

Realization of a Low-Carbon Society

Fiscal 2015 Targets and Results

Targets

① Use the energy visualization system

By fiscal 2016, have equipment and system in place to reduce annual CO₂ emissions and energy consumption by at least 5%

② Reduce CO₂ emissions through the contribution from products

Achieve cumulative values equal to or more than the initial plan values for each business segment and disclose the reduction of CO₂ emissions to the public

Results

Continuing on from fiscal 2014, still introducing system facilities at all business sites. Rolled out improvement activities, with focus on study groups, courses and sharing of data on examples of improvement, and cut annual energy consumption by 2%

Although falling below the initial target, a decrease of 510,000t-CO₂ exceeded level of emissions from business activities. Reduction results disclosed to public, primarily through website and Kawasaki Report

Reduction in CO₂ Emissions from Production Activities

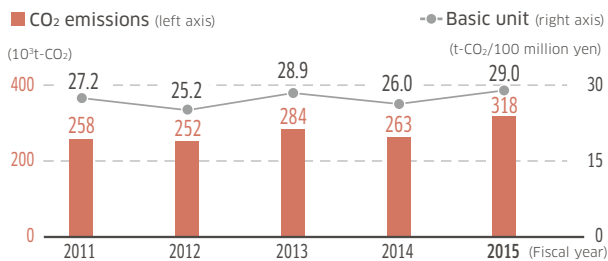
Kawasaki seeks to reduce CO₂ emissions generated through production activities by 5% by fiscal 2016 and has implemented steps to curb energy consumption.

In fiscal 2015, we achieved a CO₂ reduction effect of 6,000 tons—2% equivalent—mainly through energy-saving measures under the energy visualization system. But the emissions factor on electricity purchased from outside sources increased 16%*¹ over fiscal 2014, and overall emissions climbed 20%*² year on year, to 318,000 tons.

*¹ Year-on-year comparison of the CO₂ emissions and purchased electricity consumption ratio is calculated using emissions factors for each business site in each fiscal year

*² The CO₂ emissions value for fiscal 2014 includes a credit of 30,000 tons. If compared before the credit adjustment, the year-on-year increase is 8%, which is roughly equal to the increase in net sales in fiscal 2015.

CO₂ Emissions and Basic Unit



Notes: 1. Basic unit is a measurement obtained by dividing CO₂ emissions by net sales.

2. The CO₂ emissions factor is based on values published by Japan's Ministry of the Environment for each power provider in each fiscal year.

CO₂ Reduction Through Product-based Contributions

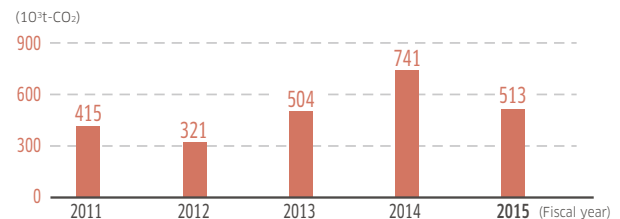
Kawasaki calculates CO₂ reduction of products in use in three categories—energy-related products, transportation-related products, and industrial equipment and products in other segments—to determine the CO₂ reduction effect through product-based contributions.

In fiscal 2015, the reduction—that is, contribution—reached 513,000 tons, or 30% year on year, reflecting a drop in the number of power generation systems (energy-related products) delivered.

Category	Reduction Effect	Main Products	Reason for Reduction
Energy-related products	202,000t/year	Gas turbine cogeneration system, gas engine power generation system	High-efficiency power generation, waste heat utilization
Transportation-related products	267,000t/year	Ships (improved propulsion performance) Aircraft (lighter weight of engines)	Better fuel economy
Industrial equipment, other	44,000t/year	Waste power generation system, hydraulic equipment, robots	Waste heat utilization, greater energy savings

CO₂ Emissions Reduction* Through Product-based Contributions

■ CO₂ Emissions Reduction



Notes: 1. Kawasaki used CO₂ emissions factors provided in the list of calculation methods and emissions factors published by Japan's Ministry of the Environment.

