



(1) Initiatives to Address Global Environmental Issues

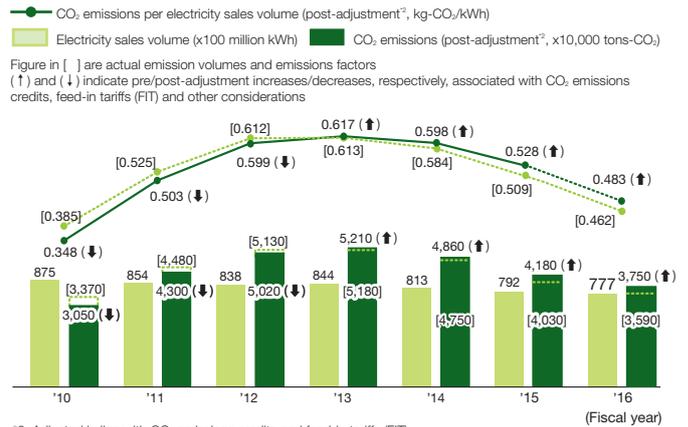
1. Greenhouse Gas Emissions for FY2016

CO₂ Emissions Results

Our CO₂ emissions for FY2016 were 37.5 million tons, with a CO₂ emissions per electricity sales volume of 0.483 kg-CO₂/kWh¹ (CO₂ emissions factor). This shows a reduction of approximately 10% in CO₂ emissions from FY2015 and a reduction of approximately 9% for CO₂ emissions factor. In addition to the stable, continuous operation (except during the schedule maintenance period) of reactors #1 and #2 of the Sendai Nuclear Power Plant, other factors such as lower electricity sales volume and an increase in power generation derived from renewable energy sources are responsible for this decline; however, CO₂ emissions are still high compared with before the Great East Japan Earthquake. Further reductions in CO₂ emissions can be expected when Genkai Nuclear Power Plant Reactors #3 and #4 go back online.

*1: These are provisional values; the national government will officially release finalized values based on the Act on Promotion of Global Warming Countermeasures.

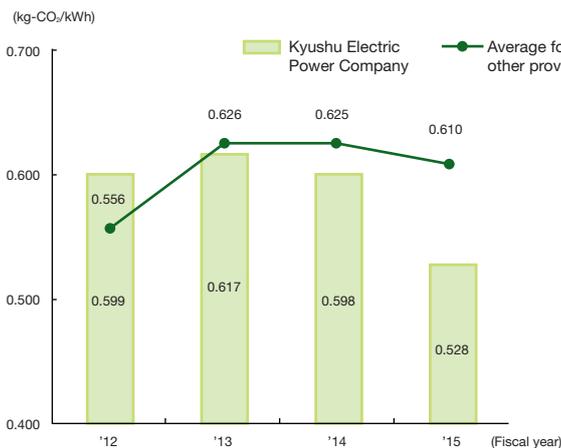
《CO₂ Emissions for Kyushu Electric Power Company》



*2: Adjusted in line with CO₂ emissions credits and feed-in tariffs (FIT).

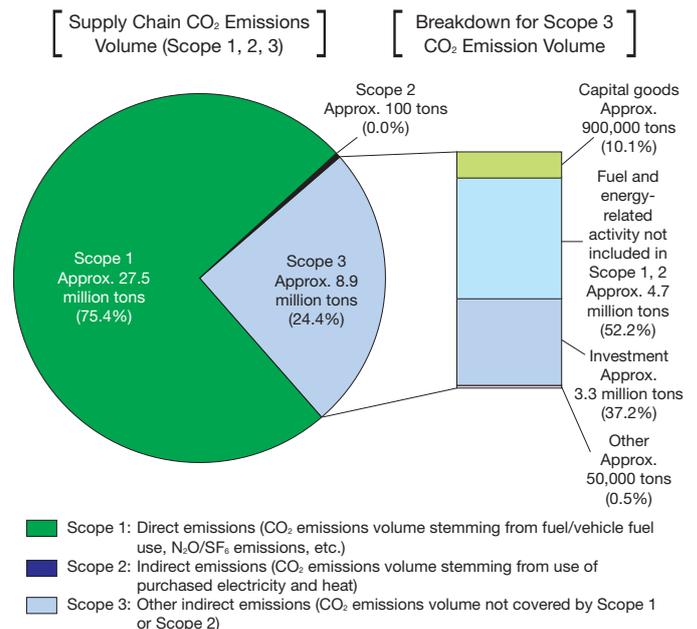
- (Note 1) Calculated according to the "Calculation and Announcement of Actual Emission Factors and Post-adjustment Emission Factors for Each Power Provider" released by the national government in accordance with the Act on Promotion of Global Warming Countermeasures (includes portion due to purchasing power from other companies)
- (Note 2) Due to the fact that FIT-adjusted CO₂ emissions volume increases surpassed reductions from CO₂ emissions credits (no results for FY2016), post-adjustment emission factors from FY2013 to FY2016 surpassed actual emission factors.
- (Note 3) In line with the full-scale liberalization of electrical power retail, the FY2016 results display CO₂ emissions volume per electricity sales volume, CO₂ emissions volume and electricity sales volume for retail electricity providers only (results are not included for isolated islands handled by general transmission power providers (excluding the Goto Islands, which are handled as part of mainland Nagasaki Prefecture)).

