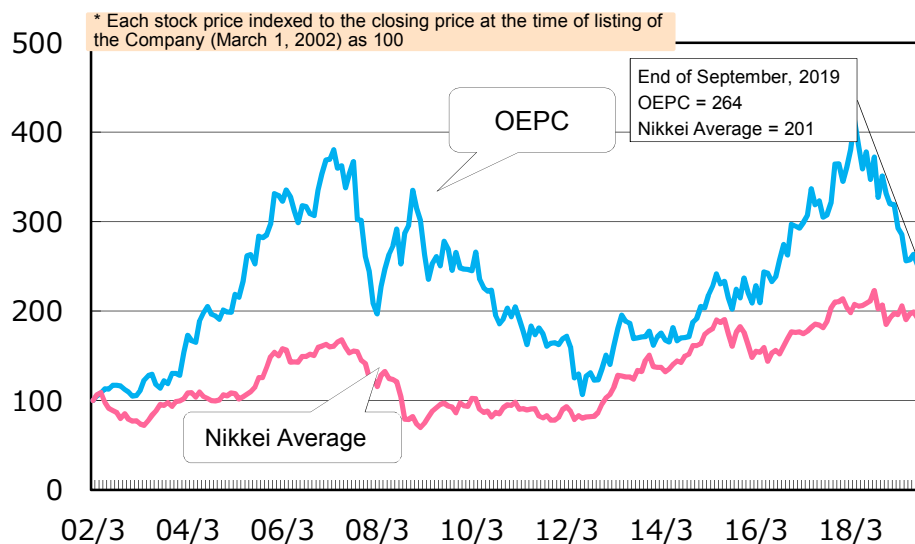
# Reference 4: Change in Okinawa Electric Power's Stock Price

Recent stock price changes: from January 4, 2019 to September 30, 2019

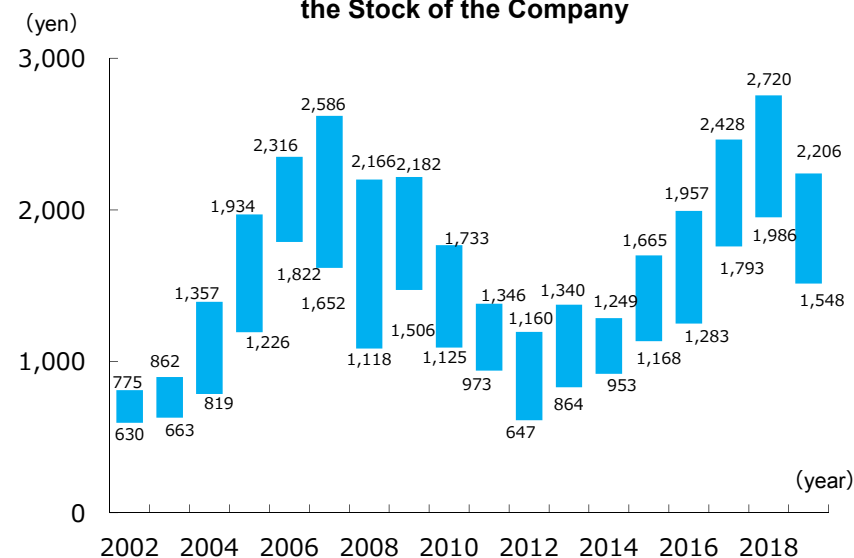
	Okinawa Electric Power Company, Inc.	Nikkei Average
Stock price as of January 4, 2019 (closing price)	2,206 yen	19,561 yen
All-time high (closing price)	2,206 yen ( - ) as of Jan. 4, 2019	22,307 yen (+14.0%) as of Apr. 25, 2019
All-time low (closing price)	1,548 yen (-29.8%) as of Aug. 13, 2019	19,561 yen ( - ) as of Jan. 4, 2019
Stock price as of September 30, 2019 (closing price)	1,770 yen (-22.9%)	21,755 yen (+11.2%)

(Note) .Figures in bracket indicate percentage change in the stock price from its closing price on January 4, 2019.