2. The CO₂ reduction effect achieved through higher efficiency of products is based on a comparison using standard, existing products.

3. Application of waste heat and energy derived from waste materials is counted toward the CO₂ reduction effect.

Use of Energy Visualization System

In fiscal 2015, we extended the scope of the energy visualization system, and we expect to have all areas at all Type 1 designated energy management factories under visualization during fiscal 2016. We set a goal to reduce annual CO₂ emissions and energy consumption by at least 5% by the end of fiscal 2016 using this system. In fiscal 2015, we achieved a 2% reduction in energy consumption, with a view to continuing our rollout of the system to all planned locations.

Going forward, we will be pursuing improvement activities involving all employees to accelerate energy-saving potential in several thousand pieces of production equipment.

To encourage all employees to support this system, we organize in-house information exchange opportunities on the topic of energy savings and set up study groups to highlight examples of the system in action. We strive to enhance energy savings and also, by promoting greater sophistication in the system's energy analysis function, enable individuals who are not necessarily experts in energy management to detect energy waste or discrepancies.

FOCUS

Using the energy visualization system, employees are able to implement energy-saving improvements on their own.

Optimizing power application method for heat treatment furnace used in production of aircraft engines (Seishin Works)

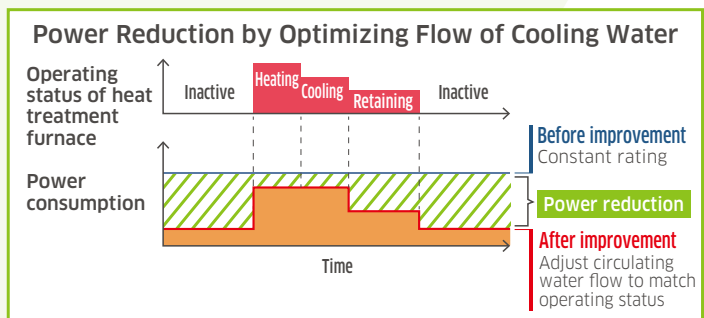
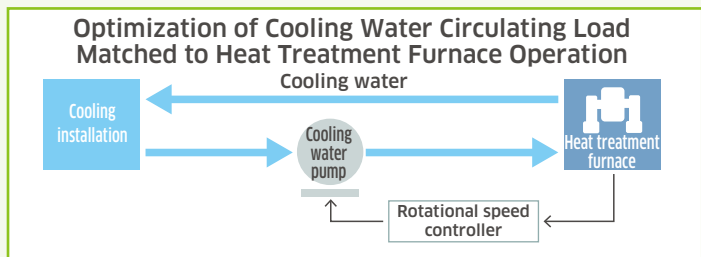


Power consumption

Down about **70%**



Experts in heat treatment looked into the process and optimized the circulating load of the cooling water. Power consumption decreased by 70%.



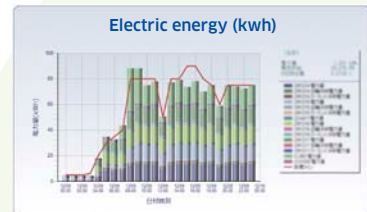
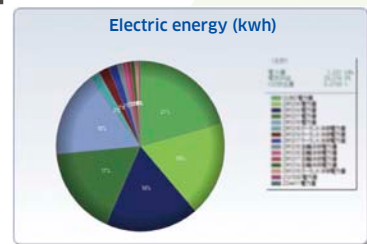
Promoting energy visualization system and energy-saving improvement know-how laterally across the organization

The production of products uses energy through various processes, from material handling to waste disposal.

To reduce energy consumption on the production stage, Kawasaki introduced an energy visualization system, dubbed K-SMILE, in all operating divisions in 2013.

