

# Management Reference Materials

**March 2012**



The Okinawa Electric Power Company, Inc.

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# Characteristics of the Business Base

## Advantage

		Reference page
Demand for Electric Power	<ul style="list-style-type: none"> <li>◆ Increasing demand as population increasing</li> <li>◆ As the proportion of energy for consumer use is high, the effects of business fluctuations are low</li> </ul>	2
Competition	<ul style="list-style-type: none"> <li>◆ Severance from competition among electric power companies on account of its isolated system</li> <li>◆ No competition with PPS (Power Producers and Suppliers)</li> <li>◆ The advance of private power generation operations is limited (Prevention of demand withdrawals through Progressive Energy Corp , a subsidiary of OEPC.)</li> </ul>	3

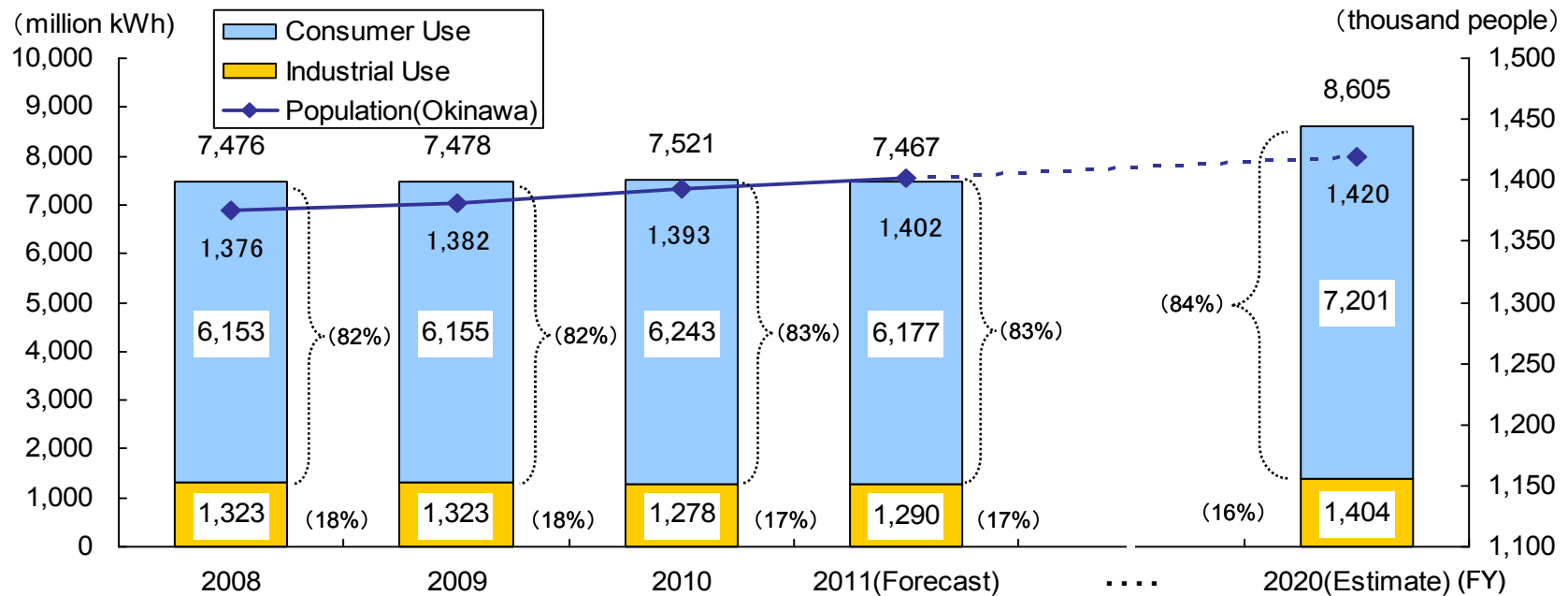
## Disadvantage

		Reference page
Electric Power Generation Facilities	<ul style="list-style-type: none"> <li>◆ Due to having an isolated system, it is necessary to have a high margin of power generation reserves</li> <li>◆ Electrical power source composition reliant only on oil and coal</li> </ul>	4~7
Fuel	<ul style="list-style-type: none"> <li>◆ As oil and coal are the only fuels used, high commodity prices exert a great influence</li> </ul>	8~10
Remote Islands	<ul style="list-style-type: none"> <li>◆ With remote islands where cost efficiency is low, the Remote Islands Company constantly records losses</li> </ul>	11~12
The Environment	<ul style="list-style-type: none"> <li>◆ Dependent on fossil fuels (oil and coal) with a high environmental burden</li> </ul>	13



# Demand for Electric Power

**Stable growth is forecasted for demand for electric power, centering on increased demand for consumer use accompanying population increases.**



Okinawa		Annual Average Growth Rate (%)	
		1999-2009	2009-2020
Demand for Electric Power	Consumer use	1.3 (1.5)	1.4 (1.6)
	Industrial use	1.4 (1.4)	0.5 (0.5)
Total		1.3 (1.5)	1.3 (1.4)

Note : Figures in brackets are post temperature correction.

Nationwide (Excluding Okinawa)		Annual Average Growth Rate (%)	
		1999-2009	2009-2020
Demand for Electric Power	Consumer use	1.2 (1.4)	1.2 (1.1)
	Industrial use	-0.1 (-0.1)	1.4 (1.4)
Total		0.7 (0.8)	1.3 (1.2)

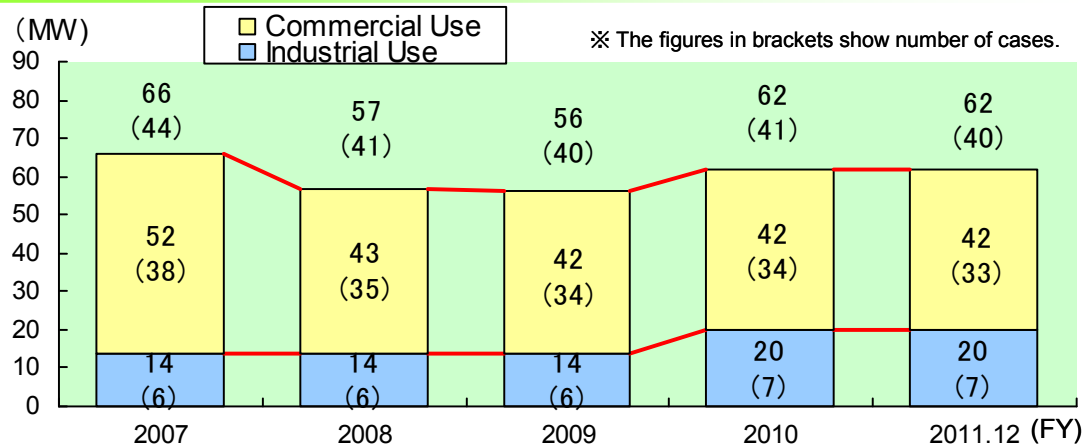
Source: Japan Electric Power Survey Committee  
(Growth rates were calculated from loads for distribution)  
Note: Figures in brackets are post temperature correction.



# Competition with Private Power Generation Operations

- The proportion of private power generation in Okinawa is 3%
- Progressive Energy Corp's share of private power generation in commercial use sectors is 59%  
(As of September 30, 2011)

## Trend in the Permitted Output of Private Power Generators



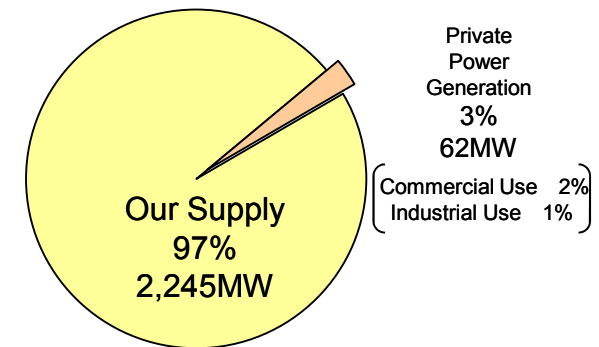
### Trend in independent power generation (output and number of facilities)

	FY 2008	FY 2009	FY 2010	FY 2011
Switch to power purchase	-11MW (-5Cases)	-1MW (-2Cases)	-1MW (-2Cases)	-1MW (-1Case)
Switch to independent power generation	1MW (2Cases)	α (1Case)	7MW (3Cases)	1MW (0Case)
Total	-9MW (-3Cases)	-1MW (-1Case)	6MW (1Case)	-αMW (-1Case)

\* Totalizing only continuously used power generators interconnected to the company's power grid.  
\* Excluding wind power, solar power and the company's facilities.

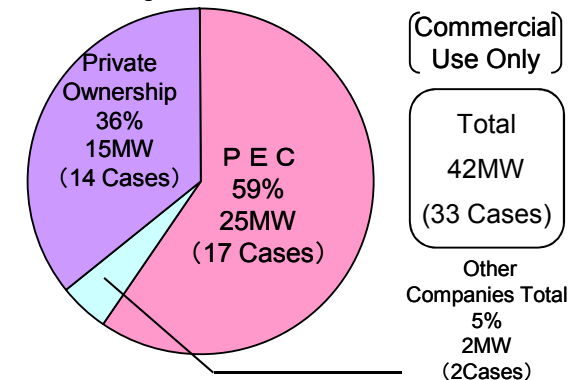
## Status of market penetration by private power generators

Proportion of private power generation in Okinawa



\* Figures for OEPC supply include Electric Power Development Co., Ltd.

Proportion of PEC's share of private power generation in Okinawa



\*PEC: Progressive Energy Corp.



# Power Generation Facilities (Reserve Capacity)

## Generation Reserve Capacity

(Thousand kW, %)

	2010 【Result】	2011	2015	2020
Peak Load	1,382	1,437	1,516	1,617
Supply Capacity	1,835 (1,586)	2,084 (1,835)	2,094 (1,941)	2,230 (1,981)
Reserve Capacity	453 (204)	647 (398)	578 (425)	613 (364)
Reserve Margin(%)	32.8 (14.8)	45.0 (27.7)	38.1 (28.0)	37.9 (22.5)

Note :The figures in brackets show demand-supply balances when gas turbines are excluded.  
Maximum electric power in FY2010 were generated in July.

- A high generation reserve margin is necessary for such reasons as the inability to exchange power with other electric power companies because of OEPC's isolated system and the responsibility to provide stable supply as a public utility.
- The power supply reserve is achieved by securing the equivalent reserve capacity of the largest single generator so that it is possible to provide stable supply even if the largest unit breaks down.
- Part of the margin is provided by gas turbines, which carry lower investment burden (permitted output: 266MW).

Although there are factors encouraging increased facility investment associated with the growth of electric power demand, OEPC is making efforts to suppress the level of facility investment and promote load leveling and the like, aiming at efficient facility formation.



# Power Generation Facilities (Power Supply Composition)

## Power Supply Composition

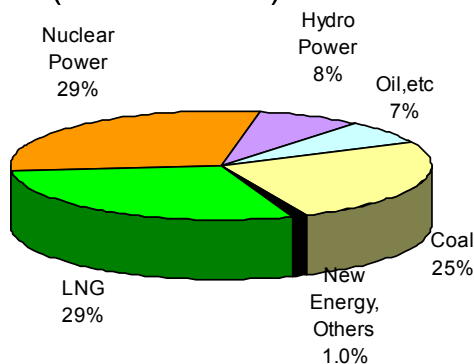
- Power supply is dependent on oil and coal because of the difficulty of finding sites for hydro or nuclear power generation due to factors including geographic and topographical characteristics and constraints on the scale of demand.



- Introducing LNG thermal power stations to diversify power supply sources  
Improving security for the stable supply of electric power

### Electric Power Composition Ratio (Generating End)

Totals for the 10 Major Electric Power Companies  
(FY2009 Results)



(Source: The Federation of Electric Power Companies of Japan)

### Okinawa Electric Power Company

(FY2010:Results)

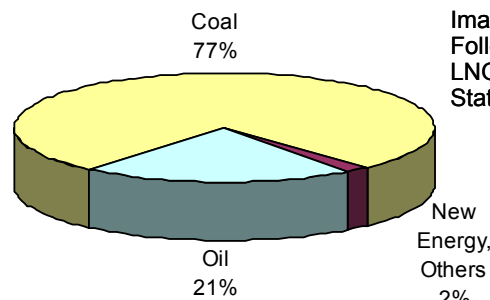
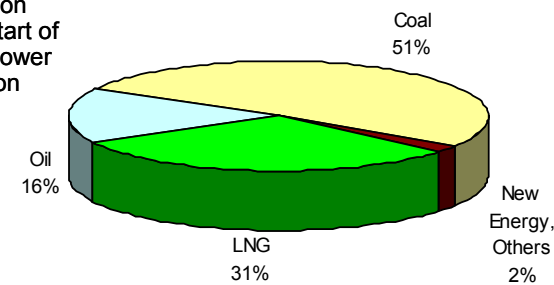


Image of Situation  
Following the Start of  
LNG Thermal Power  
Station Operation

(FY2020)



\* Both pie charts include energy supplied by other companies.





