

Kawasaki Heavy Industries, Ltd.

# Sustainable Finance Master Framework for Trustworthy Solution for the Future

Nov.2023

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## 1. Introduction

### 1) Framework Overview

After having issued its first sustainability bond in July 2021, Kawasaki has raised funds for the purpose of contributing to sustainable environment and society.

We established the Sustainability Bond Framework in 2021, and the Sustainability Linked Loan Framework in 2022. We have now revised this framework to further accelerate our sustainability management efforts to realize Group Vision 2030 "Trustworthy Solutions for the Future," in order to strengthen engagement with stakeholders, contribute to achievement of SDGs, and realize sustainable society.

The Kawasaki Heavy Industries Group (Below, our group) has designated three fields to focus in the future: A Safe and Secure Remotely connected Society, Near-Future Mobility, and Energy and Environmental Solutions. Our group aims to provide solutions to social issues through its advanced technological capabilities cultivated in a wide range of business fields, including land, sea, and air.

In order to realize Group Vision 2030, we will further expand our funding base by utilizing green, social, sustainability, transition, blue, transition-link, and sustainability-link bonds, loans, and other forms of financing stipulated in this framework to achieve our previously established goal, to raise the proportion of sustainable finance in long-term borrowings to 50% by 2030 and to 100% by 2050.

### 2) Principle of Reference, etc.

This framework has been formulated based on the following principles.

- Green Bond Principle 2021(ICMA: International Capital Market Association)
- Green Loan Principle 2023 (LMA: Loan Market Association, etc.)
- Social Bond Principle 2023 (ICMA)
- Social Loan Principle 2023 (LMA, etc.)
- Social Bond Guidelines 2021 (the Financial Services Agency)
- Sustainability Bond Guidelines 2021 (ICMA)
- Sustainability Linked Bond Principle 2023 (ICMA)
- Sustainability Linked Loan Principle 2023 (LMA, etc.)
- Green Bonds and Sustainability Link Bond Guidelines 2022 (the Ministry of the Environment)
- Green Loan and Sustainability Link Loan Guidelines 2022 (the Ministry of the Environment)
- Climate Transition Finance Handbook 2023 (ICMA)
- Basic Guidelines for Climate Transition Finance (the Financial Services Agency, the Ministry of Economy, Trade and Industry, the Ministry of the Environment)
- A Practitioner's Guide for Bonds to Finance the Sustainable Blue Economy  
(ICMA/IFC:International Finance Corporation/UNEP FI:United Nations Environment Programme Finance Initiative/UNGC:United Nations Global Compact/ADB:Asian Development Bank)
- Guidelines for Blue Finance (IFC)

### 3) Our Company Overview

For more than 120 years, our company has been contributing to the development of society through its technological expertise cultivated through manufacturing in a wide range of business fields, including land, sea, and air. Our group has originated from the establishment of Kawasaki Tsukiji Shipyard in 1878 by its founder, Shozo Kawasaki, under the philosophy of "contributing to the nation and to society through expertise." As of 2023, our group has formed with 154 subsidiaries and affiliates worldwide.

Our group will demonstrate its advanced technological capabilities in a variety of fields, including Aerospace Systems Business, Rolling Stock business, Energy Solutions & Marine business, Precision Machinery & Robotics business, and Powersports & Engines business. In addition, we will seek synergies across those fields to create new values and achieve a richer and more beautiful future society in harmony with the global environment.

## 2. Management Principals

### 1) Kawasaki Group Mission

In 2007, our group established the Group Mission "Kawasaki, working as one for the good of the planet" to fulfill its role in the society of 21st century, while carrying on its founding philosophy. We continue to create new value by contributing to the resolution of social issues around the world by utilizing our diverse and advanced technological capabilities.

### 2) Basic Policy on Sustainability

In order to achieve the Group's mission, this policy represents long-term approach for management to realize both sustainable society and our group's continuous improvement of corporate value. Our group will take actions by creating innovative solutions over various social and environmental challenges confronting humanity and our planet now and in the future.