When employees can see the flow of energy and water, they are able to draw on their own manufacturing knowledge to prevent wasted energy and incongruity. This will lead to a 5% reduction in energy costs.

K-SMILE is always evolving through feedback from users.



Proprietary energy visualization system-K-SMILE

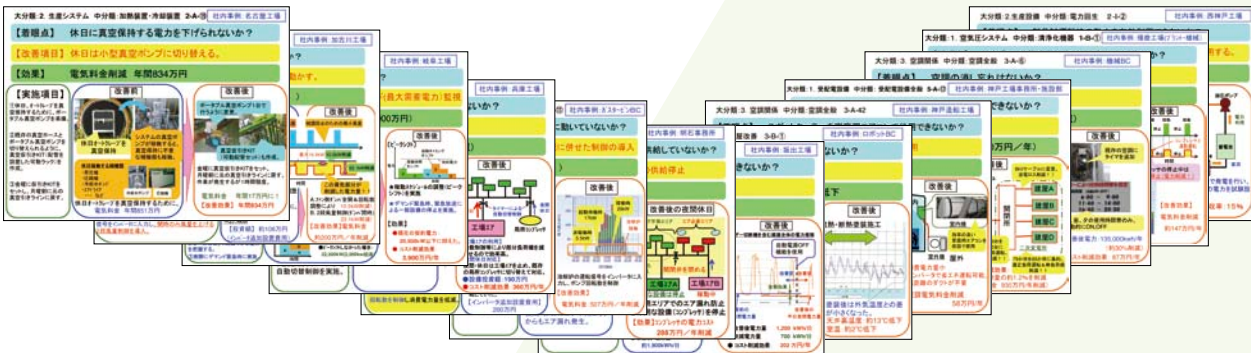
Promote self-directed energy-saving activities

Examples of energy-saving improvements in-house and elsewhere are compiled into a database. We are working to make the database available Company-wide to promote knowledge sharing.

Energy Cost Reduction Goal

5% down

Database for examples of energy-saving improvements



Study sessions on energy-saving methods

People in all operating divisions who promote energy-saving activities gather at facilities where energy-saving measures have been successful for study sessions. By promoting energy-saving technology, we accelerate associated activities throughout the organization.



Lecture on energy-saving methods

Lectures on approaches to successful energy-saving, presented by invited, an external consultant, enhance awareness and responsiveness throughout the Company.

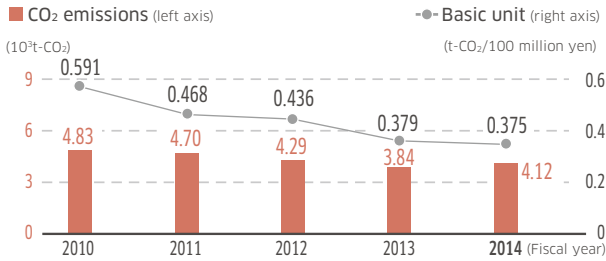


Reduction of Greenhouse Gas Emissions in Logistics Processes

Kawasaki promotes energy-saving activities and data tracking to curb CO₂ emissions from logistics processes.

In fiscal 2015, we saw a 40% increase in freight carried by ship, mainly due to greater marine transport of semi-finished products between our factories. On land, we embraced various measures, including steps to improve load efficiency. But overall, emissions rose 8%, to 4,000t-CO₂.

