Three Focal Fields

3

Energy and Environmental Solutions

Working toward the stable generation of clean energy

Quickly achieve a stably powered, carbon-neutral society at low cost

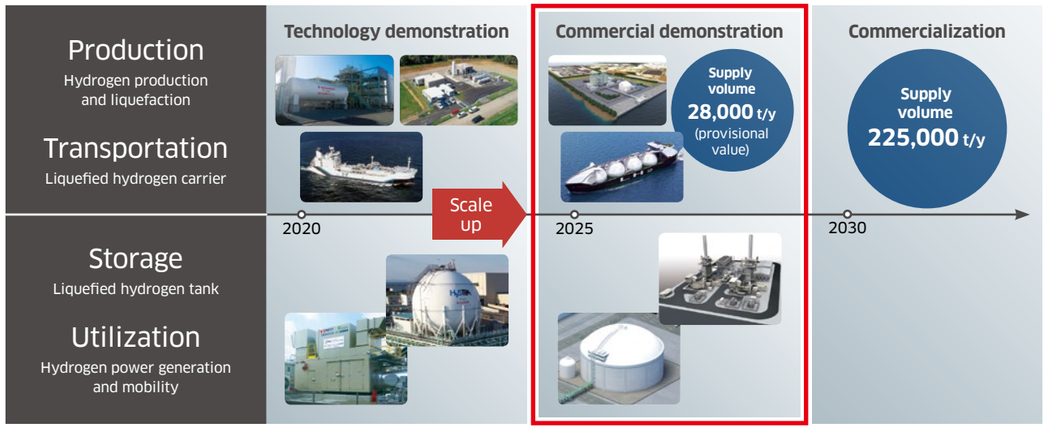
Kawasaki's Solutions to Social Issues

- We will provide decarbonization and electrification solutions that leverage our wide-ranging technologies and energy and transportation systems to address global warming.
- Building on our track record (e.g., liquefied hydrogen tanks and liquefied hydrogen containers at the JAXA Tanegashima Space Center) and pioneering technological development of a CO_2-free hydrogen supply chain (production, transportation, storage, and utilization), we will coordinate with rapidly advancing hydrogen projects around the world to improve costs and transportation volumes, helping realize a carbon-neutral society.
- With the global advance of transportation electrification and electricity supply infrastructure development, we will lead the shift to electric and hybrid technologies in motorcycles and other transportation equipment and systems, helping realize a carbon-neutral society.

Developing a Hydrogen Supply Chain

Steps Toward Expanding Hydrogen Use and Transport Volumes

Hydrogen-related businesses are increasingly being looked at as powerful potential tools in eliminating carbon emissions. The Kawasaki Group has been advancing R&D in this area for a decade, working to produce hydrogen cheaply and develop a hydrogen supply chain. Scaling up our current technology demonstrations, we expect to realize a commercial demonstration supply of approximately 28,000 tons per year in 2025 and a commercial supply of approximately 225,000 tons per year by 2030.



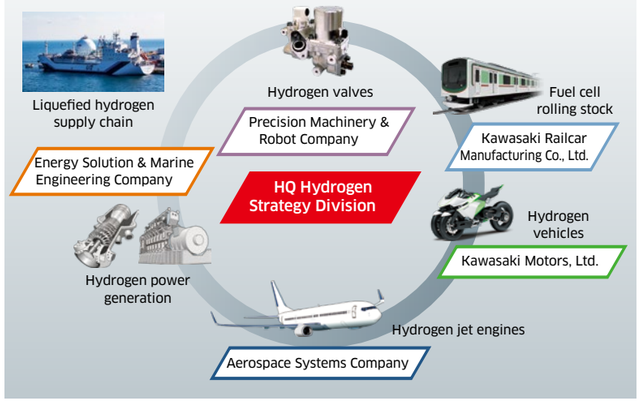
Expansion in Hydrogen Use

Several projects related to the use of hydrogen are currently in progress at Kawasaki.