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



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



(Note) The stock split was implemented six times in the indicated period (Record date :End of March 2005, End of March 2007, End of May 2015 ,End of May 2016, End of May 2017 and End of May 2018), and adjustment has been made for the figures before the end of May 2018.

# Reference 5: Earnings Per Share and Payout Ratio

## Earnings per Share and Payout Ratio

	FY	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
Net income <sup>*1</sup>	Million yen	8,950	8,047	6,956	4,318	4,731	4,943	3,647	5,517	6,273	3,751
Earnings per Share <sup>*1</sup> (Post-adjustment after stock split) <sup>*2</sup>	yen	512.04 (165.50)	460.58 (148.87)	398.15 (128.70)	247.20 (79.90)	270.80 (87.53)	282.99 (91.47)	139.22 (67.50)	140.41 (102.12)	147.00 (117.60)	72.38
Dividend per Share (Post-adjustment after stock split) <sup>*2</sup>	yen	60 (19)	60 (19)	60 (19)	60 (19)	60 (19)	60 (19)	60 (28)	60 (44)	60 (48)	60
Payout Ratio <sup>*1</sup>	%	11.7	13.0	15.1	24.3	22.2	21.2	43.1	42.7	40.8	82.9
Dividend Yield	%	1.23	1.58	1.75	1.87	1.72	1.38	1.98	2.27	1.96	3.18
Price Book-value Ratio <sup>*1</sup>	x	0.72	0.53	0.45	0.41	0.44	0.52	0.54	0.68	0.84	0.65
Price Earning Ratio <sup>*1</sup>	x	9.5	8.3	8.6	13.0	12.9	15.4	21.8	18.8	20.8	26.0

\*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.

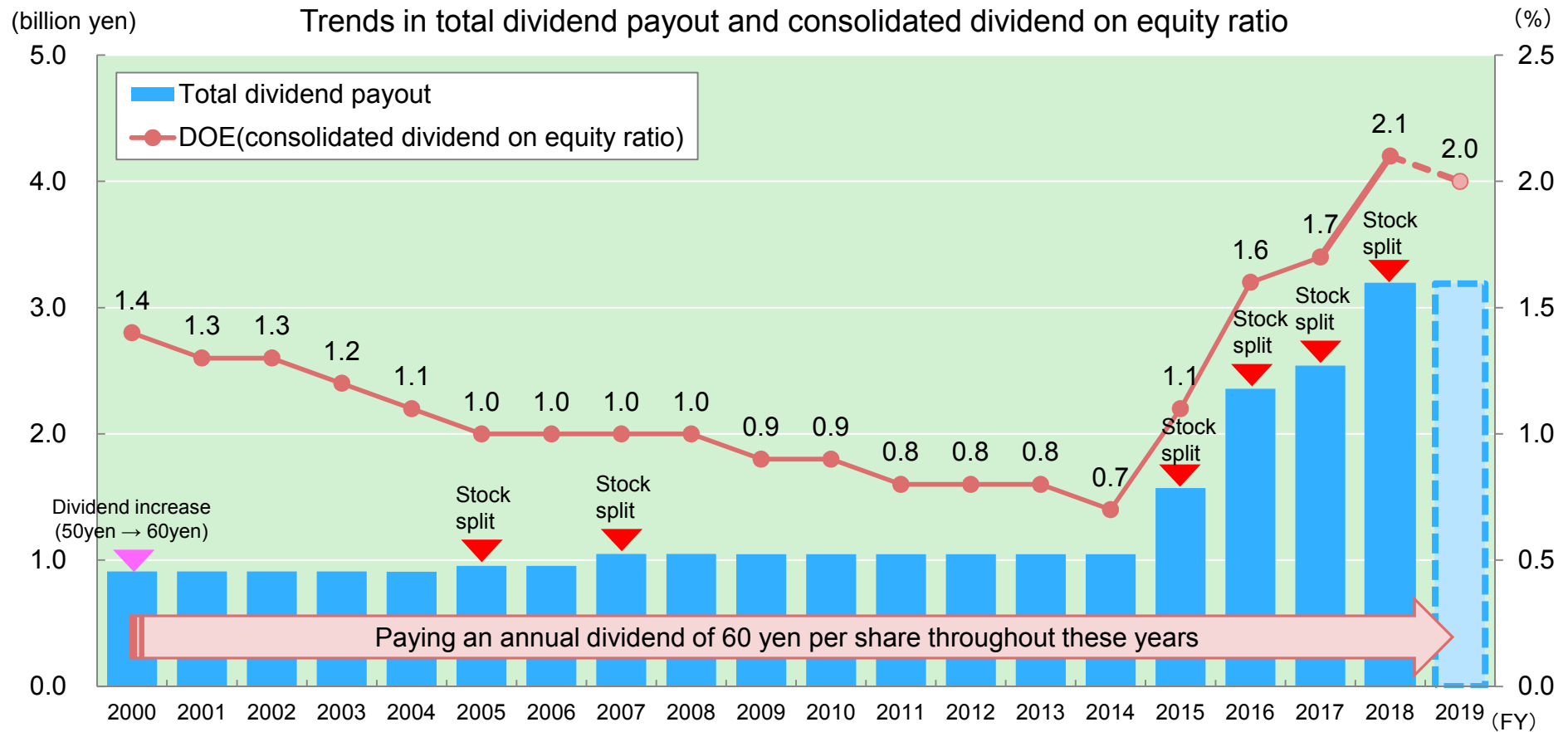
## History of Stock Splits (including planned one)

