

Alleviating Climate Changes

Fiscal 2011 Topics

• We strove for electricity conservation in response to the disaster.

Basic Philosophy

Major climate change could hinder the establishment of a sustainable society. To contribute to the alleviation of climate change, Eco Vision 2015 sets CO₂ emission reduction targets for long-term efforts led by the Energy Conservation Promotion Office.

VOICE

I believe that the effective utilization of limited resources and the prevention of environmental destruction are our obligations to the next generation. It has been two years since the Energy Conservation Promotion Office was established, and this Office has been participating in the energy conservation activities of many departments. Our key achievements for fiscal 2011 include RHK exhaust heat recovery and review of the general temperature control method; our contribution has resulted in a reduction of 923 tons in CO₂ emissions. Energy conservation activities reduce environmental burdens as well as costs, and therefore, we will continue creating mechanisms and providing support so as to further promote energy conservation activities.

Kiyotaka Ono
General Manager
Energy Conservation Promotion Office

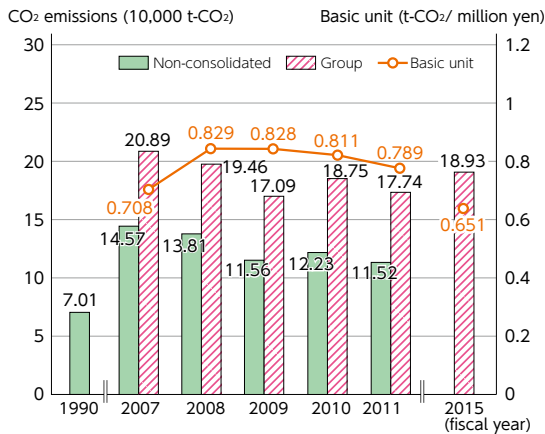


Results of the Fiscal 2011 Targets, and the Fiscal 2012 Targets

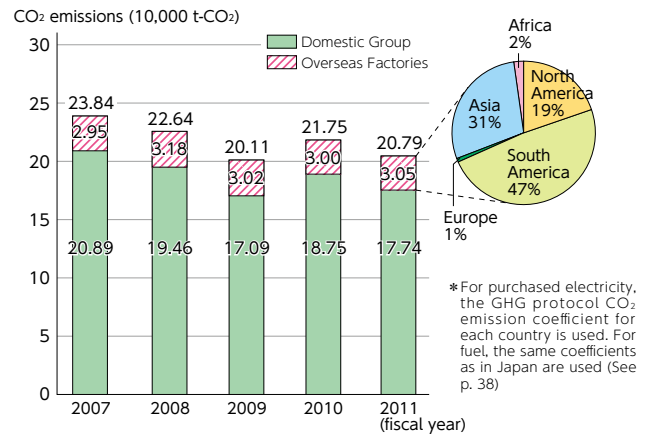
The CO₂ emission volume for fiscal 2011 was 177,400 tons (down 5.4% from previous fiscal year), thus achieving the 2011 target of 186,700 tons. This was due to energy conservation efforts such as exhaust heat recovery, combustion air preheating, and insulation during the manufacturing process, as well as electricity conservation efforts (peak reduction, etc.).

Since it has been difficult to reflect the actual business activities into the reduction results, the evaluation indices that reflect the actual status in a better manner will be used for fiscal 2012; the aim is to achieve emissions of 18.79 tons and emissions per unit of production of 0.748 tons/ million yen.

Transition of Emission Volume of Energy-Origin CO₂ (Offices and Plants)



Trend in CO₂ Emissions (Domestic Group + Overseas Factories)



Act on the Rational Use of Energy and the Law Concerning the Promotion of Measures to Cope with Global Warming

Energy consumption by NGK SPARK PLUG CO., LTD. and three affiliated companies exceed 1,500kl (crude oil equivalent), and have therefore been designated as Specified Business Operators under the Act on the Rational Use of Energy. Each designated company has appointed an Energy Management Control Officer and an Energy Management Planning Promoter to oversee energy conservation.

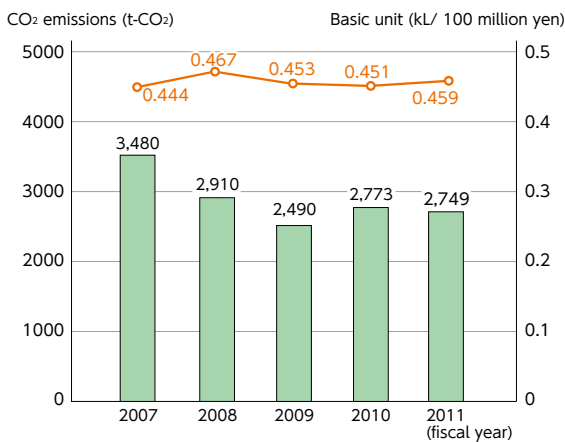
The emission volume of greenhouse gases excluding energy-origin CO₂ by NGK SPARK PLUG CO., LTD. totaled 617 tons (CO₂ equivalent), representing a 31% decrease from the previous fiscal year. Since it did not reach 3,000 tons, reporting was not required under the Law Concerning the Promotion of Measures to Cope with Global Warming; nevertheless, we will continue to calculate and control our emissions.

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Energy Conservation During Transportation

As Specified Consigners under the Act on the Rational Use of Energy, we are making efforts to reduce CO₂ emissions during transportation. The per unit energy consumption was 0.459 kL/ 100 million yen for fiscal 2011; we were unable to reach our goal of 0.426 kL/ 100 million yen. For fiscal 2012, the Logistics Subcommittee established in August 2011 will play a central role in striving to achieve the goal of 0.422 kL/ 100 million yen.

Transition of CO₂ Emissions as Consigner



Electricity Conservation in Response to the Disaster

To lower the peak of electricity use during summertime, electricity was conserved through the improved operation efficiency of air conditioning systems and production facilities, the reduced use of power through energy conservation efforts in offices, and the lowering of the maximum-level electricity use, by adjusting work times.

Use of Natural Energy

We promote the use of solar power, a natural energy source. The Nagoya Plant has three solar power generator units and one solar water heater. The Komaki Plant has a large-scale solar power generator unit that can generate a maximum of 107 kW of electricity. Power generated in fiscal 2011 totaled 164,000 kWh, equivalent to a reduction of 54 tons of CO₂.



Solar panels (Komaki Plant)

Participation in the Lights-Down Campaign

We support and participate every year in the CO₂ Reduction Lights-Down Campaign conducted by the Ministry of the Environment. In fiscal 2011, we turned off the lights of 17 advertising towers and displays from June 22 (summer solstice) to the end of August with the cooperation of our plants, sales offices and dealerships. Additional energy conservation efforts included the lights-down of four advertising towers and displays from March 2011, immediately after the disaster, until the end of January 2012.



Normal



Turned off

PICK UP

Changing the temperature control method - Komaki Plant

The Organic Package Div. of Komaki Plant has been maintaining the temperature of the area with coating lines at 25°C. This meant that when the room temperature was 30°C, air conditioners were used to lower it to 25°C, and when it was 20°C, boilers were used to raise it to 25°C. We focused on this, and considered ways to conserve energy by reducing such temperature controlling without sacrificing product quality.

Specifically, we changed the temperature setting from 25 to 28°C, and stopped heating the room when the room temperature was too low. This resulted in reducing the electricity use by air conditioners as well as reducing gas use by boilers, achieving approximately 520 tons of CO₂ emission reduction per year.