- Development of hydrogen gas engines in the marine sector
- Participation in the development of hydrogen-powered aircraft
- Leading the development of liquefied hydrogen fuel tanks, hydrogen fuel supply systems and other core technologies

In light of the expected expansion in the use of hydrogen across industrial fields, we have established the Hydrogen Strategy Division within the Head Office to coordinate our hydrogen-related businesses and advance a wide range of initiatives leveraging Group technologies.

Further Development of Hydrogen-Related Products and Businesses



ANSWERS
Realizing a Carbon-Neutral Society: The Global Acceleration of Hydrogen Energy Development (Japanese only)
https://answers.khi.co.jp/ja/energy-environment/20210731-j02/

Carbon Recycling

Kawasaki promotes the separation, capture, utilization, and storage of CO_2 emitted by power stations and manufacturing plants. We are building a pilot-scale test facility at Kansai Electric Power's Maizuru Power Station, where we will begin demonstration testing of CO_2 capture in fiscal 2022.

Electrification

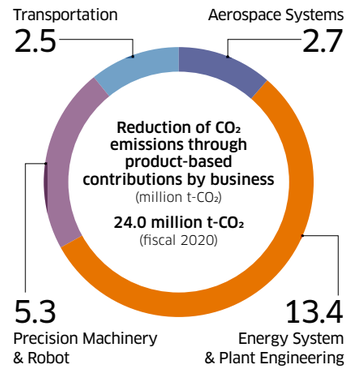
In light of the changing social environment, Kawasaki will accelerate the shift to electric and hybrid technologies in its transportation equipment and systems while reinforcing coordination within the industry.

Reducing CO_2 Emissions through Product-Based Contributions

More than 90% of the CO_2 emitted during the life cycles of our products is released during post-sale product use. To promote the reduction of CO_2 emissions during product use, since 2014 we have operated the Kawasaki-brand Green Products system, an ISO 14021-compliant internal system for certifying environmentally friendly products. Products that meet our proprietary standards related to boosting the environmental performance of the products themselves and reducing the environmental impact caused by associated manufacturing processes are registered under the system.

As of the end of fiscal 2020, the number of registered Kawasaki-brand Green Products stood at 61. We have also established rules for calculating CO_2 emissions reductions through product-based contributions in order to quantify the contributions of such products to the mitigation of global warming.* Calculations based on these rules showed that Kawasaki products sold in fiscal 2020 (mainly Kawasaki-brand Green Products) reduced CO_2 emissions by about 24.0 million tons.

*For details about calculation rules, please refer to p. 67.



Group Vision 2030

Promoting Environmental Management

Kawasaki established the Kawasaki Global Environmental Vision 2050 in 2017. To achieve this vision, we advance concrete initiatives according to environmental management activities plans formulated every three years. An overview of the 10th plan (fiscal 2019–2021) and progress in fiscal 2020 is shown below.