- ① Taking on the Challenge of Resolving Social Issues
- ② Responsible Corporate Conduct
- ③ Strengthening Business Foundations

Positioning of Policy on Sustainability Management



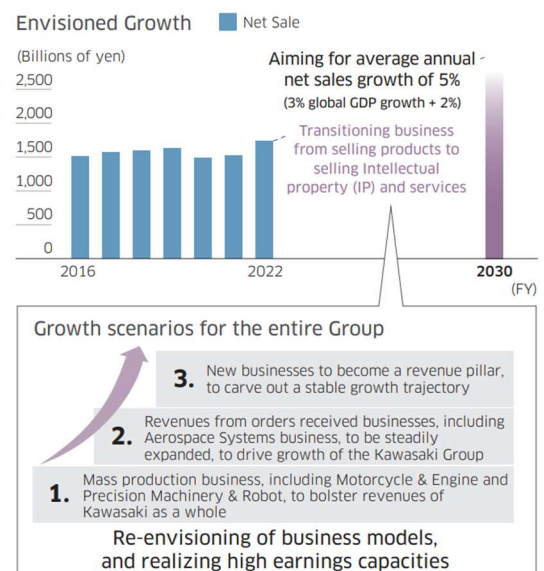
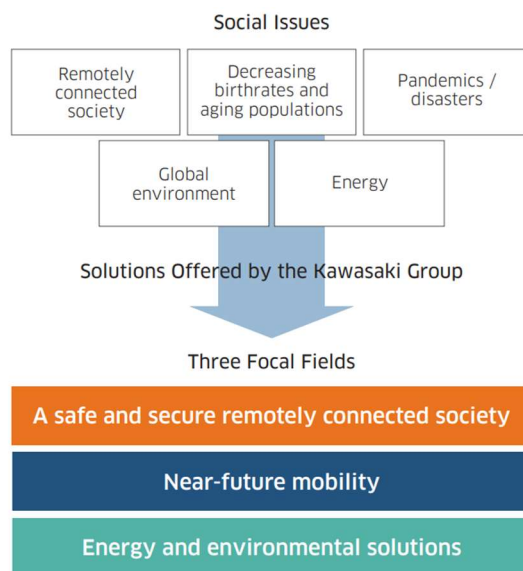


### 3) Group Vision 2030

In 2020, our group established Group Vision 2030 "Trustworthy Solutions for the Future" as a prospect for the future in 2030 to fulfill its mission in an optimal manner today. The Group Vision 2030 expresses our intention to expand our potential and drive future growth by providing innovative solutions to an ever-changing society in a timely manner and creating hopeful future.



In order to realize Group Vision 2030, we have set three fields to focus towards the future: "Safe and Secure Remotely Connected Society," "Near-Future Mobility," and "Energy and Environmental Solutions."



The "Safe and Secure Remotely Connected Society" proposes radical changes in the traditional way of working and living through robots, remote control and other practical tasks.

(hinotori™ Surgical Robot System)



(Robot Operation from Remote Areas)



Near-Future mobility combines unmanned helicopters, four-wheelers, and robotic technology to provide new transportation and mobility.

(Unmanned VTOL Aircraft and Delivery Robot)



(Unmanned VTOL aircraft loaded with delivery robots)



Energy and Environmental Solutions will realize a society that utilizes hydrogen, an ultimate clean energy that does not emit carbon dioxide when used. This will be achieved by securing the necessary technologies for entire supply chain, "Production," "Transportation," "Storage," and "Utilization," attempted first in the world.

(Large Liquefied Hydrogen Carriers)