# Power Generation Facilities (Yoshinoura LNG Thermal Power Plant)

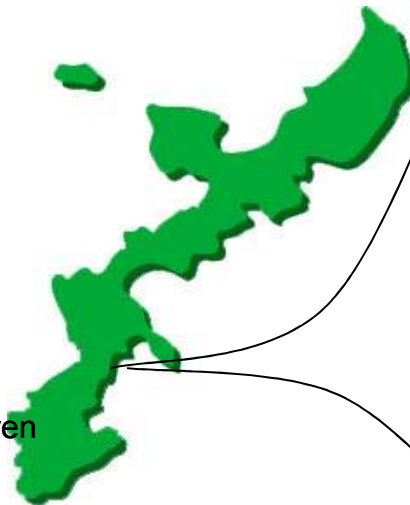
## Construction Purpose

Response towards steady demand increases  
 Environmental measures → Avoidance of large environment costs  
 Fuel diversification → Improvement of energy security  
 Search for new business opportunities making efficient use of LNG

## Investment Plan

Power generation facilities, Generators No.1 & 2 (251,000 kW each)  
 2 LNG terminals (140,000 kl each)  
 Including other expenses, the operation is on the scale of 100 billion yen  
 The forecast investment peak is from FY2010 – FY2012

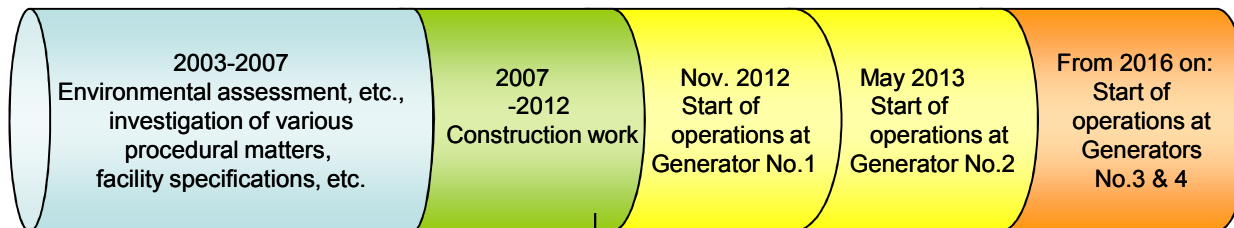
Okinawa Prefecture



【Site for Power plant construction】



## Construction Schedule



### Major events in 2012

- Start of acceptance of LNG
- Start of comprehensive test run

Conceptual Image of the Completed Facility





# Power Generation Facilities (Yoshinoura LNG Thermal Power Plant)

## Effects on Finance (Past Tendencies)

- The balance of interest bearing liabilities increased
- Large depreciation burden and decreased income associated with large-scale facility investment

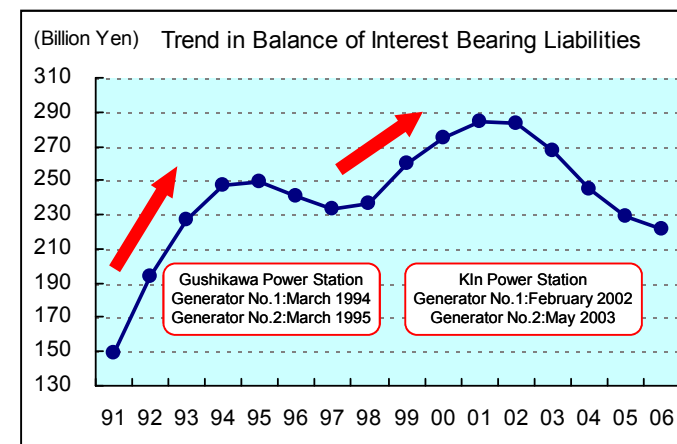
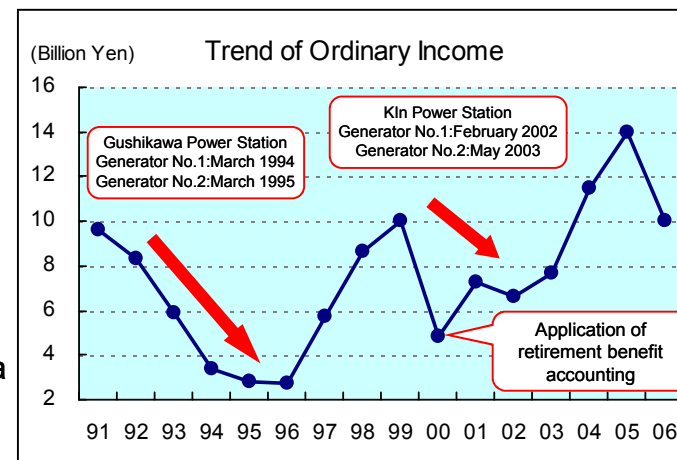
## Countermeasures

- Creation of strong financial characteristics able to withstand the Yoshinoura Thermal Power Station investment burden
  - Control the increase of the balance of interest bearing liabilities
- Reduction of the depreciation burden associated with the start of operations at Yoshinoura Thermal Power Station
  - Investigating the way for cost leveling including the finance lease for the LNG terminals.

## Perspective

Power Generation Facilities	LNG Terminals
<ul style="list-style-type: none"> <li>■ Application of usual finance to electricity operation as a whole</li> <li>■ Earlier depreciation as previously using a fixed percentage method</li> </ul>	<ul style="list-style-type: none"> <li>■ Aim at stable costs for a part of fuel costs</li> <li>■ Currently investigating cost leveling through lease finance</li> </ul>

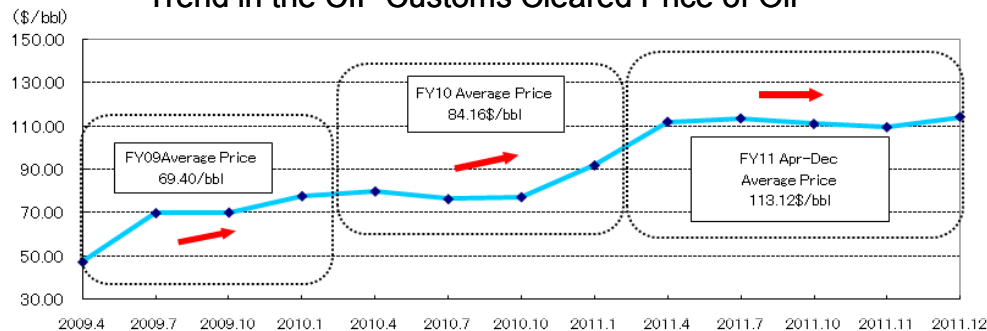
•If finance lease is adopted, the company applies on-balance sheet and non-transfer-ownership contracts.



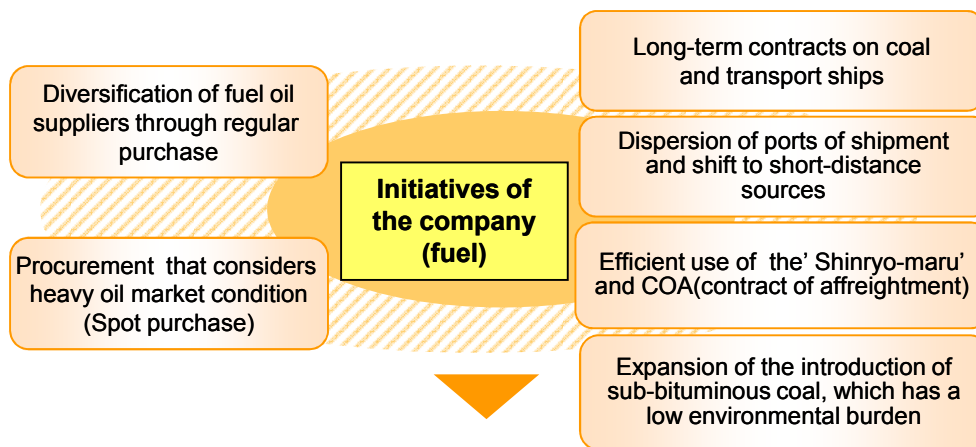
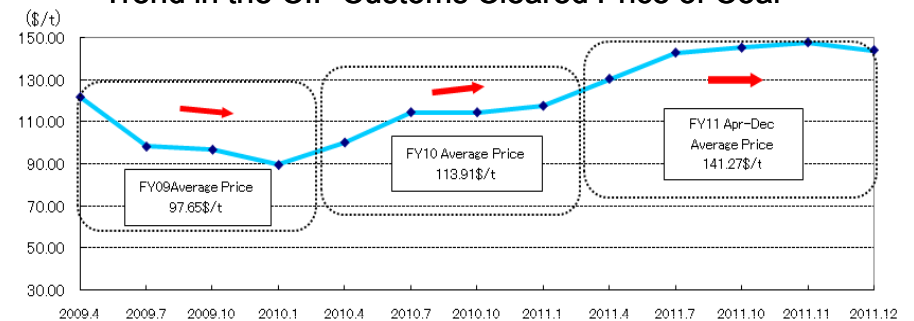
# Fuel

- Great effects are exerted on the company by movements in fuel prices.
- The prices of fuel oil and coal tend to rise and their outlook is uncertain mainly against the backdrop of political instability in the Middle East and inflows of speculative money, in addition to an increase in demand following economic growth of China and India.

Trend in the CIF Customs Cleared Price of Oil



Trend in the CIF Customs Cleared Price of Coal



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

## Activities this term

### <Fuel Oil>

- Diversification of fuel oil suppliers through regular purchase
- Reduction of fuel costs via utilization of spot market

### <Coal>

- Achieving stable coal supply and fuel cost reduction via long term contracts for coal and transport vessels
- Secure stable supply and reduced fuel cost by dispersing embarkation port and shifting to closely-located supply sources.
- Reduce transportation cost by utilizing "Shinryomaru", a specialized carrier for low transportation cost, and competitive COA (Contract of Affreightment).
- Life expansion of ash processing facilities and the reduction of fuel costs by increasing the use of sub-bituminous coal which has lower ash, lower sulfur and lower environmental load than bituminous coal.

\* Although there is a time lag, fuel price changes are reflected to the electricity rates through the Fuel Cost Adjustment System.

The Okinawa Electric Power Company, Inc.



# The Fuel Cost Adjustment System

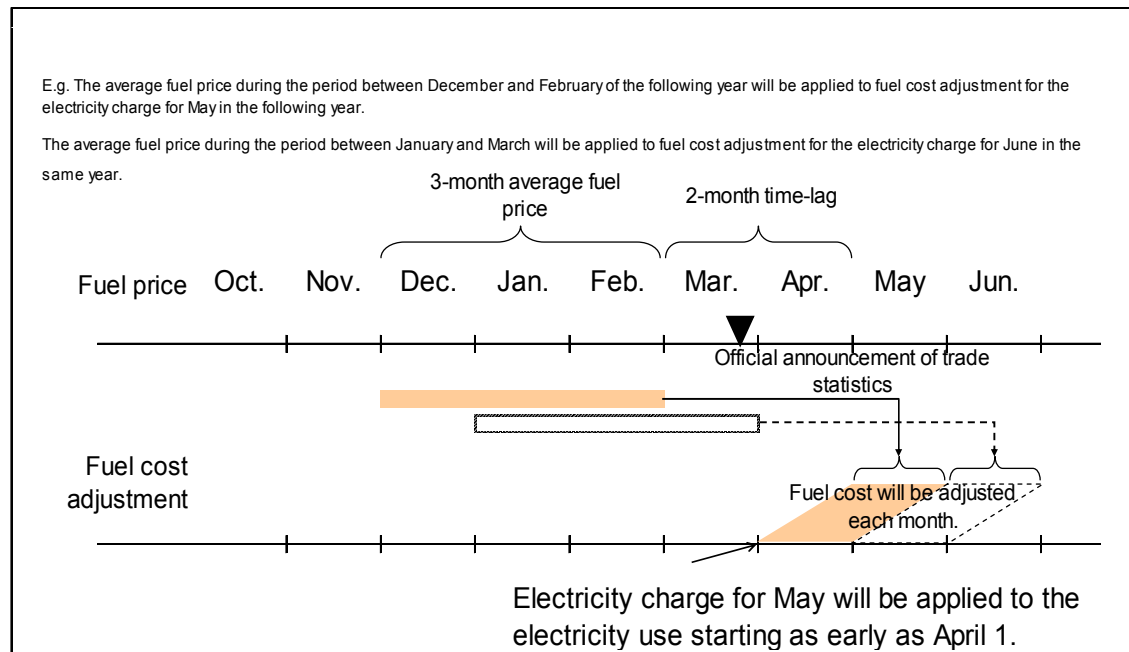
## Summary of the System

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

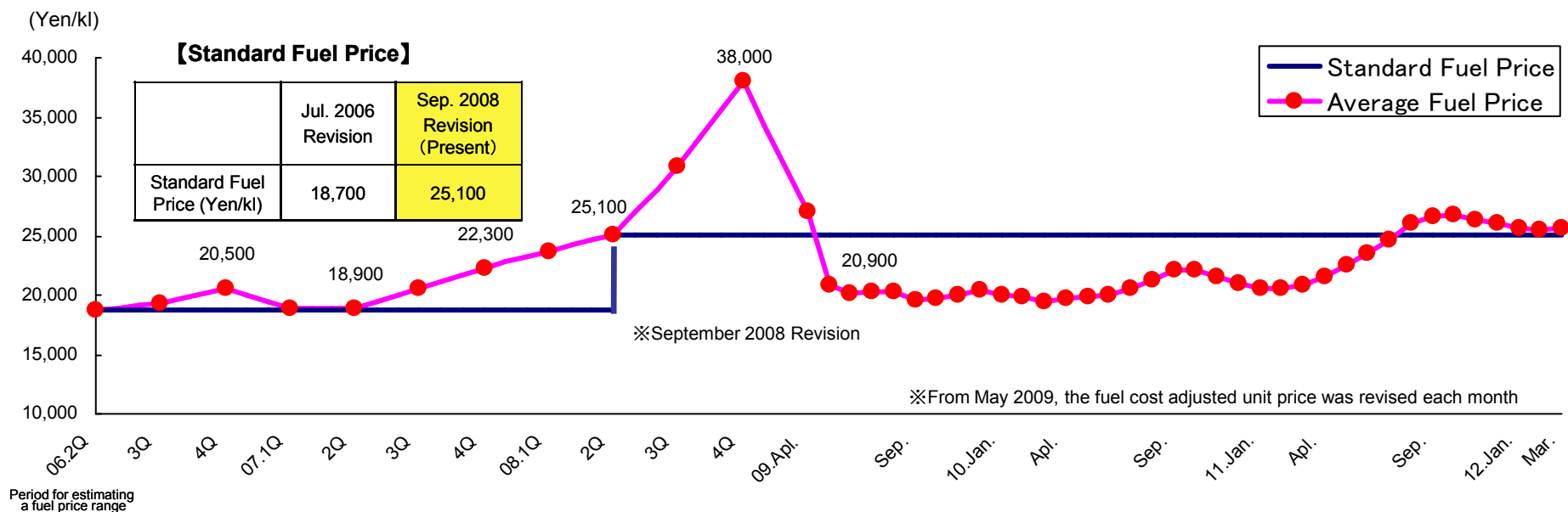
- We will calculate the average fuel price based on the prices of crude oil, coal and LNG on the trade statistics during the period between five months and three months prior to the fuel cost adjustment, and electricity charge will be automatically adjusted each month by comparing the above price with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