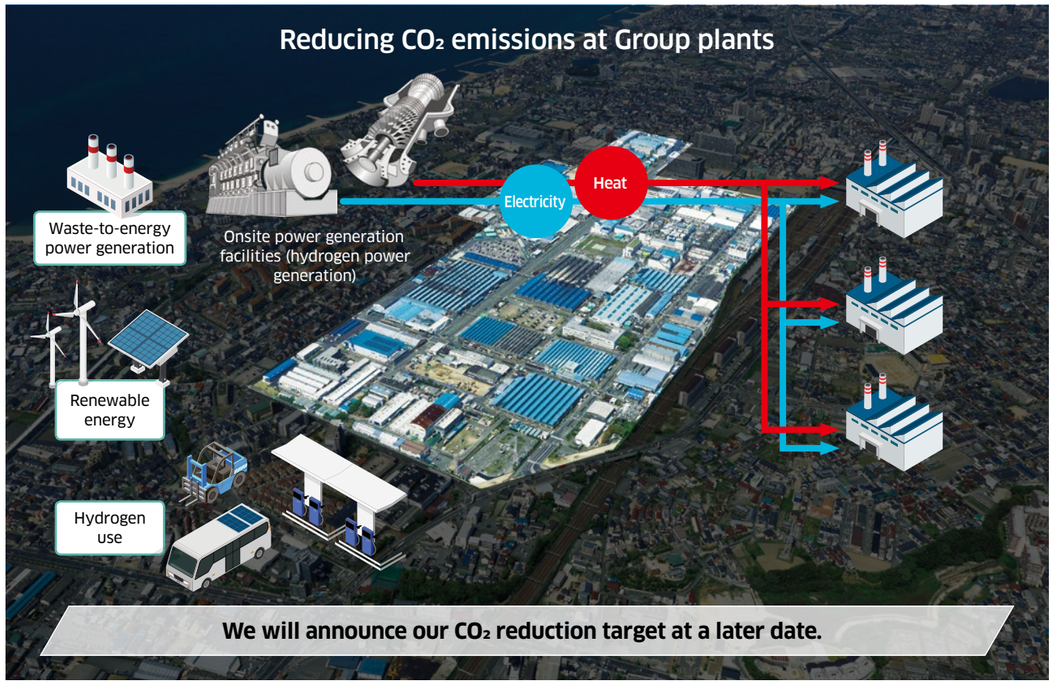
	Kawasaki Global Environmental Vision 2050	10th Environmental Management Activities Plan	
		(FY2019–FY2021 plan)	Progress (FY2020)
CO_2 FREE	●Aim for zero CO_2 emissions in business activities ●Provide products and services that greatly curb CO_2 emissions	Reduce CO_2 emissions per unit of net sales by 20% from the fiscal 2013 level (FY2021 target) Target CO_2 emissions per unit of net sales: 233 t-CO_2/billion yen (FY2019–FY2021 average)	226t-CO_2/billion yen ●Promoted the use of renewable energy (installed solar power generation facilities produced by Kyocera and Century Tokyo Leasing at the Seishin Works)
Waste FREE	●Aim for zero waste emissions in business activities ●Thoroughly enforce conservation and the recycling of water resources	Maintain ratio of direct-to-landfill waste to total waste generation at less than 1% (non-consolidated)	●Landfill disposal rate of 0.4% ●Confirmed water resource risks
Harm FREE	●Aim for zero harmful chemical substance emissions in business activities ●Develop business with respect for biodiversity	Reduce environmental risk while operating factories with respect for biodiversity	●Maintained proper management of harmful chemical substances ●Properly manage green spaces at plants, etc.

**For details about environmental management, please refer to the Kawasaki Environmental Report 2021.*

The Kawasaki Group's Initiatives to Achieve Carbon Neutrality

The Kawasaki Group is studying measures to reduce CO_2 emissions from its business processes. We plan to announce our CO_2 emission reductions target for 2030 at a later date.