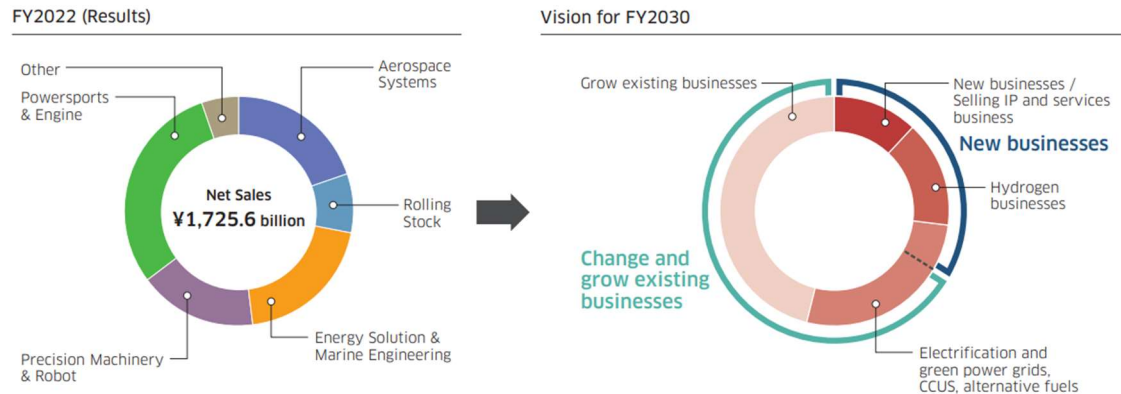
(Liquefied Hydrogen Storage Tanks)



\*A hydrogen-fired engine will be installed in the future.

In addition, we will continue to reform our business portfolio toward 2030, aiming for growth while enhancing profitability by developing products and services that meet market needs. As a result, our current focus on hydrogen-related businesses and carbon-neutral related businesses, such as electrification and green power grids, are expected to expand significantly. In addition, we will accelerate the shift from selling goods to creation of new businesses as well, by utilizing open innovation.

We aim to achieve more fundamental solutions over social issues and become a highly valued company from our stakeholders.



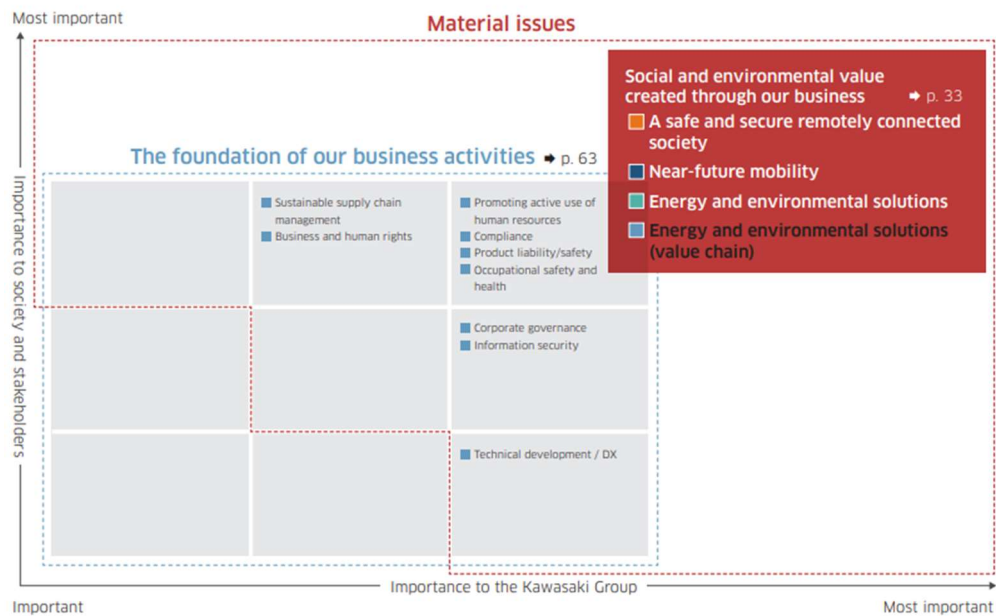
(Focus Field and Vision)



#### 4) Important Issues of the Kawasaki Group (Materiality)

Our company recognized and organized the impact of our group's corporate activities on society in light of the diversifying expectations and requests of stakeholders and changes in the business environment. Consequently, in 2018, our group has identified important issues (materiality). In addition, following the announcement of the Group Vision 2030 in November 2020, important issues were reviewed. As in 2018, important issues are divided into two broad categories: "social and environmental value created through business" and "foundations that support business activities." Initiatives through core businesses are defined as "the most important issues for our group to achieve in the long term," and other issues are defined as "foundation items" under achieving the most important issues. We will continue to periodically review our materiality in line with changes in the business environment and expectations from society.