## Conceptual drawing of the fuel cost adjustment system



# Trend of Average Fuel Price and Standard Fuel Price

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



Period for applying the Fuel cost adjustment system	11.Apl.	11.May	11.Jun.	11.Jul.	11.Aug.	11.Sep.	11.Oct.	11.Nov.	11.Dec.	12.Jan.	12.Feb.	12.Mar.
Period for estimating a fuel price range	10.Nov. ~ 11.Jan.	10.Dec. ~ 11.Feb.	11.Jan. ~ 11.Mar.	11.Feb. ~ 11.Apl.	11.Mar. ~ 11.May	11.Apl. ~ 11.Jun.	11.May ~ 11.Jul.	11.Jun. ~ 11.Aug.	11.Jul. ~ 11.Sep.	11.Aug. ~ 11.Oct.	11.Sep. ~ 11.Nov.	11.Oct. ~ 11.Dec.
Average Fuel Price (yen/kl)	21,600	22,500	23,500	24,700	26,000	26,600	26,800	26,400	26,100	25,700	25,500	25,700
Average Crude Oil Price (yen/kl)	45,047	47,556	50,223	53,667	57,367	59,177	58,852	57,240	55,678	54,452	53,399	54,205
Average Coal Price (yen/t)	9,488	9,757	10,059	10,398	10,752	10,977	11,202	11,203	11,219	11,108	11,210	11,225

### 【Method of calculating Average Fuel Price】

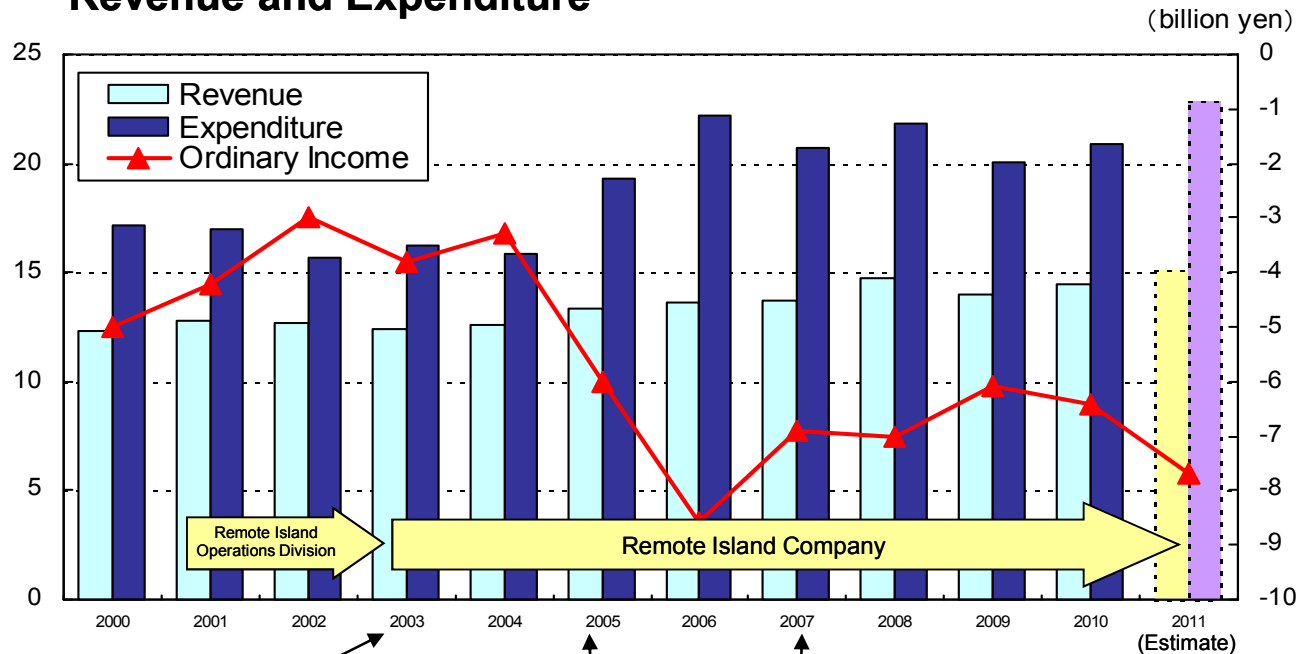
**Average Fuel Price = A × α + B × β** A : Average crude oil price per kiloliter in each quarter B : Average coal price per ton in each quarter

※ 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 Sep. 2008 effective)



# Improvement of Remote Island Income and Expenditure [1/2]

## Movements in Remote Island Revenue and Expenditure

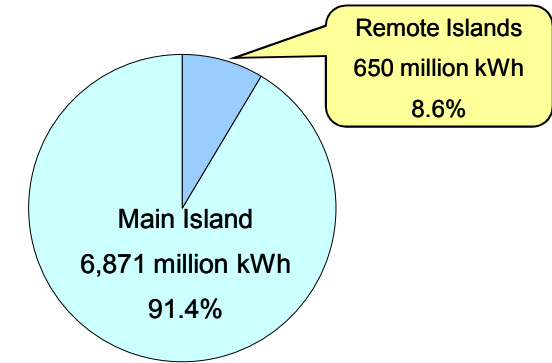


Damage worth 800 million yen due to Typhoon No.14(Miyako) (FY: 2003)

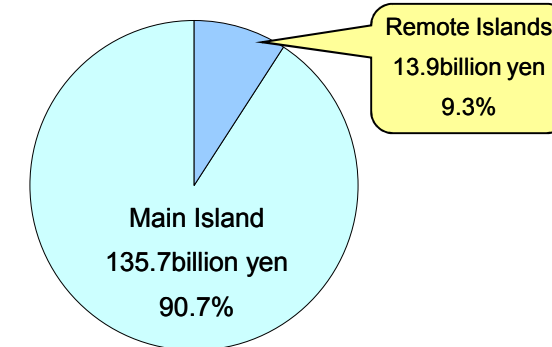
Increased Fuel Costs  
 • Change of Oil Type(C → A heavy oil)  
 • High Cost of Crude Oil (FY2005-)

Decreased Fuel Costs  
 • Change of Oil Type (A → FCC-C heavy oil)

Electricity Sales (FY2010)  
 (Total : 7,521 million kWh)



Residential, Commercial and Industrial Use Charges (FY2010)  
 (Total : 149.6 billion yen)



Remote island business occupies slightly less than one-tenth of electricity sales and residential, commercial and industrial use charges.

	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011 (Estimate)
Revenue	12.3	12.8	12.7	12.4	12.6	13.3	13.6	13.7	14.7	14.0	14.5	15.1
Expenditure	17.2	17.0	15.7	16.2	15.9	19.3	22.2	20.7	21.8	20.1	20.9	22.9
Ordinary Income	-5.0	-4.2	-3.0	-3.8	-3.3	-6.0	-8.6	-6.9	-7.0	-6.1	-6.4	-7.7



# Improvement of Remote Island Income and Expenditure [2/2]

- 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.

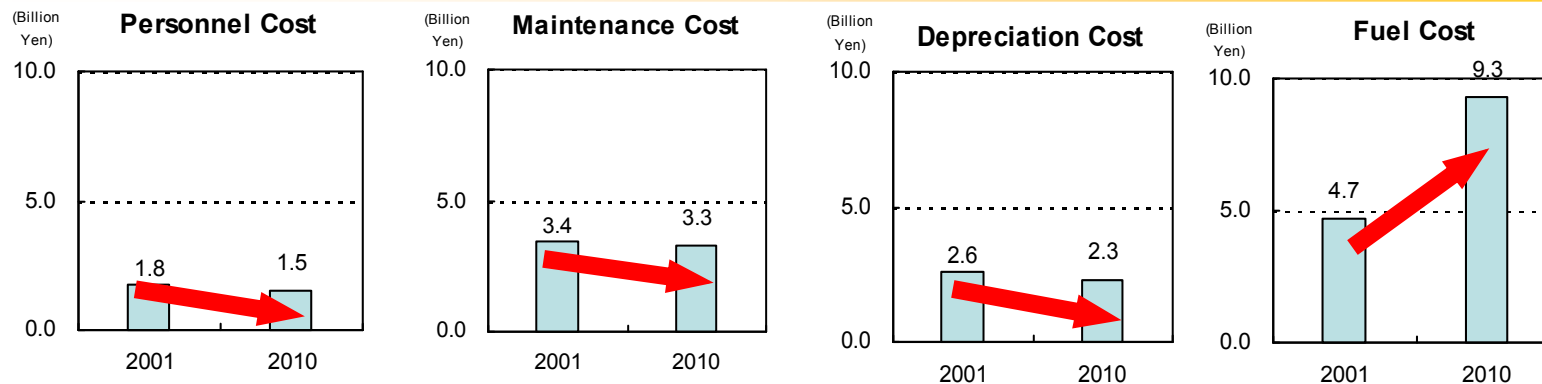
- In order to construct a system enabling fast implementation of measures to improve inequalities in income and expenditure, a Remote Island Operations Division was launched in FY2001 and from FY2002, this was converted into the Remote Island Company.

- Establishing remote control system for power generation plants in Miyako and Ishigaki.
- Revising the procedures for regular inspections on electric power supply facilities.
- Purchasing other companies' idle facilities and moving idle facilities of own company.
- Switching from A heavy oil to FCC-C heavy oil.

- Fuel costs are greatly increasing due to the recently soaring price of crude oil.

We work out new measures to stabilize supply and improve the balance of revenue and expenditure while pushing ahead with ongoing various measures

- Reducing fuel consumption by introducing New energy (Retractable wind-power generators, etc.).
- Effective utilization of waste oil. etc.



# Addressing the global warming issues

- Finding sites for 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.)**

## Company Efforts

- Introduction of LNG thermal power, which creates low CO<sub>2</sub> emissions (Yoshinoura Thermal Power Station)
- Promotion of the introduction of new energy such as wind and solar power
- Promotion of multi-fuel operation with biomass energy
- Operation of small hydro power generation facilities
- Efficient operation of thermal power plants
- Equity participation in carbon funds taking advantage of the Kyoto Mechanism
- Investment for CCS survey research
- Promoting introduction of electric vehicles for business-use (introducing 100 electric vehicles by FY2020)
- Promoting energy saving on the demand side (by offering EcoCute services, etc.)

(cf.) Actual result of CO<sub>2</sub> emission coefficient for 2009: 0.931kg - CO<sub>2</sub> /kWh (The figure after adjustment is the same)  
Actual result of CO<sub>2</sub> emission coefficient for 2010 ( after reflecting CO<sub>2</sub> credits ): 0.692kg - CO<sub>2</sub> /kWh  
( before reflecting CO<sub>2</sub> credits ): 0.935kg - CO<sub>2</sub> /kWh





# Q & A



# Q1.What is the Current State of the Okinawa Prefectural Economy and What is the Future Forecast?

## 1 Okinawa's Economy

### ◎The current state of affairs

Although business activities in Okinawa slumped at one time due to the impact of the Great East Japan Earthquake, the economy has gotten out of the impact of the quake, and the economic activity in Okinawa is gradually picking up mainly in consumer spending and tourism-related businesses.

### ◎Prospects

The economy is expected to remain on the recovery track, supported by the recovery of tourism and robust consumer spending. Meanwhile, it is necessary to pay attention to trends of world financial and exchange markets and the effects of the slowdown of overseas economy.

Trends in Main Economic Indicators (Rates of Growth) (%)

Indicators	FY2010			FY2011	
	First Half	Second Half	Total	First Half	3 <sup>rd</sup> Quarter
Sales by large-scale retailers	-1.8	0.5	-0.7	0.8	3.0
No. of new car sold	26.9	-24.0	0.5	-25.2	18.8
Wholesale shipments of household appliance	17.3	13.2	15.2	-4.5	-33.7
New residential construction starts	-6.2	0.8	-2.8	14.8	3.5
Value of public works contracts	-16.2	4.3	-6.4	-6.6	-5.2
No. of Inbound tourists	5.1	-4.5	0.5	-10.0	5.2
Total unemployment rate	7.5	7.1	7.3	7.3	6.6
Value of corporate failures	-36.9	-39.1	-37.7	93.5	-6.0

Note 1: The figures for 'Sales by large-scale retailers' are calculated from the values given in preliminary figures for December 2011 on an all-store base.

Note 2: The figures quoted here for 'Sales of household appliance' are estimates.

Note 3: The figures for 'Total unemployment rates' are raw data.

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



# Q1.What is the Current State of the Okinawa Prefectural Economy and What is the Future Forecast?

## 2 Annual Average Growth Rate of GDP

- Due to the development of various measures based on the “Okinawa Promotion and Development Plan”, the annual average growth rate of GDP was 1.4% in Okinawa prefecture during the period of its Promotion and Development Plan (from FY2002 to FY2010), exceeding that of the national average of about 0.8%.
- With the development of various measures to actualize the “Okinawa’s 21<sup>st</sup> Century Vision” in the future, economy in Okinawa prefecture is expected to continue to develop steadily.

