Kawasaki’s approach to environmental issues, such as global warming and energy use and availability, is to lessen environmental impact through its products, and toward this end, the Company has supported a program, Kawasaki Green Product Promotion Activity, to address these issues, since 2014. Registered products receive an ISO 14021-compliant environmental label certifying that they are environment-friendly.

The Select “Second Set” of Kawasaki-brand Green Products
Kawasaki selected 11 products in 2015 to be in the second set of Kawasaki-brand Green Products. Kawasaki-brand Green Products are assessed for their contribution to the realization of a low-carbon society, a recycling-oriented society, and a society that coexists with nature, as well as conforming to established criteria, from two perspectives—environmental performance of the product and environmental management during manufacturing processes. We will continue to provide customers with Kawasaki-brand Green Products, boasting superior environmental performance.
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Lessen Environmental Impact

Kawasaki-brand Green Products

Kawasaki Super Green Products:

- Kawasaki Green Machinery
- Kawasaki Super Carriers
- Kawasaki Straight Tube
- Kawasaki LED Lamps for Rail Cars
- Kawasaki Ninja
- Kawasaki Versys
- Kawasaki Truck Carriers

Environmental performance of the products during manufacturing processes and environmental management are monitored and evaluated. This evaluation includes the following: energy use efficiency, total use of fuel, carbon dioxide (CO2) emissions, and回收（Recycling）.

- Total use of fuel: 144 fuel: 83
- CO2: 100 CO2: 112

A gas turbine cogeneration system produces electricity with a generator using a gas turbine as its main driver and utilizes the heat for additional applications, such as air conditioning, hot water, and factory heating, which derives the most efficient use of supplied energy. Cogeneration systems have also been designated by the government, which will lead to wider use of these systems as distributed energy systems using natural gas.

What is a Gas Turbine Cogeneration System?

A gas turbine cogeneration system produces electricity with a generator using a gas turbine as its main driver and utilizes the heat for additional applications, such as air conditioning, hot water, and factory heating, which derives the most efficient use of supplied energy. Cogeneration systems have also been designated by the government, which will lead to wider use of these systems as distributed energy systems using natural gas.

M7A-03D Gas Turbine Domestic Delivery (Customer Comment)

Electricity and steam obtained from the gas turbine cogeneration system that was installed at the factory are used on the production floor. Since the system was installed, we have achieved an annual reduction effect of about 12,000kWh on a crude oil equivalent basis, compared with the use of existing boiler (gas- and heavy oil-fired) facilities. Converted to CO2, that works out to about 30,000 tons per year, equivalent to emissions from around 5,600 typical households in Japan. In addition, the system has contributed to overall plant energy savings of about 22%.

Utility Section, Engineering Department, Okazaki Plant, Toray Industries, Inc.

* Estimated annual CO2 emissions from a single-family household are 5,270kg-CO2. Source: Greenhouse Gas Inventory Office of Japan

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Development of Hydrogen Gas Turbine Technology to Further Reduce CO2 Emissions

Hydrogen-fired gas turbine combustion technology

Hydrogen is characterized by its fast rate of combustion and because of this, when used with conventional gas turbines, it is problematic, generating higher NOx, exhibiting unstable combustion, and causing burner scaling. Seeking to solve these issues, Kawasaki has been working on the development of hydrogen combustion technology, which would make it possible to burn hydrogen-enriched natural gas in volumes from 0% to up to 100% (hydrogen only). Repeated combustion simulations and verification tests have been made at RWTH Aachen University in Germany with Kawasaki gas turbines, on the road to establishing proprietary hydrogen-fired gas turbine technology. (Kawasaki welcomed the start of demonstration testing for a low-NOx, mixed hydrogen and gas-driven gas turbine system, commencing at its Akashi Works in May 2015.)