(Please refer to <https://www.khi.co.jp/sustainability/materiality/sdgs.html> for our approach to contributing to the SDGs.)



## 5) Sustainability Promotion System

In our group, the Board of Directors is the highest decision-making body that deliberates and determines the basic sustainability policies and plans for the entire Group. Under the supervision of the Board of Directors, the Sustainability Committee makes decisions on various measures based on the basic plans established by the Board of Directors and reports the progress to the Board of Directors. In principle, the committee is held at least twice a year.

### Sustainability Promotion System

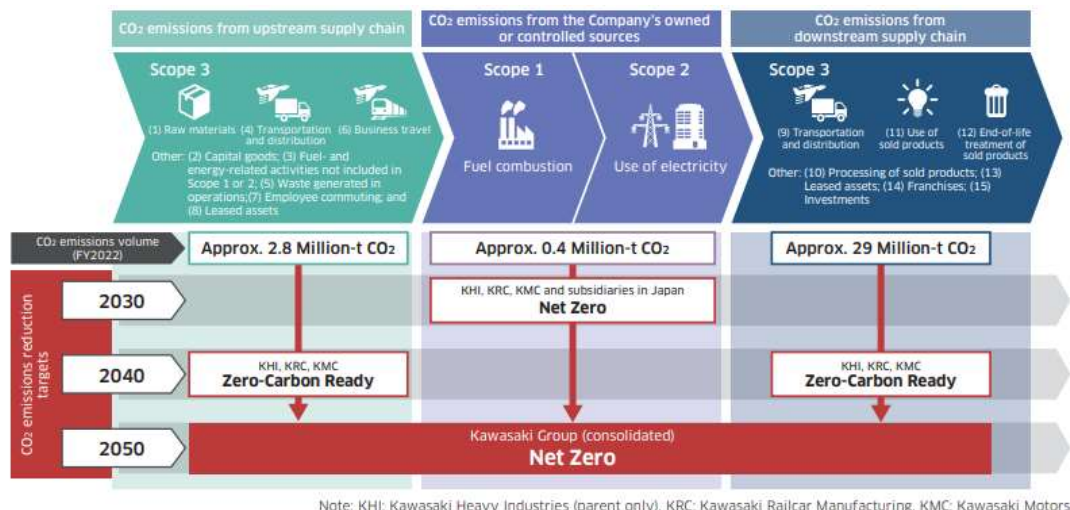




### 3. Transition Strategy and Goals

#### 3.1 Climate Transition Strategy and Governance

##### 1) Carbon-Neutral Strategy



With respect to Scope1 and 2, our group will achieve carbon neutrality in Japan in 2030 through voluntary initiatives, mainly hydrogen power generation. Regarding Scope3, we will decarbonize our products and services under the keywords "hydrogenation," "electrification," "green power grid," "alternative fuels," and "CCUS." By 2040, we aim to make our products and services "0 - Carbon Ready," or our company's decarbonization solution, available to customers. Together with both our suppliers and customers, we will expand the circle of decarbonization solutions and contribute to the early realization of carbon neutrality.

Target year	Scope no.	Corresponding companies	Target
2030	Scope 1 and 2	Kawasaki Heavy Industries, Kawasaki Railcar Manufacturing, Kawasaki Motors + Affiliated companies in Japan	The Group aims to achieve carbon neutrality at its domestic business sites through the further advance of energy saving, the expanded use of renewable energies, and the expansion of waste-to-energy power generation, as well as independent initiatives focusing on hydrogen power generation. Of the approximate 400,000 tons of emissions recorded under Scope 1 and 2 as of 2021 (consolidated basis), the target is to reduce the 300,000 tons of emissions, which include those of the domestic group, to a net zero by focusing on in-house hydrogen power generation domestically.
2040	Scope 3	Kawasaki Heavy Industries, Kawasaki Railcar Manufacturing, Kawasaki Motors	Zero-Carbon Ready Category (i): Reduce CO <sub>2</sub> emissions by 80% (compared to fiscal 2021) Category (ii): Develop a lineup of CO <sub>2</sub> -free standard solutions, and further facilitate global CO <sub>2</sub> reductions through the carbon capture, utilization, and storage (CCUS) business, etc.
2050	Scope 1 to 3	Consolidated basis	Achieve net zero CO <sub>2</sub> emissions at the Kawasaki Group and throughout its supply chain