### Annual Average Growth Rate of GDP

	FY2002	FY2010	Annual Average Growth Rate FY2002-Y2010
Prefectural GDP	3,657.5 billion yen	4,082.2 billion yen	Approx. 1.4%
National GDP	479,870.8 billion yen	510,992.4 billion yen	Approx. 0.8%

Sources: Okinawa prefecture  
Economic and Social Research Institute, Cabinet Office

### Okinawa 21<sup>st</sup> Century Vision

The “Okinawa 21<sup>st</sup> Century Vision” was formulated in March 2010 as a fundamental plan to draw up an ideal situation in Okinawa in the future (roughly in 2030) and make it clear of the direction on how to address its realization and the roles of its citizens and government.

The formulation of the “Basic Plan on Okinawa 21<sup>st</sup> Century Vision” is currently being instituted under the initiative of Okinawa prefecture to replace the Okinawa Promotion and Development Plan which shall expire at the end of FY2011. From now, various measures are expected to be taken in order to build an Okinawa-type self-supporting economy.

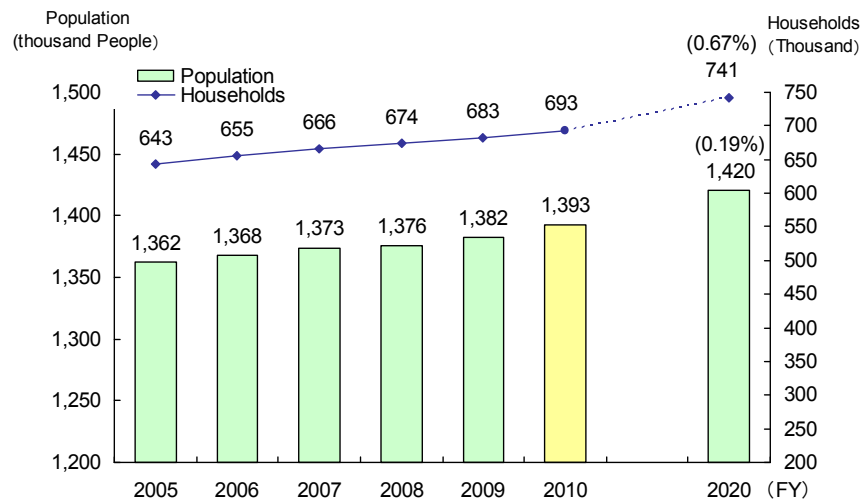


# Q1. What is the Current State of the Okinawa Prefectural Economy and What is the Future Forecast?

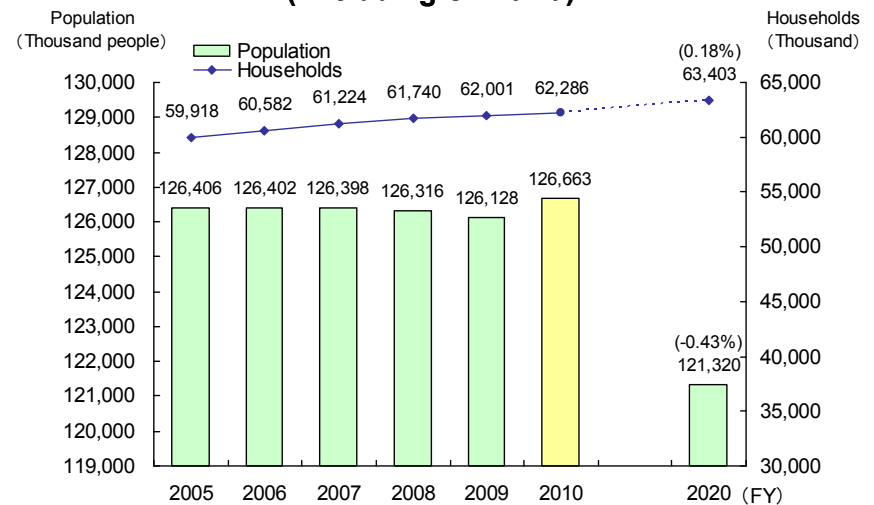
## 3 Population and Household Growth in Excess of Nationwide Growth

- While nationwide (excluding Okinawa) is expected to decrease by 0.43% annually on average from FY 2010 to FY 2020, the population in Okinawa is expected to increase by 0.19%.
- Okinawa is expected to reach its population peak between 2025 and 2030.

**Growth of Population and Households in Okinawa**



**Growth of Population and Households Nationally (Excluding Okinawa)**



Thanks to the stability growth of household numbers in association with the increasing population, residential demand increases are expected.

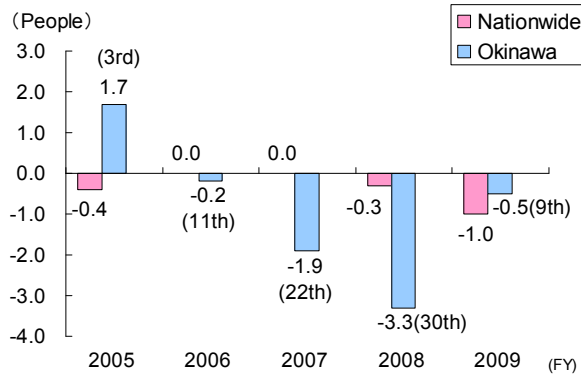


# Q1.What is the Current State of the Okinawa Prefectural Economy and What is the Future Forecast?

## 4 Okinawa Prefecture Demographics

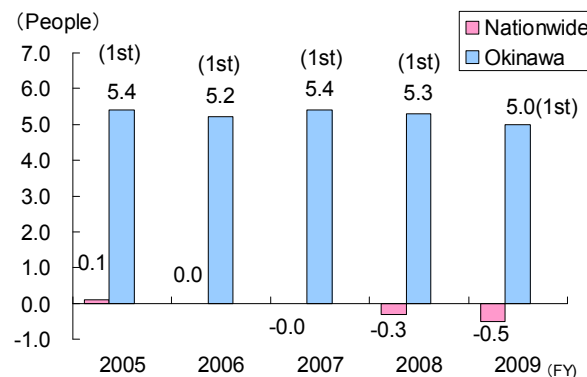
- Demographics of Okinawa Prefecture are in outflow of 0.5 person per 1,000 people in terms of social increase in population, but natural increase in population remains steady and is at the top nationwide with 5.0 persons per 1,000 people.
- Consequently, growth of population in the prefecture significantly exceeds the national average of -1.4 person, with 4.5 persons per 1,000 people.

**Trend in the Social Increase of population  
(Per Thousand people)**



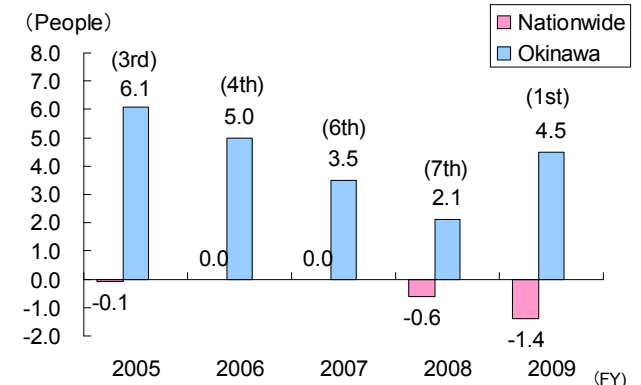
Source: Bureau of Statistics,  
Ministry of Internal Affairs and Communications  
Note: Social increase of population  
= Incoming population – Outgoing population  
The figures in brackets in the chart show  
Okinawa Prefecture's national ranking.

**Trend in the Natural Increase of population  
(Per Thousand people)**



Source: Bureau of Statistics,  
Ministry of Internal Affairs and Communications  
Note: Natural increase of population = Births – Deaths  
The figures in brackets in the chart show  
Okinawa Prefecture's national ranking.

**Trend in the Increase of population  
(Per Thousand people)**



Source: Bureau of Statistics,  
Ministry of Internal Affairs and Communications  
Note: Population increase = natural increase in population  
+ increase/decrease of population in the society  
The figures in brackets in the chart show  
Okinawa Prefecture's national ranking.

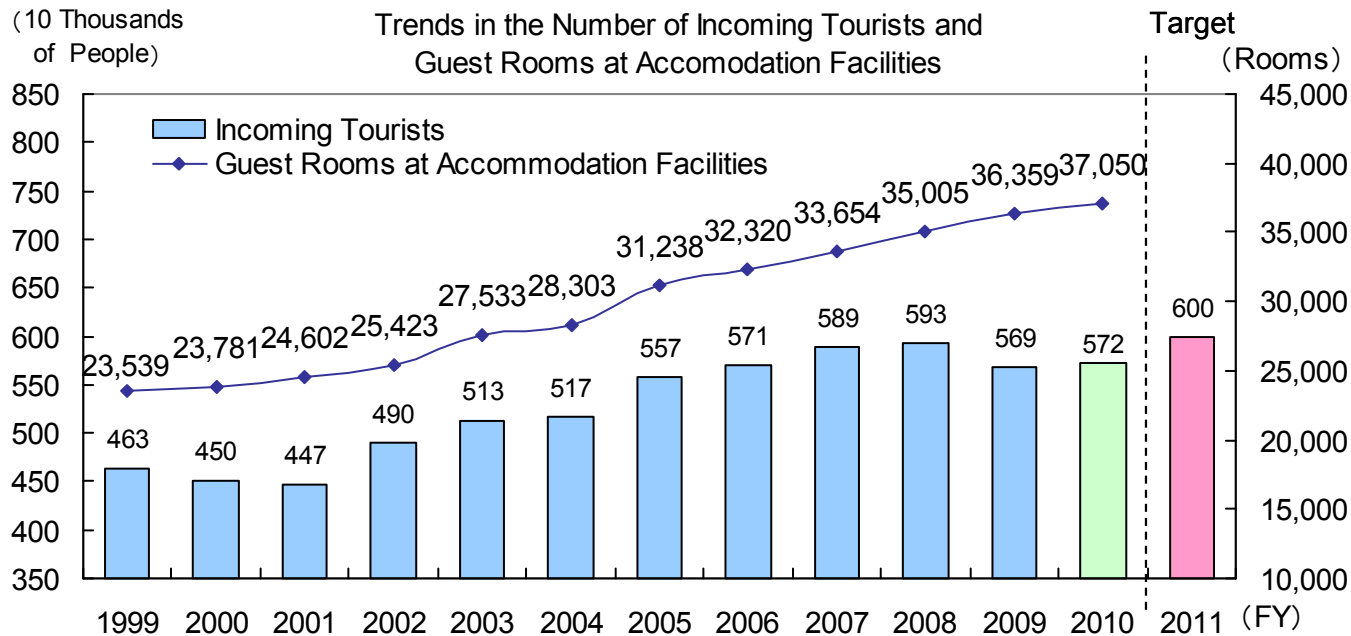


# Q1.What is the Current State of the Okinawa Prefectural Economy and What is the Future Forecast?

## 5

### Trends in the Number of Incoming Tourists and Guest Rooms at Accommodation Facilities

- FY2010 Result for incoming tourists: 5.72 million people(+0.5% in the previous year's figure)
- ※The target figures for 2011 are 6.0 million incoming tourists



Source: Okinawa Prefecture

•The survey of guest rooms at accommodation facilities changed from a biennial to an annual basis from 2003.

#### 【Reference】

##### ①FY2011

##### Visit Okinawa Plan

- Incoming Tourists 6.00million (Including Tourists from foreign countries 0.4million)

- Tourist Income 432.0billion Yen

##### ② FY2010 Results

- Incoming Tourists 5.72million

- (Including Tourists from foreign countries 0.28million)

- 0.5% growth rate (YoY)

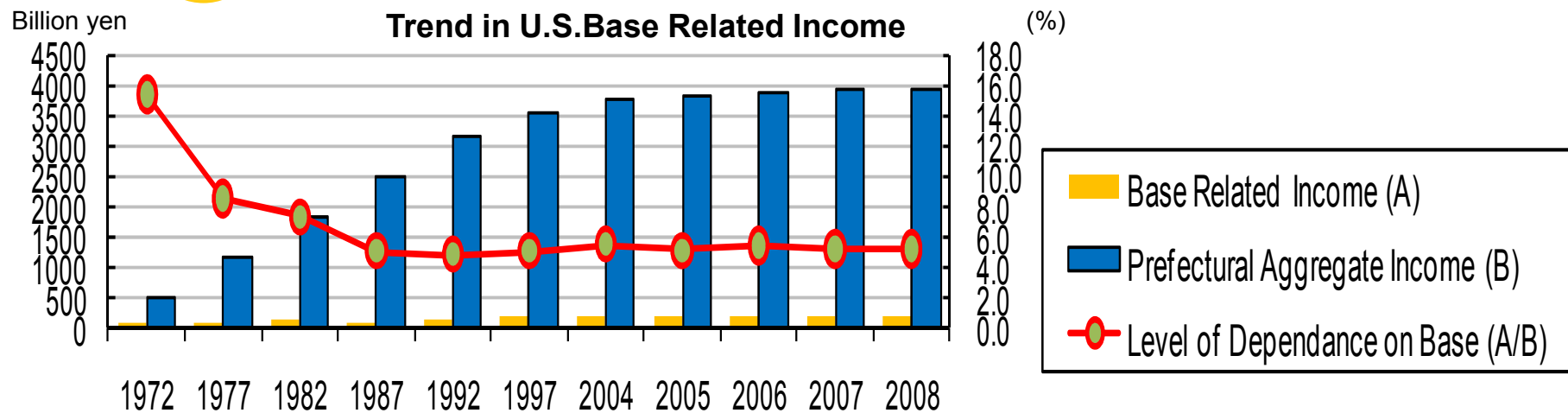
Despite a rise in foreign tourists in addition to the interscholastic athletic meet hosted in Okinawa, the growth in number of tourists remained modest due to a decrease of domestic tourists in relation to route reduction by each airline after December last year, and the effect of the Great East Japan Earthquake occurred in March

With the number of tourism related facilities (hotels, etc.) increasing in association with increased numbers of incoming tourists, increases are forecast for demand for commercial use electricity.