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
Apr. 01, 2007	17,524,723	Split 1:1.1

Date	Issued number of shares of common stock	
Jun. 01, 2015	26,287,084	Split 1:1.5
Jun. 01, 2016	39,430,626	Split 1:1.5
Jun. 01, 2017	43,373,688	Split 1:1.1
Jun. 01, 2018	54,217,110	Split 1:1.25

# Reference 6: Policy for Returning Profits to Shareholders

- Our basic policy is to “distribute stable and continuous dividends,” and we have continuously been distributing an annual dividend of 60 yen per share since 2000.
- We will make efforts to maintain “a DOE of over 2.0%,” which is our indicator.



# Reference 7: Stock Split

- We implemented a stock split for four consecutive years on June 2018. (Eighth time since being listed on the stock market.)
- This was to increase the actual amount of dividend per share for maintaining an annual dividend of 60 yen per share.

## 1. Purpose of stock split

To distribute profits back to all our shareholders and increase the liquidity of our shares

## 2. Method of stock split

A 1.25-for-1 stock split

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

Total number of issued shares prior to the stock split :  
43,373,688 shares

Number of shares increasing as a result of the stock split :  
10,843,422 shares

Total number of issued shares after the stock split :  
54,217,110 shares

Total number of authorized shares after the stock split :  
92,800,000 shares

## 4. Stock Split Calendar

Record date: May 31, 2018  
Effective date: June 1, 2018

## 5. Expected dividend for March 2020

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
Jun.1, 2018	54,217,110	1:1.25

# Reference 8: Repurchase of Shares

- We repurchased treasury stock at FY2017 in accordance with the provisions in the articles of incorporation pursuant to the provisions of the Companies Act.

## 1. Purpose of repurchasing shares

To increase capital efficiency and implement flexible capital policy

## 2. Class of shares to be repurchased

Common shares

## 3. Total number of shares to be repurchased

1,750,000 shares

## 4. Total purchase price for repurchase of shares

4,900,602,600 yen

## 5. Period of repurchase

From Nov. 29, 2017 to Dec.15, 2017


## 6. Method of repurchase

Market purchases including the purchase of treasury stock through the off-hours trading (ToSTNeT-3)

<Reference: Number of treasury stock held>

Date	Number of treasury stock
As of 2017.09.30	156,197 shares
As of 2018.03.31	1,906,955 shares
As of 2019.03.31	2,389,436 shares
As of 2019.09.30	2,389,762 shares

\* We implemented a stock split on June 1, 2018.



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.

**【Enquiries regarding this document】**

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