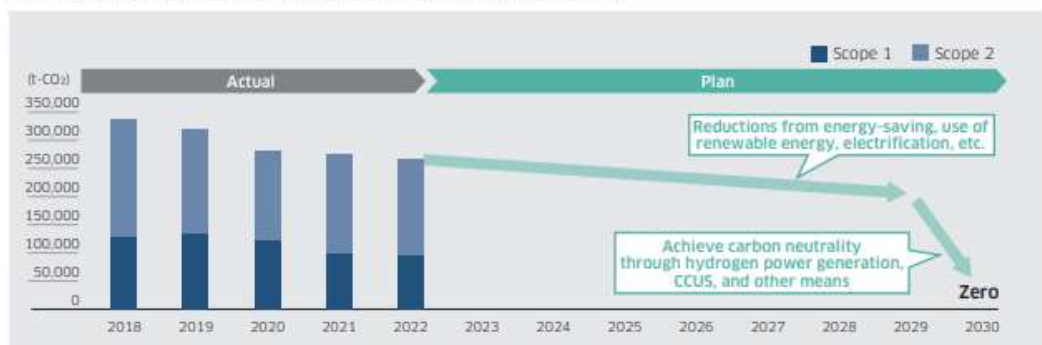
## Scope1,2

### Scope 1, 2 In-house fuel and power use

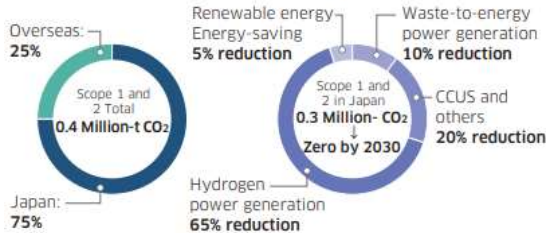
#### / Achieve carbon neutrality in Japan by 2030, mainly by hydrogen power generation

Regarding Scope1 and 2, in Japan, which accounts for 3/4 of our group's total annual CO2 emissions of about 400,000 tons, we will realize a zero-emission plant by combining our own hydrogen power generation with waste power generation and renewable energy, as shown in the figure below. Through these efforts, our domestic group plans to achieve carbon neutrality by 2030 with 0 CO2 emissions. We are working to reduce CO2 emissions overseas as well.

CO2 Emissions (Scope 1 and 2) and Reduction Targets (Domestic Group)



#### CO2 Emissions Reduction Plan in Japan



#### Zero-Emission Plant



### Scope3

#### / Promote ahead of society to become Zero-Carbon Ready

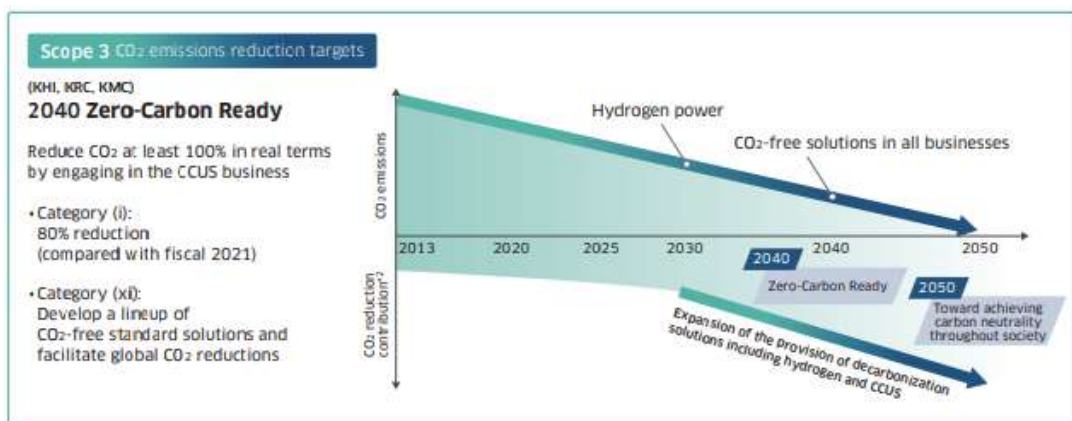
Scope3 Net Zero can be achieved only by ensuring that all customers and suppliers in the value chain are Zero-Carbon Ready. Our company will take the best possible action with Scope3 to achieve 0 Carbon Ready in 2040. Specifically, in Category 1, 80% of CO<sub>2</sub> emissions at suppliers of materials will be reduced, and in Category 11, CO<sub>2</sub>FREE solutions will be included in the standard lineup for all businesses. Furthermore, through the realization of a hydrogen society and the CCUS project, we will continue to reduce CO<sub>2</sub> emissions by more than our company's Scope3 emissions and thus contribute to the early realization of carbon neutrality in the world.