《Comparison with Other Providers for CO₂ Emissions》 per Electricity Sales Volume (post-adjustment)



*Average CO₂ emissions volume per electricity sales volume (post-adjustment) of former general power providers (nine companies), excluding Kyushu Electric Power.

《Greenhouse Gas Emissions Volume for the Overall》 Supply Chain



Note) Results are for FY2016. Figures may not match up with total values, as they have been rounded to the nearest whole number.

2. Initiatives Aimed at Electrical Supply

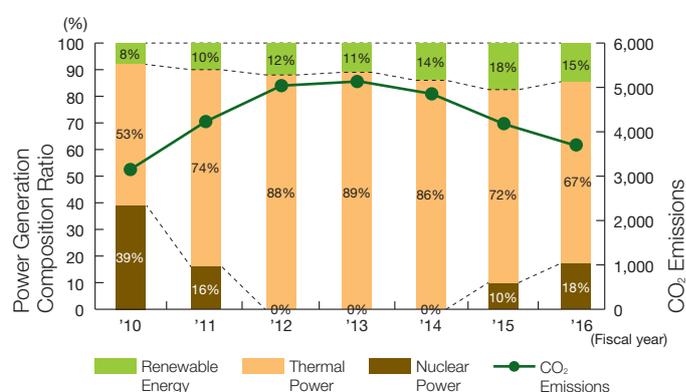
We are working to help realize the low-carbon society by undertaking a variety of initiatives, including pursuing proven and safe nuclear power generation, proactively developing and fully embracing renewable energy options, and working to improve the heat efficiency of our thermal power plants.

Pursuing Proven and Safe Nuclear Power Generation

Our CO₂ emissions volume has risen significantly compared with before the Great East Japan Earthquake (FY2010); however, as a result of such factors as the stable, continuous operation (except for periods of scheduled maintenance) of the Sendai Nuclear Power Plant Reactor #1 and #2 reducing the percentage of overall power generation derived from thermal power generation, CO₂ emissions for FY2016 were approximately 4.3 million tons less than they were in FY2015.

Nuclear power generation is similar to renewable energy in that it produces no CO₂ during power generation; thus, it is an excellent means of mitigating global warming and, from an energy security standpoint, remains an important energy option.

《 Power Generation Composition Ratio* and CO₂ Emissions Volume Change Over Time 》 Units: x10,000 tons-CO₂*



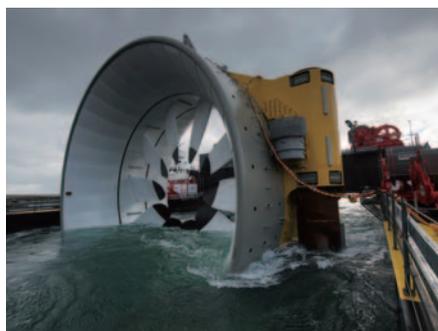
*: Power received from other companies does not include unspecified fuel types. The composition ratio shown here differs from the power source composition ratio for electricity sales volume.

Proactive Development and Full Incorporation of Renewable Energy

We in the Kyushu Electric Power Group are working proactively to develop and fully incorporate renewable energy as part of our operations, recognizing its terrific potential as a source of domestically produced energy which can be effectively utilized, as well as a means of fighting global warming. We are undertaking a variety of renewable energy projects through which we seek to develop 4 million kW of renewable energy (current 1.8 million kW + an additional 2.2 million kW) domestically and overseas by 2030, focusing primarily on geothermal and hydroelectric.