# Q1.What is the Current State of the Okinawa Prefectural Economy and What is the Future Forecast?

## 6 Trend in U.S. Base Related Income



(Unit: billion yen, %)

	1972	1977	1982	1987	1992	1997	2004	2005	2006	2007	2008
<b>Base Related Income</b> (Charges for Land Occupied by US Armed Forces) (A)	77.7	100.6	134.6	128.2	156.3	184.0	211.1	201.0	215.3	208.8	208.4
<b>Prefectural Aggregate Income (B)</b>	501.3	1,163.1	1,822.6	2,516.5	3,192.9	3,582.6	3,809.3	3,871.1	3,913.4	3,939.6	3,954.8
<b>Level of Dependence on Bases (A/B)</b>	15.5	8.6	7.4	5.1	4.9	5.1	5.5	5.2	5.5	5.3	5.3

- U.S. Base related income has become an income source that supports the Okinawa economy.
- However, the level of dependence on the bases has been falling year on year as the prefectural economy expands, and it had fallen to 5.3% in FY2008 from the 15.5% share at the time Okinawa was returned to Japan (1972).

Source: Okinawa Prefecture





# Reference : Main Economic Indicators

Trends in Main Economic Indicators (Year-on-Year Comparison)

(Unit : %)

Indicators	FY2010							FY2011								
	1st half	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
Sales by large-scale retailers	-1.8	-0.7	3.3	-0.1	1.9	1.2	-2.3	-1.5	-3.7	3.9	4.3	0.8	1.0	4.6	0.7	3.6
No. of new car sold	26.9	-22.8	-20.8	-31.9	-4.8	-24.0	-31.6	-55.8	-33.7	-14.0	-18.9	-25.8	-6.6	11.9	13.7	32.0
Sale of household appliance (Wholesale base)	17.3	18.0	49.7	17.2	5.2	-8.7	0.1	-3.0	-5.4	9.5	1.7	-16.8	-15.8	-24.6	-39.5	-33.8
New residential construction starts	-6.2	-11.4	23.4	-22.9	6.5	29.6	-13.3	145.6	-26.6	24.6	-20.2	-0.3	3.4	12.7	-5.5	5.6
Value of public works contracts	-16.2	-19.6	7.2	-44.0	43.3	94.9	18.1	16.7	2.2	-53.7	26.6	8.0	-7.2	-17.4	8.6	0.2
No. of Inbound tourists	5.1	4.1	1.1	-2.3	-2.9	-3.7	-19.9	-21.3	-17.3	-7.1	-6.7	-5.5	-4.7	4.5	3.6	7.6
Total unemployment rate	7.5	8.1	6.9	7.1	7.6	6.6	6.2	6.9	7.8	7.6	7.3	7.4	6.6	6.2	6.6	7.1
Value of corporate failures	-36.9	-52.1	-62.5	-46.6	-33.9	-36.6	182.8	210.1	1226.3	4.6	1001.6	963.5	-27.7	-56.9	-50.8	154.4

Note 1: The figures for 'Sales by large-scale retailers' are calculated from the values given in preliminary figures for December 2011 on an all-store base.

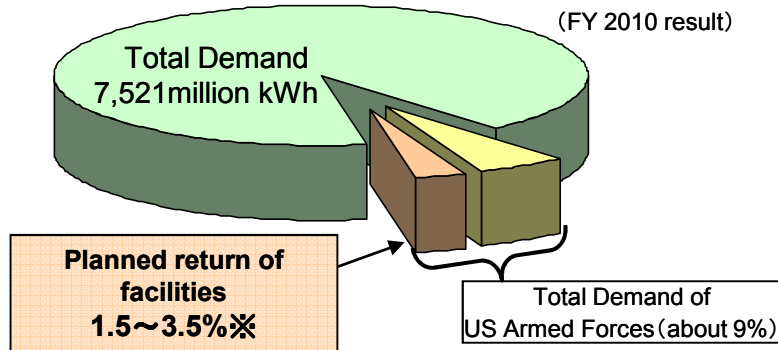
Note 2: The figures for 'Total unemployment rates' are raw data.

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



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

## 【Proportion of Demand Taken Up By U.S. Armed Forces】



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

## 【Summary of U.S. Armed Forces in Okinawa】 (As of Mar. 2010)

No. of Facilities		34
Area		233 km <sup>2</sup>
Personnel*	On Base	36,250
	Off Base	14,844
	Total	51,094

\* The figures for personnel are as of the end of March 2011.  
Reference: No. of army employees: 8,962 \*As of the end of December 2010

• Source:  
Japan Ministry of Defense  
Military Base Affairs Division, Executive Office of the Governor, Okinawa Prefecture  
Labor Management Organization for USFJ Employees

- U.S. Armed Forces demand was about 9% of total demand and about 7% of revenue in fiscal 2010.
- The proposal for reorganization of the U.S. Armed Forces was agreed upon by the U.S.-Japan Security Consultative Committee on May 1, 2006, and the facilities to be returned were clarified.
- The schedule for return of US military bases, which should have been developed by March 2007, has not been formulated yet and the detailed plan remains uncertain.
- Although Japan and the U.S. reached an agreement with the Henoko plan as a result of reviewing several plans for a new location of the U.S. Futenma Airbase after the change of government in September 2009, the Okinawa Prefecture and Nago City have not agreed with the plan, making its future outlook uncertain.
- Although there will be a temporary decrease in demand if facilities are returned, activation of the regional economy is forecasted in line with the redevelopment of returned sites.
- From now on, the company shall analyze the effects of returns on operations while paying attention to state and prefectural activity with regard to the proposal for reorganization of the U.S. Armed Forces.

### 【U.S.-Japan roadmap drafted for realignment of U.S. forces】

(Source: Website of Japan Ministry of Defense )

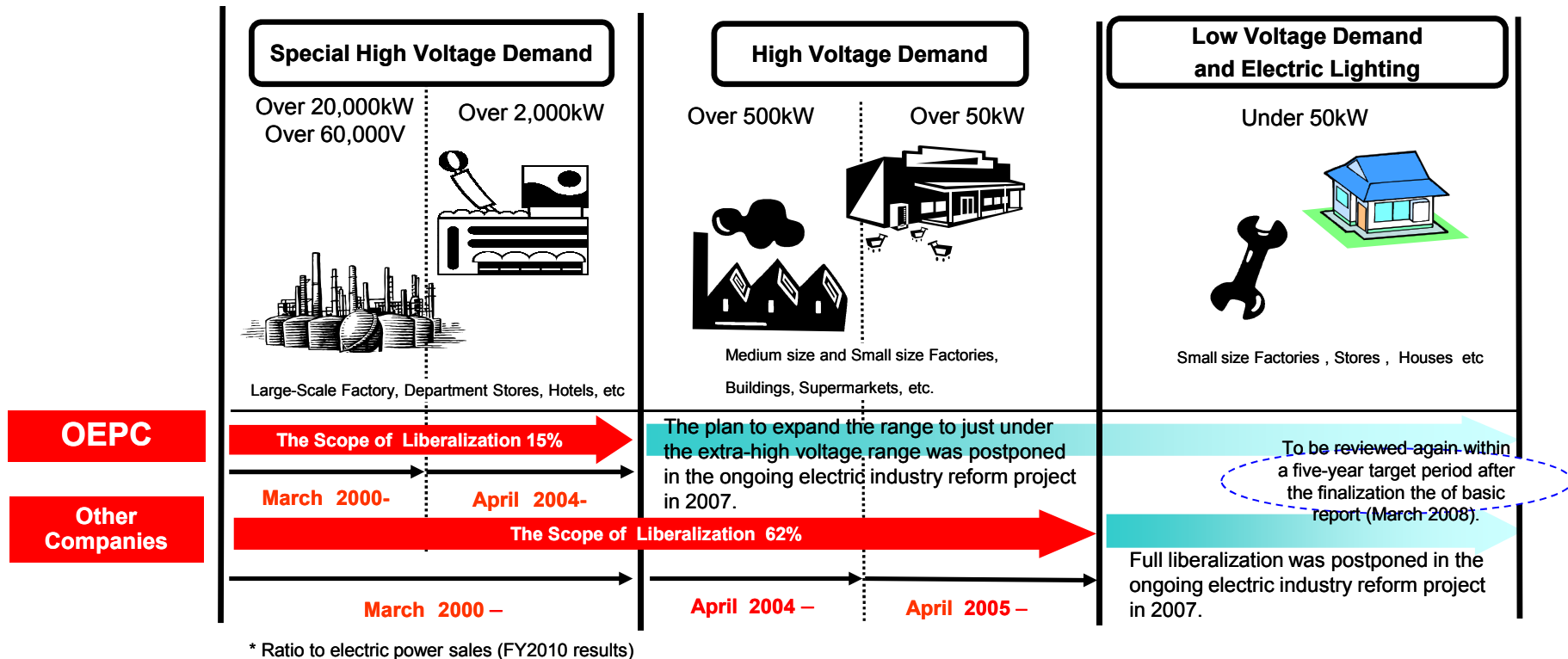
- Realignment of U.S. forces in Okinawa (main contents)
  - (a) Construction of supplement facility of Futenma Airbase: Futenma Replacement Facility (FRF)
    - Relocation to Camp Schwab scheduled to complete in 2014.
  - (b) Reduction of military forces and relocation to Guam
    - Relocation of 8,000 Marine Corps and their family (9,000 persons) to Guam by 2014.
  - (c) Return of land
    - Total or partial return of land of six bases south of Kadena airport.
    - \* Said return of land will take place after completion of personnel relocation, after 2014.

[Others] In addition to the plan mentioned above, there is a plan to deploy a PAC-3 unit, which calls for relocation of 600 staffers and their 900 family members from Texas, the U.S., to Okinawa. Operation of PAC-3 will partially start by the end of 2006.



# Q3. What are the Effects of Liberalization of Electric Power and What is the Future Forecast for Liberalization?

**Retail Market** Compared to other electricity companies, this will be a more cautious step in the liberalization process



# Q4. What are the Special Tax Measures?

## Currently Applied Special Tax Measures

### 1. Alleviation of Fixed Property Tax

Basic Law: Supplementary Provisions of the Local Tax Law  
(Article 15.14)

Details: Alleviation to 2/3 of the Standard Tax Rate

Period: April 1, 1982 – March 31, 2012  
(Extended for 5 years from April 1, 2007)

### 2. Exemption from the Oil and Coal Tax

Basic Law: Special Measures Law for the Promotion of  
Okinawa (Article 65.2), Special Taxation  
Measures Law (Article 90.4.3.1)

Details: Exemption from the Oil and Coal Tax for coal

Period: October 1, 2003 – March 31, 2012  
(Extended for 5 years from April 1, 2007)

### ※ Alleviation of Business Tax was abolished on May 15, 2007

Details : Standard Tax Rate: 1.1%  
(Standard Tax Rate for Electric Utilities: 1.3%)

Period : December 31, 1971 – May 14, 2007

## Need for Special treatment

- 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.

## Value of Tax Alleviation Due to the Special Measures

- The value of the alleviation measures in FY2010 was about 2.3 billion yen.
- The average value of the alleviation measures for FY2011 is expected to be 2.3 billion yen.

## FY2012 Tax Reform Outline

- FY2012 Tax Reform Outline was decided by the cabinet (on December 24, 2011), and the extension of alleviation of fixed property tax, the extension of exemption from the oil and coal tax concerning coal and addition of exemption from the oil and coal tax concerning LNG, which had been requested by Okinawa Electric Power, are reflected in the outline.

**The amount of reduction based on the special measures is being returned to customers through electricity charge.**

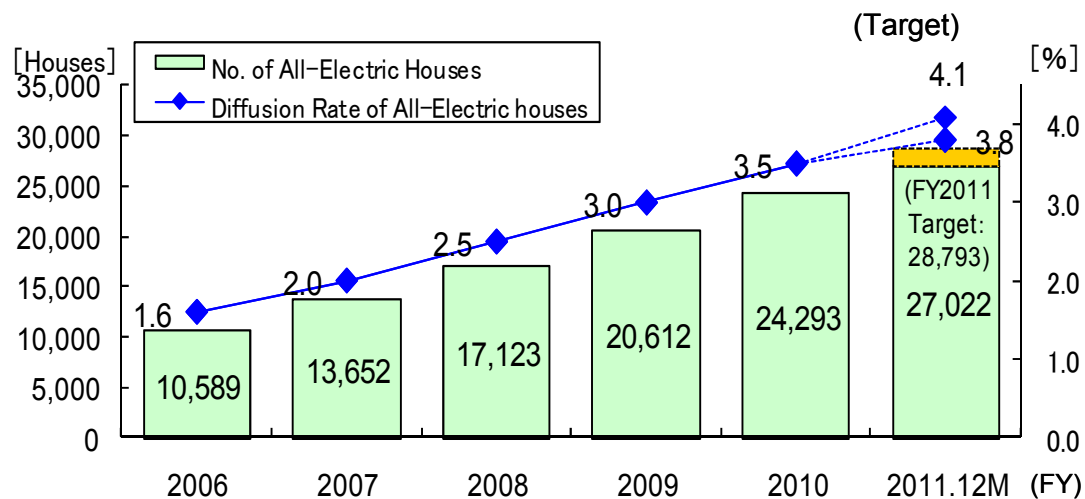


# Q5. What is the Current State of the Promotion of All-Electric Houses?

**1. Sales target for FY2011 ⇒ All-Electric Houses 4,500 (15.5 million kWh)**

**2. Approach for the promotion and diffusion.**

- ① Launching of effective promotion activities to facilitate penetration of all electrification housing brand.
- ② Proactive activities to promote penetration of ecocute (CO2 refrigerant heat pump water heater).
- ③ Expansion of sales activity in cooperation with sub-users.
- ④ Strengthening of sales activity to collective housing and existing homes.
- ⑤ Promotion of sales activities for electrification based on widespread use of solar power



## 【Reference】

- Adoption rate (results for FY2011 first half)
- All-electric adoption rate in newly built houses (included multi-family dwellings etc.) = 18.6%
- All-electric adoption rate in newly built houses = 62.4%



# Q6.What is the Current State of the New Demand Creation Through the Promotion of Commercial Electrification Equipment ?