Scope 3 Breakdown by Categories

(Million t-CO<sub>2</sub>)



<sup>\*1</sup> Category (xi) is the total for the Kawasaki Group. Other is the total for Kawasaki Heavy Industries (non-consolidated), Kawasaki Motors, and Kawasaki Railcar Manufacturing

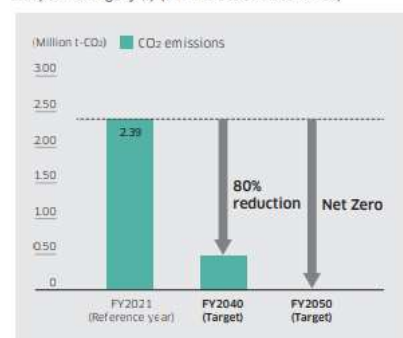


#### Scope 3 Category (i) CO<sub>2</sub> emissions from procurement of materials and parts

#### Hydrogen & CCUS solutions support industry initiatives and further accelerate reductions

Each industry and company are expected to take various measures to reduce CO<sub>2</sub> emissions, including the use of renewable energy and efficient energy usage. At our company, we will strengthen cooperation with suppliers of materials and parts. By sharing emission information and by providing solutions such as hydrogen power, hydrogen fuel, and other alternative fuels, as well as CCUS, not only within our group but also to suppliers, we aim to support

Scope 3 Category (i) (CO<sub>2</sub> reductions scenarios)



CO2 reduction and achieve zero emissions sooner.

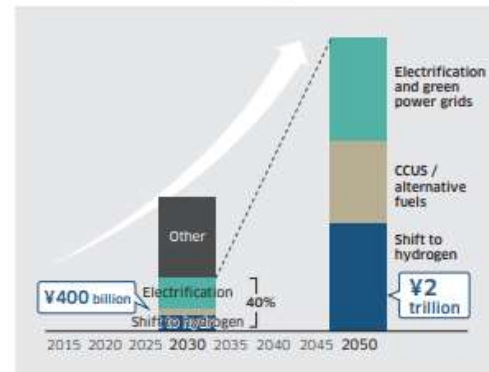
**Scope 3** Category (xi)\*2 Providing customer solutions

**CO2FREE solutions for all customers**

We are working to decarbonize our products and services under the keywords "hydrogenation," "electrification," "green power grid," "alternative fuels," and "CCUS."

As a short-term initiative towards 2030, we will continue to reduce energy consumption and improve the efficiency of conventional products through the Kawasaki Ecological Frontiers System, as a transition to a decarbonized society.

Envisioned Scale of Business by Future Solution



We will also promote the hybridization and electrification of motorcycles and other products as well. We will also promote the commercialization of hydrogen energy and expand the use of hydrogen in gas turbines and gas engines. In addition, we will promote the commercialization of Kawasaki CO2 Capture and DAC as to capture and utilize CO2.