[Tidal Power Demonstration Project]

Kyuden Mirai Energy, the Nagasaki Marine Industry Cluster Promotion Association and two other companies have joined together to create a consortium which has been chosen by the Ministry of the Environment to carry out its Tidal Power Technology Commercial Application Promotion Project in the Strait of Naru-seto near Goto City in Nagasaki Prefecture. The consortium has begun tidal studies in preparation for carrying out demonstration testing of Japan's first commercial-scale, large tidal power project (2,000kW). (Demonstration period: planned for 2016 - 2019)



Tidal power electrical generator

[Basic Specifications]

- Type: Ocean floor installation and open center system
- Output: 2,000 kW
- Diameter: Approx. 16 m
- Height: Approx. 27 m
- Weight: Approx. 1,200 t
- Speed: 10-16 rotations/min.

Approach to Renewable Energy Adoption

We take a well-balanced approach to adopting renewable energy which involves capitalizing on the specific characteristics of each type of energy to incorporate them as fully as possible, but without compromising on the stability of power delivery. This means that we tailor our supply-demand operating policies in response to renewable energy's significant, weather-dependent variations in power output.

[Start of Large Capacity Accumulator System Operation]

We are undertaking a variety of renewable energy adoption initiatives which rely on a well-balanced approach that capitalizes on the specific characteristics of each type of energy to incorporate them as fully as possible, but without compromising on the stability of power delivery.

One such initiative is the establishment in March 2016 of the Buzen Accumulator Substation, which was constructed as part of the national government's project to demonstrate the use of large capacity accumulator systems as a means of better balancing power supply and demand. Demonstration at this substation was conducted to show how accumulators, which charge and discharge depending on the status of solar power generation, can be used to improve the balance between supply and demand, as well as to show how a large capacity accumulator system can be efficiently run. (FY2015 - FY2016)

For the future, we will apply the findings and technology obtained from this demonstration testing to the reduction of output control volume during actual operation.



Aerial view of the Buzen Accumulator Substation

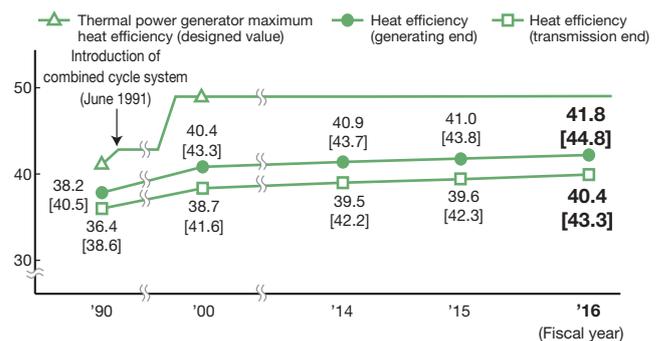
Maintenance and Improvement of Thermal Power Plant Heat Efficiency

We are working to maintain and improve the overall heat efficiency of our thermal power plants in order to better control fuel consumption and CO₂ emissions.

As a result of the continuous, stable operation (excluding periods of scheduled maintenance) of Sendai Nuclear Power Plant causing the operation rate of low heat efficiency oil-fired thermal power plants to drop, coupled with such factors as the start of operations for the high-efficiency Shin-Oita Power Plant No.3×4, results for FY2016 surpassed those for FY2015, reaching 40.4% (transmission end).

Additionally, we are currently constructing Matsuura Power Plant Unit 2 (which is scheduled to start operation in December 2019), and the cutting-edge "ultra-supercritical (USC) pulverized coal combustion" technology it will utilize for power generation will provide improved efficiency while lowering fuel consumption and environmental load.

Thermal Power Total Heat Efficiency (higher calorific value base) Unit: %



(Note) Figures in [] are lower calorific value base-converted values for which Comprehensive Energy Statistics conversion factors, etc., have been used.

Overview of Matsuura Power Plant Unit 2 Development

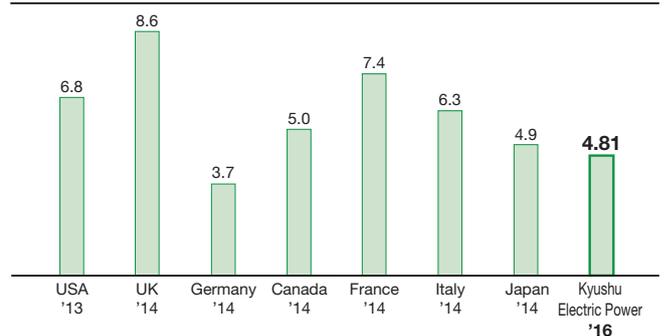
Output	1 million kW	
Power generation method	Ultra-supercritical pulverized coal combustion	
Fuel	Coal	
Thermal efficiency (generating end)	Higher calorific value standard	43% or more
	Lower calorific value standard	45% or more

Reduction of Transmission/Distribution Loss

Efforts to reduce the amount of power lost via transmission and distribution lines (transmission/distribution loss) are not only important to ensure efficient power delivery but also to reduce the amount of fuel used by thermal power plants and the amount of CO₂ which is produced.