## 1. Sales target (in total of three years from FY2010 to FY2012): 30 million kWh

\* Electrification system (electric air-conditioning system including heat storage, electrified kitchen and electrified water heater)

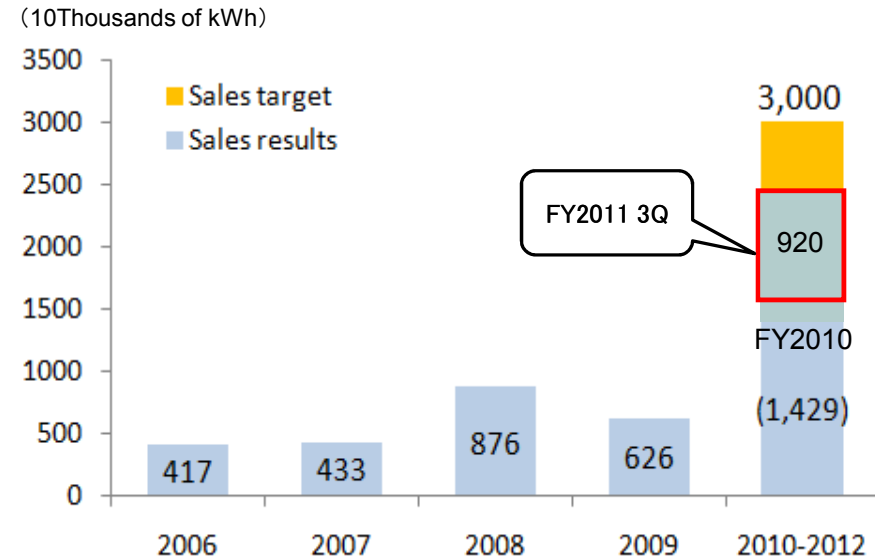
## 2. Approach for the promotion and diffusion.

- ① Implementation of electrification proposal activities suitable for the power usage of customers.
- ② Promotion of heat pump equipment (air-conditioning and water heaters)
- ③ Expansion of sales activity in cooperation with sub-users.

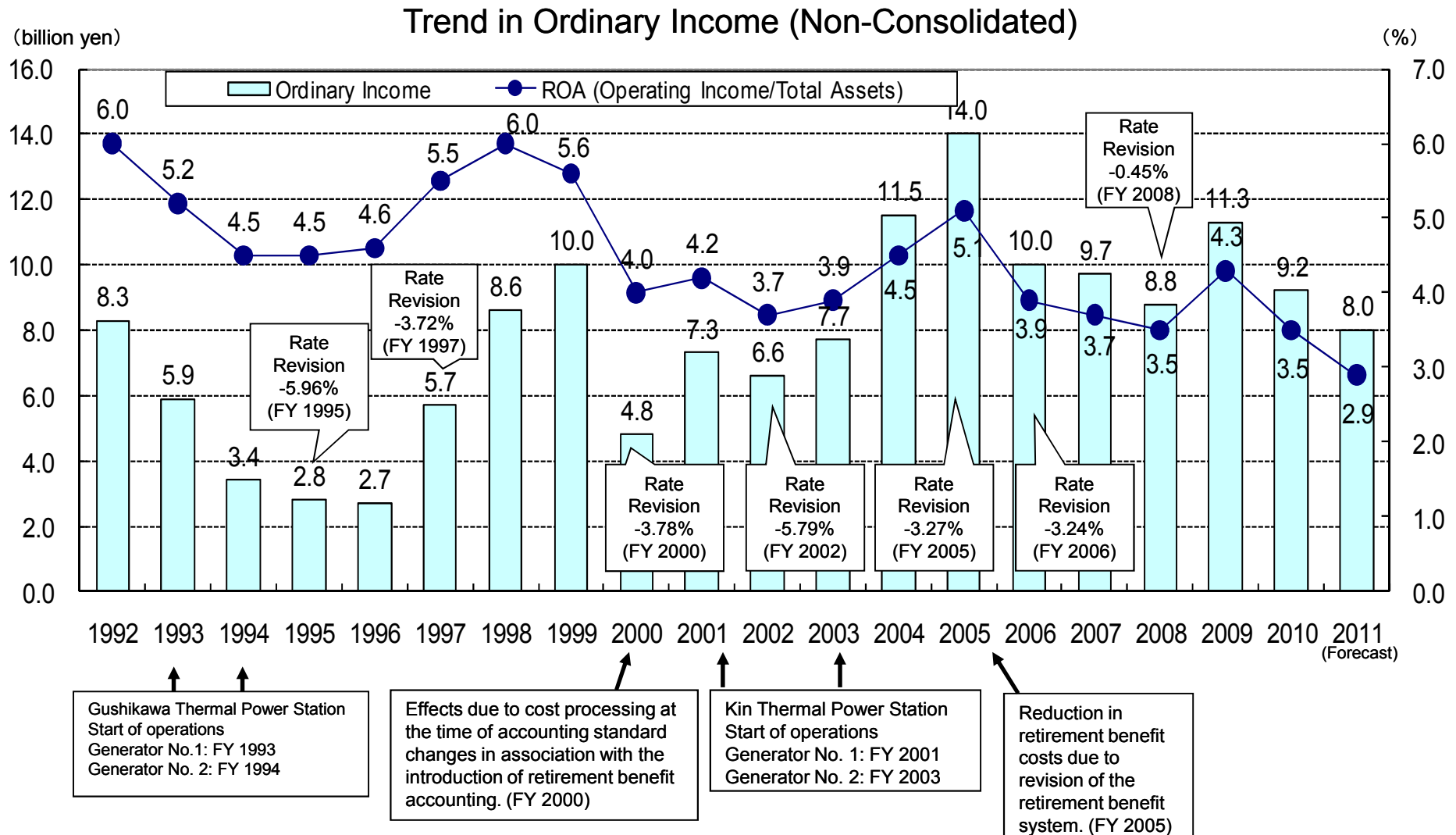
➤ Sales target (in total of three years from FY2010 to FY2012): 30 million kWh

### The demand for commercial electrification equipment

	10Thousands of kWh						
	2006	2007	2008	2009	2010-2012		
					2010	2011 (3Q)	2012
Commercial Electrification Equipment (Cumulative)	417	433	876	626	3,000 (Target)		
					1,429	920	—

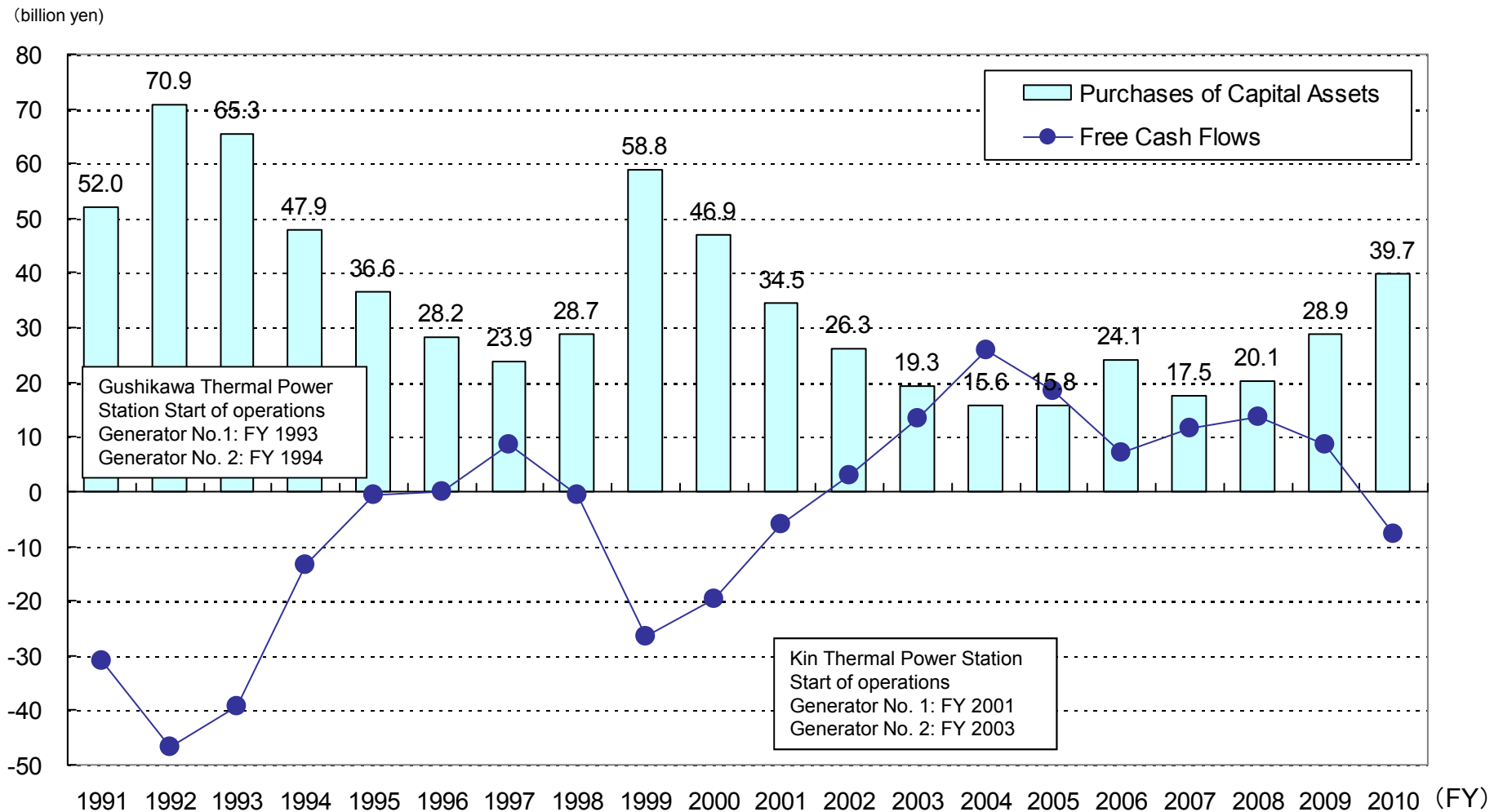


# Q7. What is the Past Trend of Ordinary Income and What is the Forecast for this Fiscal Year ?





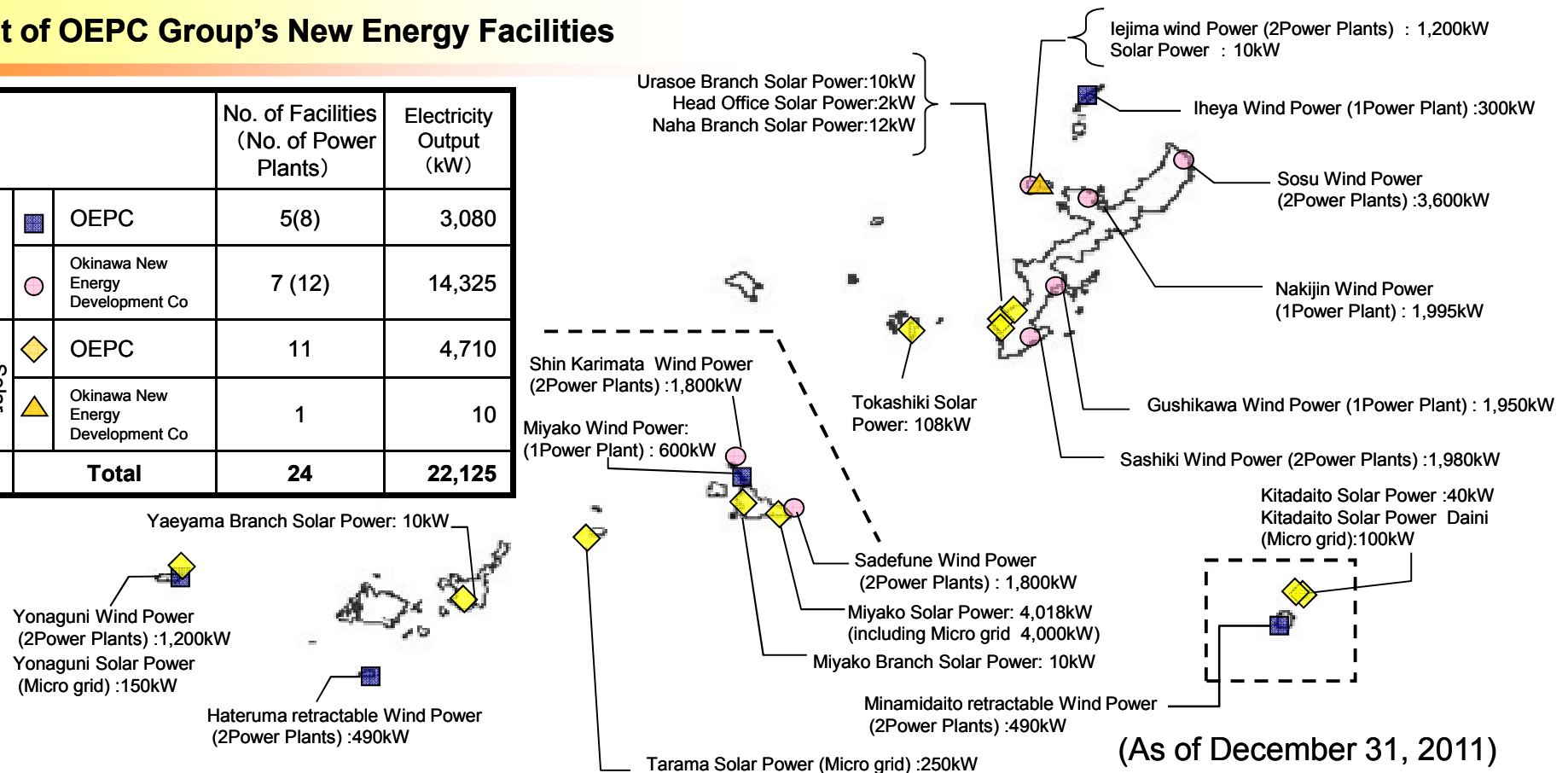
# Q8. What are the trends of the Capital Expenditure and Free Cash Flows?