In terms of medium-to long term initiatives for 2040, we are promoting 3 major initiatives. Firstly, we will provide CO2-free fuel and electricity to society, by focusing on hydrogen business. Secondly, when customers utilize our company's solutions including mobility and robotics, our company will provide them with choices of electrification and CO2-free fuel. Third, to realize a CO2 recycling society, in addition to CO2 capture, we will promote the effective use of CO2 through the production of synthetic fuels and chemical products.

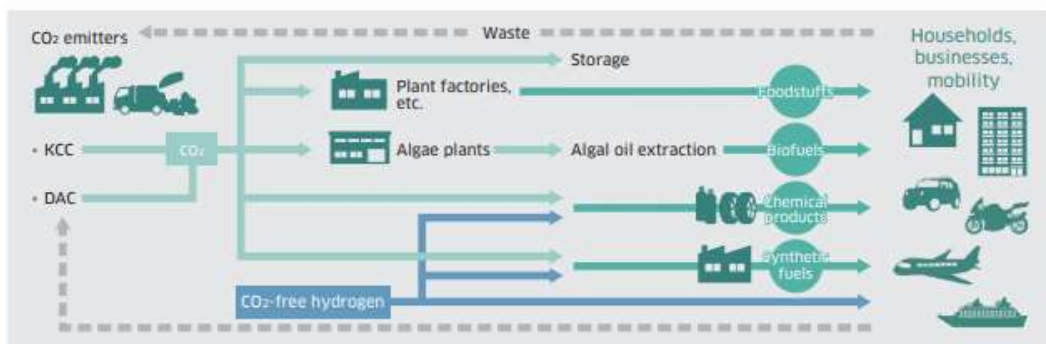
Based on these 3 pillars, we will provide choices available to our customers of products and services (excluding defense and emergency products) to promote CO2 reduction globally and contribute to carbon neutrality by 2040.



## Decarbonization Solutions



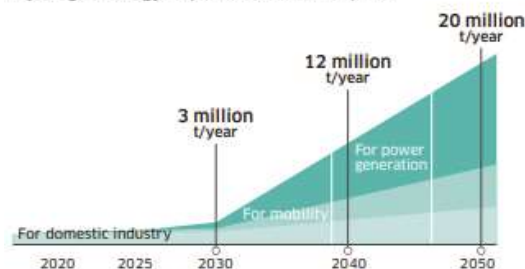
## A CO<sub>2</sub>-recycling Society



## 2) Early Realization of a Hydrogen Society

In June 2023, the Japanese government revised its Basic Hydrogen Strategy. It set a new target of introducing 12 million tons of hydrogen by 2040, and milestones of 3 million tons by 2030 and 20 million tons by 2050 to improve foreseeability of the target. The introduction of clean hydrogen of overseas is necessary for the supply of hydrogen at low cost and in large quantities.

### Hydrogen energy implementation in Japan<sup>\*1</sup>



<sup>\*1</sup> Calculated by Kawasaki based on materials of subcommittees of the Ministry of Economy, Trade and Industry

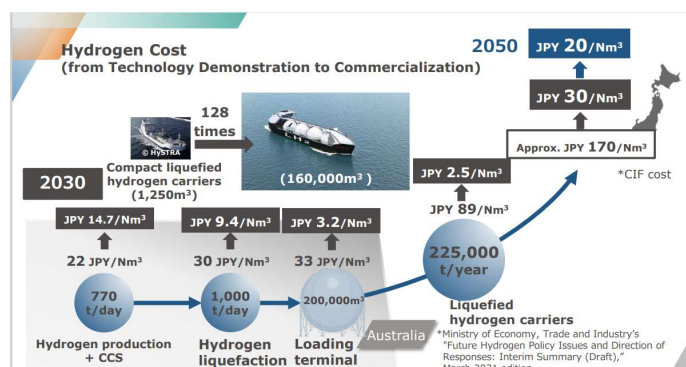
### Hydrogen market in 2050<sup>\*2</sup>



<sup>\*2</sup> Calculated by Kawasaki based on Hydrogen for Net Zero, Hydrogen Council