CO₂ Emissions from Logistics Processes and Basic Unit

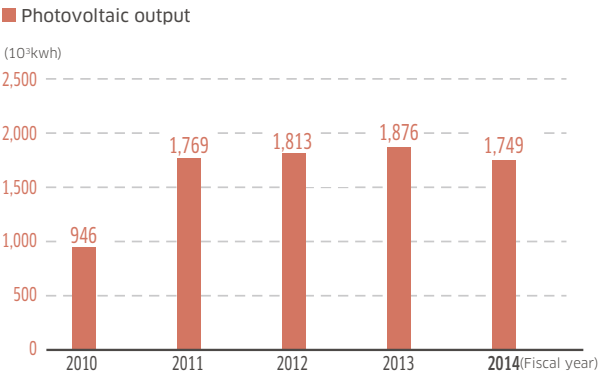


Notes: 1. Basic unit is a measurement obtained by dividing CO₂ emissions by net sales.
2. CO₂ emissions in logistics processes are calculated from our position as a specified consignor under the Energy Saving Law.

Utilizing Renewable Energy

Kawasaki has installed solar power generating facilities at seven domestic factories, for total generating output of about 1,500kW. In addition, Kawasaki Trading Co., Ltd., a Kawasaki Group company, is involved in sales of about 2,700kW under Japan's Feed-in Tariff Scheme for Renewable Energy.

Electric Power Output from Photovoltaic Systems



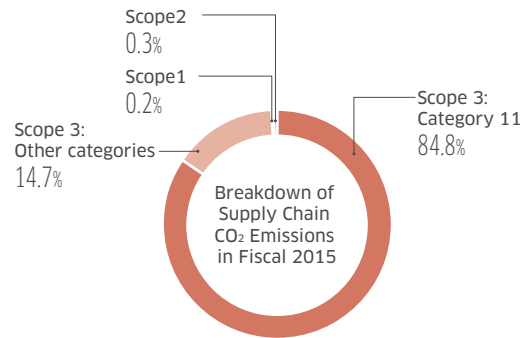
Estimating CO₂ Emissions in Supply Chain

The scope that Kawasaki is required to cover in tracking CO₂ emissions is expanding, characterized by an accelerating trend toward the inclusion of not only the Company's own operations but those of its supply chain as well. The standards for calculating emissions along our supply chain include Corporate Value Chain (Scope 3) Accounting and Reporting Standard, established by the Greenhouse Gas Protocol. In Japan, the Basic Guidelines on Accounting for Greenhouse Gas Emissions Throughout the Supply Chain—a Japanese version of Scope 3—were prepared by the Research/Study Committee on Standards for Accounting and Reporting Organization's GHG emissions throughout the

Supply Chain, established jointly by the Ministry of Economy, Trade and Industry and the Ministry of the Environment, to look into methods for calculating greenhouse gas emissions along corporate supply chains. Using these basic guidelines, Kawasaki calculated CO₂ emissions along its supply chain, and presents the results in the pie graph below.

According to this data, the GHG effect accompanying the use of Kawasaki-sold products over the whole supply chain is extremely high. We have been making progress in reducing CO₂ emissions through product-based contributions, but going forward, we will take an even more proactive approach.

Breakdown of Supply Chain CO₂ Emissions in Fiscal 2015



Scope 1: Direct GHG emissions from reporting company's own corporate activities, such as direct emissions from fuel consumption or industrial processes at company sites

Scope 2: Indirect GHG emissions from use of energy from reporting company's corporate activities, such as indirect emissions from the use of purchased electricity and heat

Scope 3: All other indirect GHG emissions not included in Scope 1 or Scope 2 systematically broken down into 15 categories

Category 11: GHG emissions from use of sold products

Other categories: Total of categories 1, 2, 3, 4, 5, 6, 7, 9 and 15

Categories not included in the above: Categories 8, 10, 12, 13 and 14 are not part of the business activities of Kawasaki or are accounted for under other categories, or else the GHG emissions are difficult to calculate at the current time and are excluded

The Next Step

To achieve the CO₂ emissions reduction target set out in Environment Vision 2020, we will put more effort into improvement activities using the energy visualization system and accelerate approaches to save energy and natural resources. In addition, we will strive to develop products with the capacity to curb CO₂ emissions and encourage the widespread use of such products by conducting product assessments and by leveraging the program Kawasaki Green Products Promotion Activity.