

Realizing a Low-carbon Society

CO₂ emissions by providing products with better environmental performance and reducing CO₂ emissions through such initiatives as energy-saving in manufacturing processes. We are advancing corporate activities accordingly.

Below is a look at Kawasaki's achievements related to these—CO₂ reduction through product-based contributions and business activities—in fiscal 2018, as well as a review of the results of the activities of the recently concluded Ninth Environmental Management Activities Plan (fiscal 2016 to 2018) and the key initiatives of the new 10th Environmental Management Activities Plan (fiscal 2019 to 2021).

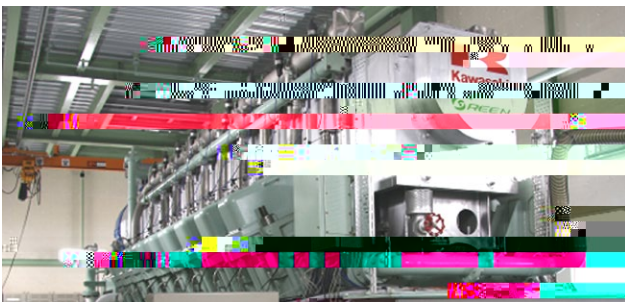
Realization of a Low-carbon Society: Product-based Contributions to CO₂ Emissions Reduction

About 90% of CO₂ emitted during the life cycles of our products is released during their use after they are sold. The Company therefore seeks to realize a low-carbon society by providing products that emit less CO₂ during use. In fiscal 2017, we established new rules for calculating the CO₂ emissions reduction achieved through product-based contributions in order to better quantify the contributions of highly energy efficient products to the mitigation of global warming.

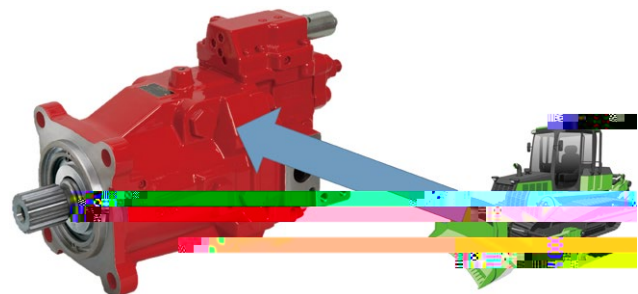
Calculations based on these rules found that the CO₂ emissions reduction through products Kawasaki sold (non-consolidated basis) in fiscal 2018 was approximately 29.1 million tons. Large contributions were made by such products as the Green Gas Engine, which boasts world-leading power-generation efficiency, and the M7V Series motors for HSTs, both of which are Kawasaki-brand Green Products.

Fiscal 2018 Result (non-consolidated)
Reduction of CO₂ Emissions through
Product-based Contributions

Approximately **29.1** million tons of CO₂



Green Gas Engine



M7V Series motors for HSTs

1. HST: Hydrostatic transmission: A non-stage transmission comprising a hydraulic pump and hydraulic motors.
2. The details of Kawasaki-brand Green Products are disclosed on Kawasaki's website: http://global.kawasaki.com/en/corp/sustainability/green_products/index.html#2018item
We launched the Kawasaki-brand Green Products* in-house registration program in 2013 for products that meet standards established by the Company related to energy efficiency and other factors. The number of registered products has continued increasing every year, reaching 54 in 2019.

Calculation Rules

● **Products to be assessed:** Kawasaki-brand Green Products, products that use waste, waste heat, and renewable energy, as well as cogeneration systems and rolling stock pertaining to modal shift, etc., were selected for assessment.

● **Period of assessment:** We have adopted a flow-based approach

To reduce CO₂ emissions from business activities, Kawasaki has built energy-saving promotion structures for each business segment, and the entire Company is implementing a wide range of energy-saving initiatives.

In fiscal 2018, energy-saving initiatives reduced Kawasaki's (non-consolidated) annual CO₂ emissions by approximately 16,000 tons, bringing total CO₂ emissions from business activities to approximately 3,010,000 tons. Below are two examples of energy-saving improvements.

Saving Energy in Composite Parts Manufacturing Lines

Because of the strict quality requirements for composite materials used in aircraft fuselages and components, these materials are manufactured in clean rooms with controlled air temperature and humidity. Previously, the composite materials were manufactured on separate lines in multiple clean rooms. By increasing the speed of manufacturing on these lines and optimizing the processes, we reduced the manufacturing time required per component, thereby enabling production at the same pace as before with one fewer line. Stopping the unused molding and processing line and turning off the air conditioning for its cleanroom yielded a reduction in annual CO₂-

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Under the Ninth Environmental Management Activities Plan (fiscal 2016–2018), we implemented energy-saving initiatives aimed at reducing CO₂ emissions from business activities and cutting energy costs. While we achieved our target of reducing annual resource and energy costs by 5% or more in all three years, we met our goal of reducing CO₂ emissions per unit of net sales by 3% or more only in some years. Furthermore, we revised the rules for calculating the CO₂ reduction effect of products to improve calculation accuracy,

realizing more correct information disclosure.

Under the 10th Environmental Management Activities Plan (fiscal 2019–2021), we will consider the potential impacts on our businesses of risks and opportunities as we work to further reduce CO₂ emissions by expanding the provision of products with low CO₂ emissions and promoting further energy-saving improvements and energy reuse in our business activities. By doing so, we will ambitiously work to achieve major reductions in CO₂ emissions.