Zero-Emission Plant



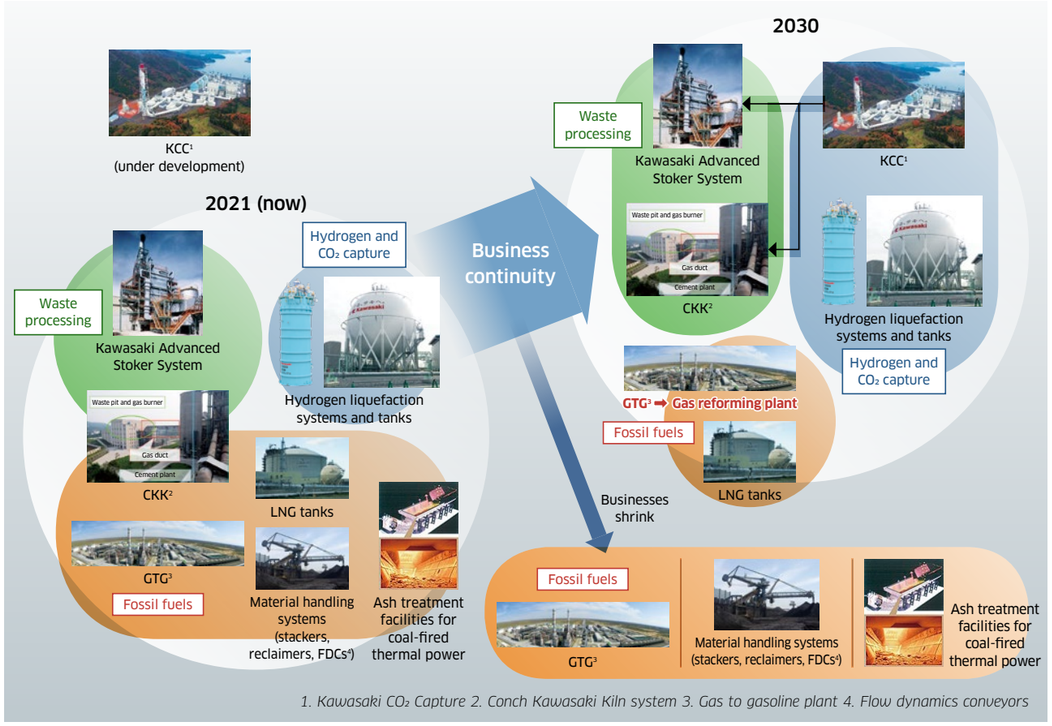
Disclosure in Line with the Recommendations of the Task Force on Climate-related Financial Disclosures

Strategy

Based on the 2°C scenario and 4°C scenario of the Intergovernmental Panel on Climate Change and related scenarios (from the International Energy Agency and elsewhere), Kawasaki has conducted scenario analyses of its industrial plant business, with a target year of 2030. Going forward, looking at the entirety of the Group's businesses, we will advance further analyses of businesses likely to be highly impacted by climate change and study the financial impact on them in quantitative terms.

	2°C scenario	4°C scenario
Waste processing	●Waste incineration and waste-to-energy power demand will not decrease ●Future regulatory tightening could limit CO_2 emissions from waste incineration	●Waste incineration and waste-to-energy power demand will not decrease
Fossil fuels	●Coal and gasoline demand will fall, but liquefied natural gas (LNG) will be a main power source in 2030 (after 2030, LNG demand may also fall)	●Fossil fuel demand will remain at current levels
Hydrogen and CO_2 capture	●Steps toward the widespread adoption of hydrogen will advance and its production cost will decrease (focus on hydrogen carriers using methods of transportation and storage other than liquefaction, such as using organic hydrides or ammonia) ●Demand for CO_2 capture (such as Kawasaki CO_2 Capture, "KCC") for power generation and other industries will grow	●Hydrogen and CO_2 capture will not be widely adopted
Kawasaki's response	We determined that Kawasaki's businesses will be resilient, based on the countermeasures shown in the diagram below.	While it will take more time to recoup investment in hydrogen and CO_2 capture, Kawasaki will be able to maintain business continuity based on its current technology portfolio.

Vision of the Future (2°C Scenario) and Countermeasures



1. Kawasaki CO_2 Capture 2. Conch Kawasaki Kiln system 3. Gas to gasoline plant 4. Flow dynamics conveyors

Countermeasures

Waste processing
- Shift away from fossil fuels (heavy oil) as auxiliary fuels for incineration
- Promote the development of carbon capture and storage (CSS) and carbon capture, utilization and storage (CCUS)
- Improve the efficiency of heat recovery

Fossil fuels
- GTG: Reforming natural gas into methanol, xylene, and hydrogen

Hydrogen and CO_2 capture
- Respond to the growing use of hydrogen and demand for CO_2 capture (accelerate manufacturing and research)

Note: For details on disclosure in line with the recommendations of the Task Force on Climate-related Financial Disclosures, please refer to the Kawasaki Environmental Report 2021.