# Q9.What is the Status of Wind and Solar Power Electricity Generation Facilities?

## List of OEPC Group's New Energy Facilities

		No. of Facilities (No. of Power Plants)	Electricity Output (kW)
Wind Power	OEPC	5(8)	3,080
	Okinawa New Energy Development Co	7 (12)	14,325
Solar Power	OEPC	11	4,710
	Okinawa New Energy Development Co	1	10
<b>Total</b>		<b>24</b>	<b>22,125</b>



(As of December 31, 2011)

- OEPC Group has new energy facilities with total output of 22,125 kW (wind power: 17,405 kW, solar power: 4,720 kW)
- Introducing Plan of New Energy Facilities.
  - ✓ Main island of Okinawa mega solar power (1,000 kW, start in FY2011)
  - ✓ Ogimi wind power plant (2,000 kW class × 2, start in FY2013)



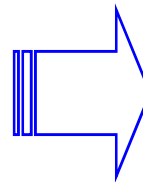
# Q10.What is a retractable wind-power generator?

## ■ Overview of retractable wind-power generator

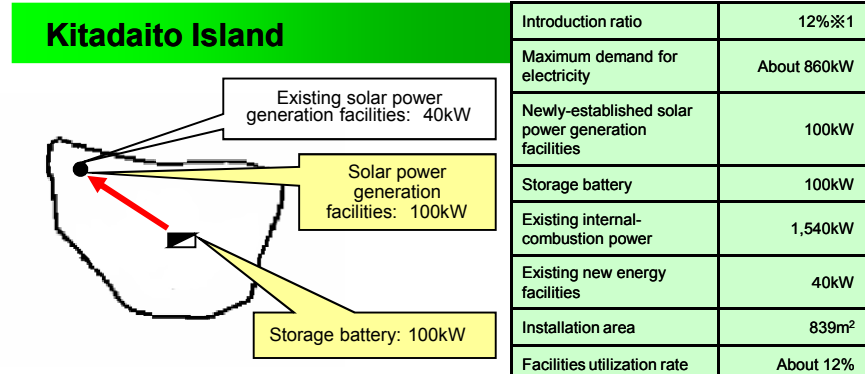
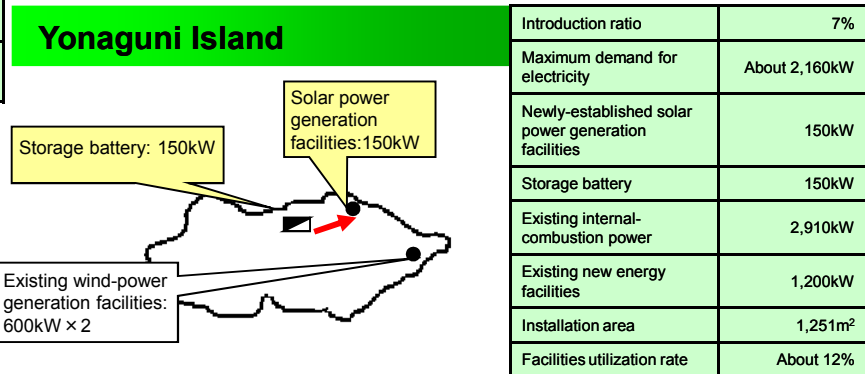
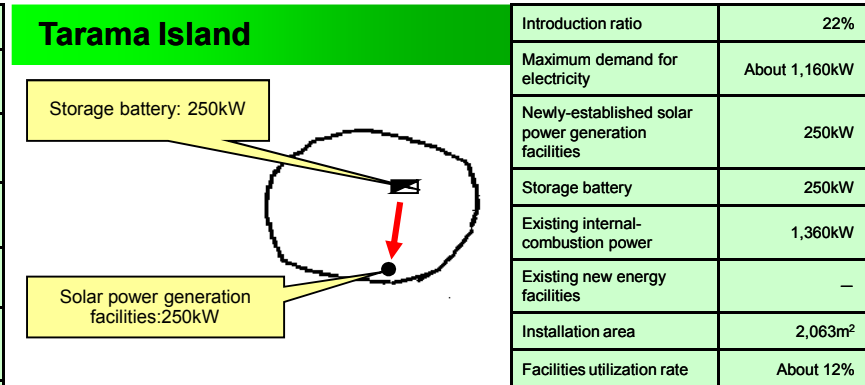
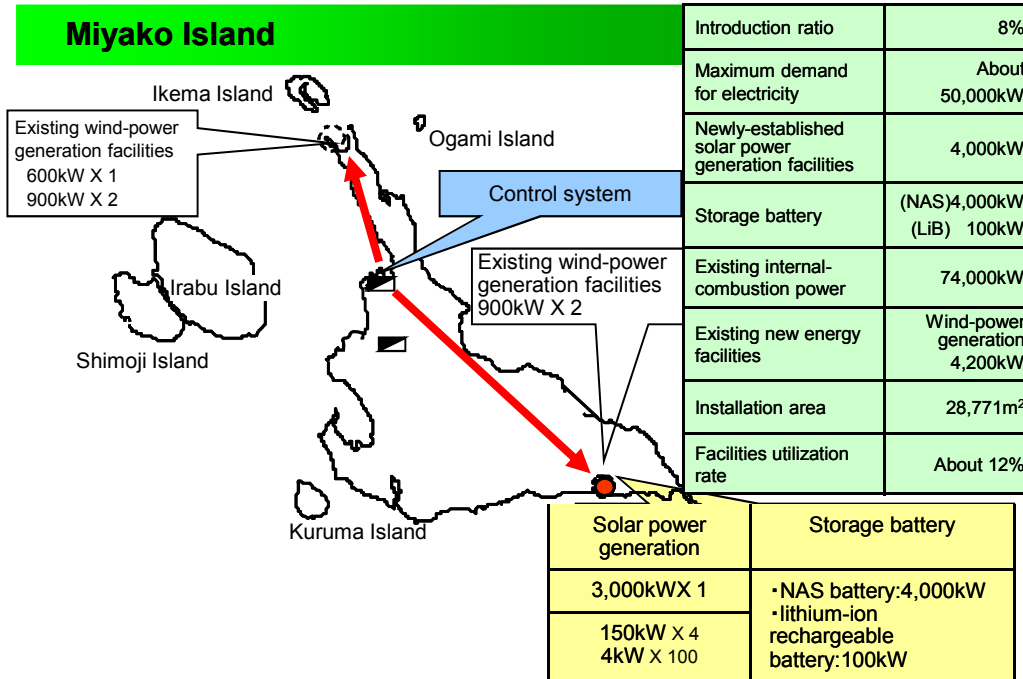
<b>Place</b>	Hateruma/Minamidaito Island(2 Plants each)
<b>Manufacturer/country of manufacture</b>	Vergnet/France
<b>Rated power output</b>	245kW
<b>Wind speed for power rating/start-up/stoppage</b>	13m/s, 4m/s, 20m/s
<b>Number of blade</b>	Two
<b>Diameter of blade</b>	32m
<b>Height of hub</b>	38m

## ■ Advantages

- Wind-power generator can be folded nearly 90 degrees so that damages by big wind in typhoon can be avoided by folding it.
- Large-size cranes are not needed to construct the wind-power generator to enable construction in hilly areas.
- Wind-power generator is retractable, making it possible to perform maintenance on the ground.
- Wind-power generator is supported by wires.



# Q11.What is the New Energy verification studies for the Remote Island Independent System?



- (1) Purpose
- The purpose of performing introduction demonstration for the independent power generation system of Remote Islands with different scale of system is as follows:
- Grasping the impact of large-scale introduction of solar power generation to the actual system
  - Calculation of allowable amount of solar power generation introduction
  - Obtaining knowledge on stabilization technology concerning the system
- (2) Plan
- Grasping the impact of solar power generation on four remote islands with different scale of system
  - Analyzing operation data on solar power generation and secondary battery
  - Verifying the method of system stabilization for remote island independent system



The Okinawa Electric Power Company, Inc.

※1: Include existing solar power generation facilities(40kW) : 16%  
 ※2: The facility utilization rate may be lower than the assumed value as the relevant demonstration facilities shall be partially operated for solar power depending on each test (for example, an operation is conducted with only 1 MW out of 4 MW capacity of Miyako solar power.)

## Q12.How do Current Electricity Rates Compare to Rates at Other Companies?

While the detailed comparison of electricity rates is not available due to limited amount of reported data, the following is the comparison of electricity rates for the main supply contracts.

Model Unit Rates for All Companies (As of March 2012, including fuel cost adjustments, consumption taxes and PV Surcharge )

( Unit: yen/kWh)

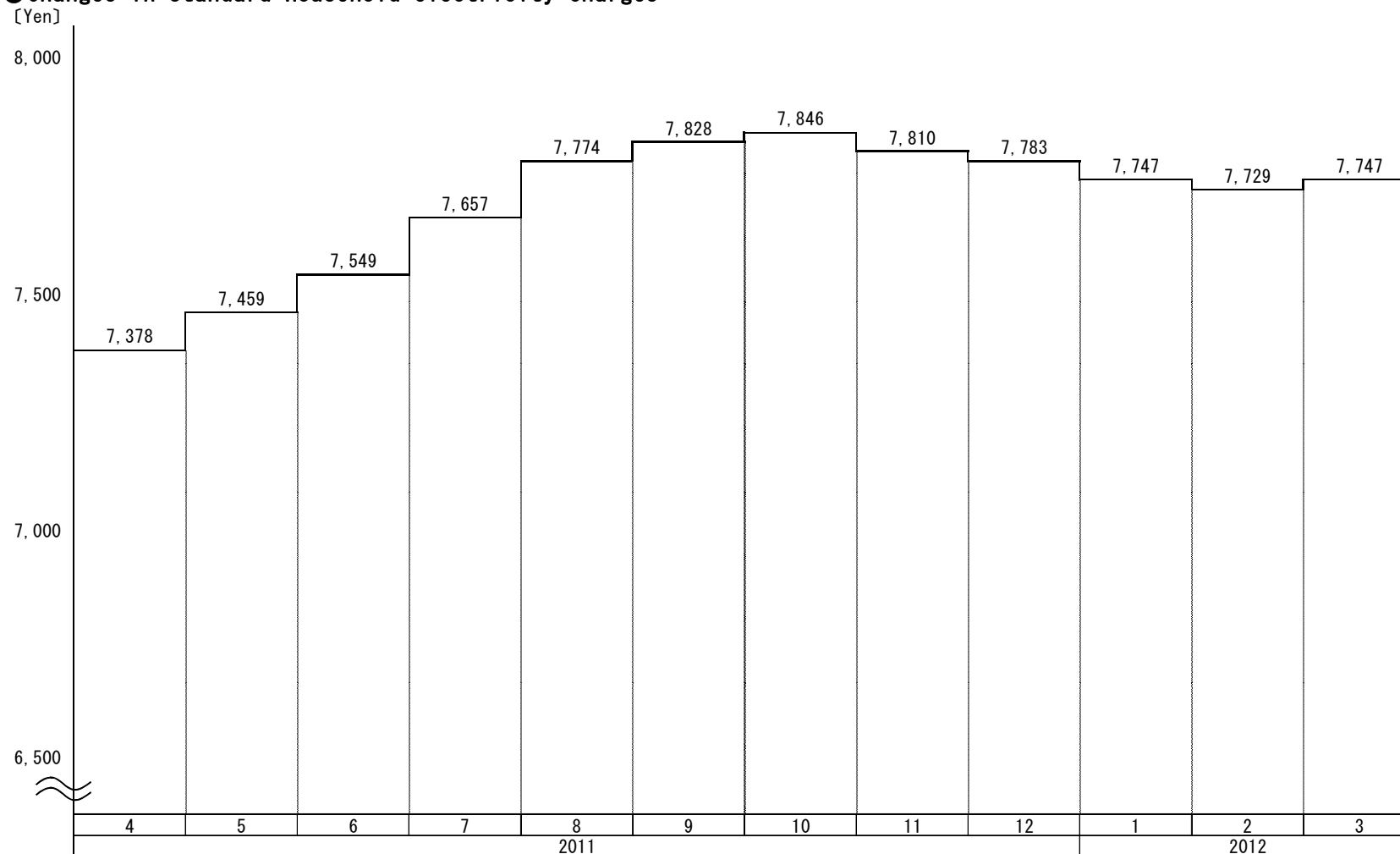
	OEPC	Co. A	Co. B	Co. C	Co. D	Co. E	Co. F	Co. G	Co. H	Co. I
Metered Residential Model Basic Unit 300	25.82 ⑩	24.76 ⑨	23.71 ⑥	23.75 ⑦	23.44 ⑤	21.80 ①	22.41 ③	23.94 ⑧	22.67 ④	21.84 ②
Commercial Use Electricity (High Voltage) Model Basic Unit 250 (Power Factor 100%)	21.27 ⑩	18.25 ⑤	18.55 ⑦	18.91 ⑨	18.34 ⑥	16.10 ①	17.45 ④	18.87 ⑧	16.99 ②	17.14 ③
High-voltage Power A Model Basic Unit 250 (Power Factor 100%)	19.06 ⑩	17.16 ⑥	17.00 ④	17.34 ⑦	17.84 ⑨	15.43 ①	16.65 ②	17.73 ⑧	17.10 ⑤	16.67 ③

Note: The circled numbers indicate price level rankings (higher numbers indicate more expensive rates).