As a result of efforts to increase transmission voltage, introduce low-loss transformers and other initiatives, our transmission/distribution loss rate for FY2016 was 4.81%, which is among the best in the world.

Country Comparison for Transmission/Distribution Loss Rates Unit: %



Source: Created based on the Hand Book of Electric Power Industry (2016 ed.).

3. Initiatives Aimed at Electrical Use

We are engaged in the promotion of initiatives aimed at reducing power usage among customers as well as at our offices.

Helping Customers to Conserve Electricity

[Providing Energy-Saving Information]

Through our membership website, "Kirei Life Plus," we provide customers with handy information about how they can save energy. The site offers a variety of fun and easy-to-understand articles, images and videos by experts who share their insights and tips on how to reduce electricity usage in our daily lives.

In addition, users who register as Kirei Life Plus members have access to resources which allow them to objectively check and evaluate their household's energy-saving efforts, such as by comparing average electrical usage among similarly priced power plans and by checking "Energy Conservation Rankings" which let them compare their electrical use with other, similarly-sized households.



Energy Conservation Ranking

[Power Meter Data Notification Service]

We provide a service enabling electrical usage data measured by a smart meter every 30 minutes to be sent to a HEMS (home energy management system) installed in the customer's home. This lets customers check their electricity usage in real-time and then explore more energy-efficient means of saving electricity.

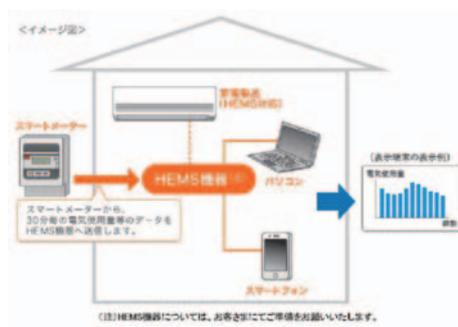


Image of Power Meter Data Notification Service

4. Contribution to International Global Warming Mitigation Measures

[Contributing to CO₂ Emissions Reduction via IPP Project Implementation]

We are helping to control CO₂ emission not only in Japan but also overseas thanks to our involvement in IPP projects centered mainly in Asia, such as the construction of high-efficiency, natural gas thermal power plants in Vietnam and the Philippines and the construction of wind power generation facilities in China.

In March 2017, Sarulla Geothermal Power Plant Unit 1 (106,000 kW), which represents one of the largest geothermal IPP projects in the world, went online. When Unit 2 (scheduled to start operation in 2017) and Unit 3 (scheduled to start operation in 2018), which are currently being built, also go online, the total power output for the plant is expected to be approximately 320,000 kW.



Aerial view of Sarulla Geothermal Power Plant Unit 1

[Reducing CO₂ Emissions via IPP Projects]

The contribution to CO₂ emissions reduction for FY2014 as a result of high-efficiency thermal power plant and wind power plant operations overseas (six countries, seven projects^{*1}: equity ownership in output of 1.5 million kW) is estimated at approximately 380,000 tons^{*2}. This is roughly equivalent to 0.8% of Kyushu Electric Power's domestic CO₂ emissions volume.

*1: IPP projects: six projects / General power providers: one project

*2: CO₂ emissions factors for the countries in question were calculated using values obtained from the "CO₂ EMISSIONS FROM FUEL COMBUSTION 2016 EDITION (IEA)" (because the latest data is from 2014, calculation was performed using figures for 2014).

[Utilizing Kyushu Electric Power Group Technology and Expertise for Overseas Consulting]

We are actively involved in overseas consulting on basic energy plans, on energy generation, transmission and conservation and on environmental initiatives which put to use the technology and expertise that we as a group have cultivated in the course of our domestic and international electrical power operations, helping other countries to improve the stability, eco-friendliness and human resources infrastructure of their power generation industries.

In FY2016, we performed a study in support of the installation of a solar power generation system on Ebeye Island, part of the Marshall Islands located in the western central Pacific Ocean, as well as performed a study in relation to the operation of a geothermal power plant in Kenya.

Overseas Project Implementation (FY2016)