# Q13. Recent changes in standard household electricity charges

○Changes in standard Household electricity charges



※ 300kWh/Month ※ PV Surcharge is included in electricity charges



# Q14. What is the Excess Electricity Purchasing Scheme for photovoltaic power ?

The Excess Electricity Purchasing Scheme for photovoltaic power was launched on November 1, 2009, based on the Japanese state law to cover the cost of introducing solar photovoltaic power generation facilities by the entire nation and promote the introduction of solar photovoltaic generation with the aim of reducing CO<sub>2</sub> emissions domestically.

This system obliges electric power companies to purchase surplus electricity, which is generated using solar photovoltaic power facilities and meets the requirements, at the unit price specified in the law for 10 years.

This program is designed to be "an all-participating system," in which all customers assume the cost incurred for the purchase as photovoltaic generation surcharge (PV surcharge) according to their electricity usages.

## ■ Unit price of electricity purchase (Basic image) (FY2011)

(The maximum electricity receivable)

		Not eligible for the purchase	
500kW	50kW or greater	40 yen	
	Less than 500kW		
50kW	10kW or greater	40 yen	40 yen
	Less than 50kW		
10kW	Less than 10kW	42 yen	40 yen
		Residential electricity [Low-voltage]	

## ■ Unit Price of PV Surcharge

The solar power generation incentive rebate rate (PV surcharge) applied in FY2011 and FY2012 is as shown in the table below.

	Unit Price of PV Surcharge
FY 2011	0 .06yen/kWh
FY 2012	0 .11yen/kWh

※The unit price mentioned above includes the consumption tax.

※In the case of volume-based supply, the aforementioned unit price is applied uniformly, regardless of supply voltage.

※In the case of flat-rate supply, unit price is also calculated in the same way as the case of volume-based supply.





## Q15. 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	CO <sub>2</sub> Emission Volume Per Unit Heat Value [g-CO <sub>2</sub> /MJ] * <sub>1</sub>	vs.Coal	vs.Oil * <sub>3</sub>	CO <sub>2</sub> Emission Volume Per kWh [kg-CO <sub>2</sub> /kWh] * <sub>2</sub>	vs.Coal	vs.Oil * <sub>3</sub>
Coal	90.6	1.00	1.27	0.84	1.00	1.24
C Heavy Oil	71.5	0.79	1.00	0.68	0.81	1.00
LNG	49.5	0.55	0.69	0.35	0.42	0.51

\*1 The values from the Law Concerning the Promotion of the Measures to Cope with Global Warming were used as the CO<sub>2</sub> emission factors to calculate g-CO<sub>2</sub>/MJ.

\*2 Thermal Efficiency at Generation End of 39%, 38% and 51% were assumed for coal, oil and LNG respectively in calculations.

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



# Q16. What is the Current State of the Progress of Discussion in the Gas Supply Business ?

## As The integrated energy company

As LNG is expected to have potential needs as raw material for town gas and industrial fuel for its superior environmental and safety profiles, the Company is considering the supply business of LNG which will be introduced in the Yoshinoura Thermal Power Station.

### Current status

The Company is considering the supply business of LNG while assessing the status of procurement of LNG fuel and the progress of construction works of Yoshinoura Thermal Power Plant. The Company is proceeding with discussions with Okinawa Gas Co., Ltd., which is a public gas provider in Okinawa Prefecture, about wholesale supply. We have reached an agreement on basic matters, including the supply scheme and supply amount, and are considering detailed matters toward the start of supply.

### For the promotion of LNG

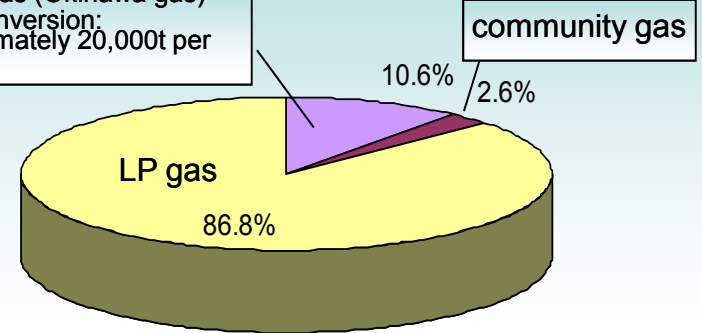
In addition to the wholesale supply of LNG to Okinawa Gas, the Company is examining the possibility of supplying it to heavy consumers for commercial and industrial uses in consideration of energy environment and market trends.

### Perspective for the launch of business

The Company aims to launch gas supply business from 2015 after the launch of operation at the Yoshinoura power plant, in consideration of the LNG fuel supply situation and the stable operation at the Yoshinoura thermal plant.

## Current status of the gas business in Okinawa (Conversion of heat consumed in FY2010)

Public gas (Okinawa gas)  
LNG conversion:  
approximately 20,000t per  
year.



Source: Agency for Natural Resources and Energy website, Japan LP Gas Association website, Okinawa Gas

### 【Reference: Corporate profile of Okinawa Gas】

Date of foundation : July 22, 1958.

Capital : JPY 250,222,000

Sales : JPY 6.5bn (2010)

Supply area : Most of Naha city, A part of Urasoe city, Tomishiro city, Haeburu town, Nishihara town, Nakagusuku village

No. of customers: General gas: approx.53,000 units

LP gas: approx.16,000units



# Q17. How to Address Our Contingency Planning Accompanying the Great East Japan Earthquake

We have ever been addressing the removal of causes of disasters and the improvement of disaster resistant environment on a day-to-day basis in order to prevent our power facilities from accidents and to recover the damages that occurred promptly. Based on the enormous damages caused by the Great East Japan Earthquake occurred on March 11, we need to enhance disaster contingency planning by recognizing the importance of our mission, “stable supply of electric power,” more than ever.

We are proceeding with practical and organizational revalidation in order to make disaster recovery complete assuming various situations as well as to aim at reviewing disaster contingency planning related to our facilities, etc. against large-scale disasters.

## **(1) Launch of Validation Committee for Disaster Contingency Planning**

Established the Validation Committee for Disaster Contingency Planning chaired by the President in March 2011.

Setting up working groups as its subsidiary organization in each related department, and conducting specific validations on disaster contingency planning to take necessary actions.

## **(2) Establishment of Disaster Management Office**

Established a division that oversees company-wide disaster management work in July 2011 by reorganizing “section in charge of disaster prevention,” posted in the General Affairs Division, as “Disaster Management Office” in order to re-examine disaster prevention measures to build facilities highly resistant to disasters and reinforce the structure that can handle restoration work with the entire company working in a body.

## **(3) Major Details of Verification**

We are verifying measures to enhance facilities and their restoration prospects on the assumption of damages by earthquakes and tsunami on the hazard map of Okinawa Prefecture\* and based on the results of investigations into damages to power facilities caused by the Great East Japan Earthquake and their restoration status. (\*Earthquake damage assumption survey of Okinawa Prefecture in March 2010 and tsunami and high tide damage assumption survey of Okinawa Prefecture in March 2007)

## **(4) Reflection in FY2011 comprehensive disaster prevention drills**

As for drills in the current fiscal year, we conducted drills that reflect lessons learned from the earthquake and the results of reviews at the Validation Committee for Disaster Contingency Planning, in addition to drills we had implemented in the past.

## **(5) Provision of altitude indication space on utility poles of the Company free of charge**

At the request of the Okinawa Prefectural Government and municipal governments, we have been offering space to post altitude indication sheets on utility poles owned by the Company since September 2011, as part of our activities to extensively enlighten residents of the prefecture about awareness of disaster prevention and cooperate in initiatives for regional disaster prevention.

## **(6) Future schedule**

We plan to formulate draft measures for enhancement of facilities in response to damage assumption in the current hazard map of Okinawa Prefecture possibly by the end of the fiscal year.

In a case where the Okinawa Prefectural Government officially announces a new hazard map, etc., we plan to successively conform to such hazard map, etc.

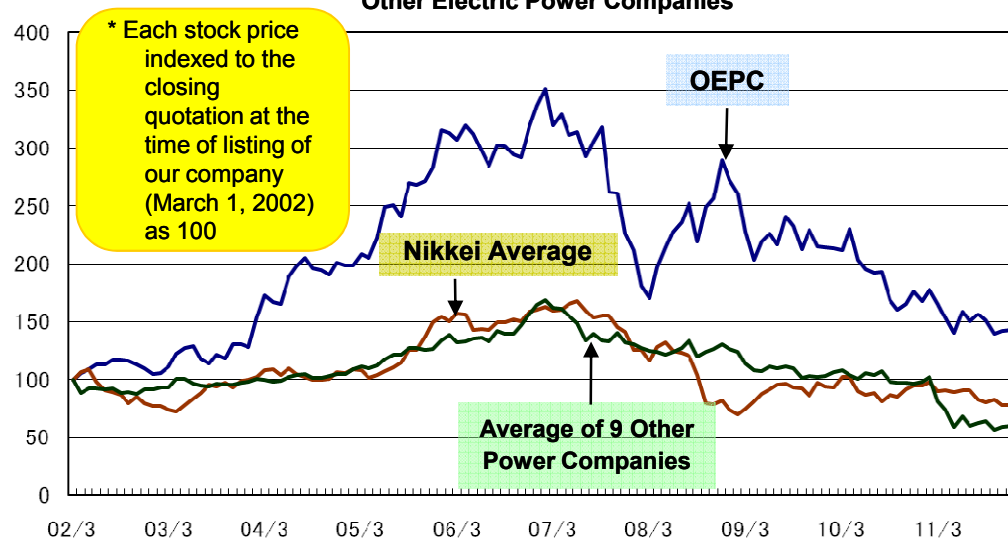


# Change in Okinawa Electric Power's Stock Price

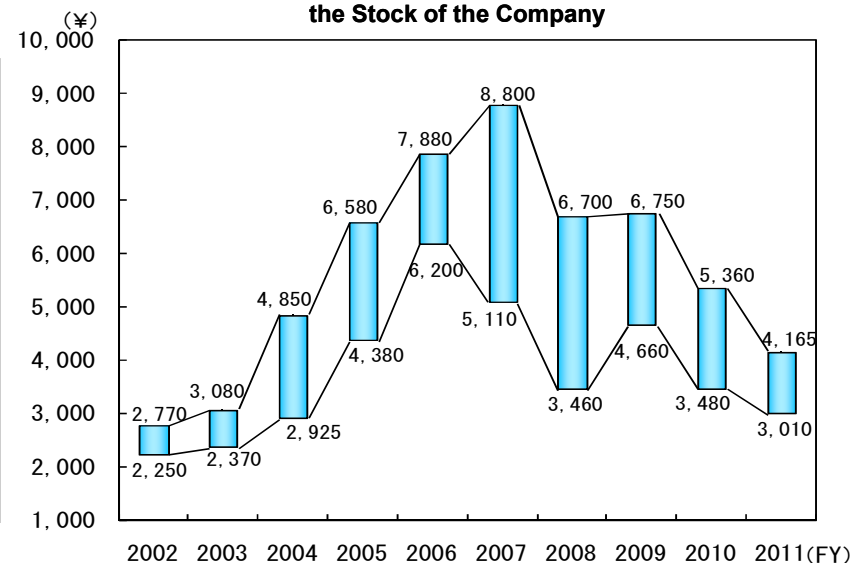
Change in Stock Price (January 4, 2011 ~ January 31, 2012)

	Okinawa Electric Power	Average of 9 Other Power Companies	Nikkei Average
Stock price on January 4, 2011	¥4,010	¥1,930	¥10,398
All-time high	¥4,140 as of March 1, 2011(+3.2%)	¥2,057 as of February 22, 2011(+6.6%)	¥10,858 as of February 21, 2011(+4.4%)
All-time low	¥3,015 as of June 7, 2011(-24.8%)	¥1,027 as of June 13, 2011(-46.8%)	¥8,160 as of November 25, 2011(-21.5%)
Latest stock price Closing quotation on January 31, 2012	¥3,235(-19.3%)	¥1,202(-37.7%)	¥8,803(-15.3%)

Changes in the Stock Price of the Company, the Nikkei Stock Average and Average Stock Price of Other Electric Power Companies



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



# Earnings Per Share and Payout Ratio

## Earnings per Share and Payout Ratio (Non-consolidated)

FY		2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Net Income	Million yen	4,807	4,430	5,594	7,591	9,163	6,398	6,590	3,635	7,293	6,872
Earnings per Share	Yen	316.86	286.52	363.37	494.77	571.05	402.25	376.84	207.89	417.26	393.36
Dividend per Share	Yen	60	60	60	60	60	60	60	60	60	60
Payout Ratio	%	18.9	20.9	16.5	12.1	10.5	14.9	15.9	28.9	14.4	15.3

Date	Issued number of shares of common stock	
1992.02.10	14,728,132	Listed
1995.11.20	14,875,413	Split 1 : 1.01
1999.05.25	15,172,921	Split 1 : 1.02
2005.05.20	15,931,567	Split 1 : 1.05
2007.04.01	17,524,723	Split 1 : 1.10



# Reference

- <http://www.okiden.co.jp/english/index.html> (The Okinawa Electric Power Company Incorporated)
- <http://www.pref.okinawa.jp/english/index.html> (Okinawa Prefecture)
- <http://www.fepc.or.jp/english/index.html> (The Federation of Electric Power Companies of Japan)
- <http://criepi.denken.or.jp/en/> (Central Research Institute of Electric Power Industry)



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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