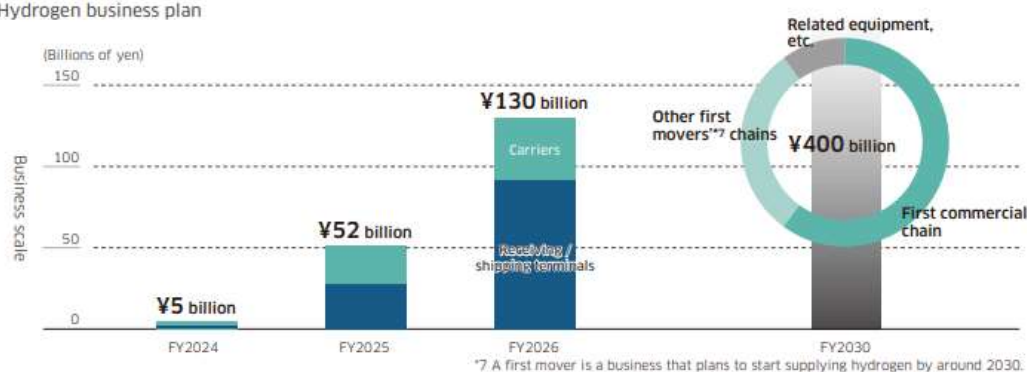
It is estimated that the cost of hydrogen would be about 170 yen/Nm<sup>3</sup> if a small carrier of the size of a domestic ship is used. This is about 10 times higher than LNG, and it will be difficult for hydrogen to popularize. By increasing the overall scale towards 2030, we will reduce the cost of each step, from hydrogen production to transportation, to approximately 30 yen/Nm<sup>3</sup>.

(Refer to [https://www.meti.go.jp/shingikai/energy\\_environment/suiso\\_nenryo/pdf/025\\_01\\_00.pdf](https://www.meti.go.jp/shingikai/energy_environment/suiso_nenryo/pdf/025_01_00.pdf) for cost estimation.)



In contrast to the market size of 22 trillion yen in 2050, our company has made progress with steps such as the realization of the world's first international transportation of liquefied hydrogen in spring of 2022. The business size is expected to exceed 50 billion yen in fiscal 2025 and 130 billion yen in fiscal 2026. In fiscal 2030, we plan to increase our business scale to 400 billion yen, including other first-mover chains, assuming the supply and licensing of key parts to other companies.

Hydrogen business plan



### 3) Kawasaki Ecological Frontiers System

To reduce the environmental impact of our products and services throughout their life cycles, we have been promoting the Kawasaki Ecological Frontiers System since 2014.

#### The Certification Process

Our group evaluates its products and their manufacturing processes for conformity with its own internal standards and disseminates the results of its evaluations outside the company in accordance with international standard ISO14021. Specifically, our standards are geared to

improving the environmental performance of our products and reducing the environmental impact of our manufacturing processes from three emissions-reduction standpoints: CO FREE (reduction of CO emissions), Waste FREE (reduction of industrial waste), and Harm FREE (reduction in the release of harmful chemical substances). As a result of these evaluations, the products that satisfy the standards are registered as shown below in accordance with the level of the satisfied standard.

S Class: Product evaluated as corresponding to the highest classes in the industry when it comes to environmental consciousness

A Class: Product evaluated as exceeding industry standard class or our previous model when it comes to environmental consciousness

Our group updates registration by reevaluating registered products every three years. As of the end of August 2023, the Group had registered 68 products in total, including 19 new registrations during the three years prior (9 in 2021, 5 in 2022, and 5 in 2023) and 49 renewed registrations of products originally certified in 2014–2020.

#### Impact of the System

The CO<sub>2</sub> emissions reduction effects\*1 of Group environmentally friendly products, including those registered under the Kawasaki Ecological Frontiers system, are 24,370 kt-CO<sub>2</sub>\*2 annually. Certified and registered products are contributing in many ways to reduce annual CO<sub>2</sub> emissions and other environmental burdens. Examples include gas-turbine and gas-engine electric power generation equipment that has achieved world-class efficiency, motorcycles manufactured with more than 90 percent recycled materials, and energy-saving rolling stock made possible by weight reduction.

\*1 Reduction in CO<sub>2</sub> emissions compared to earlier products (refer to the calculation rules below.)

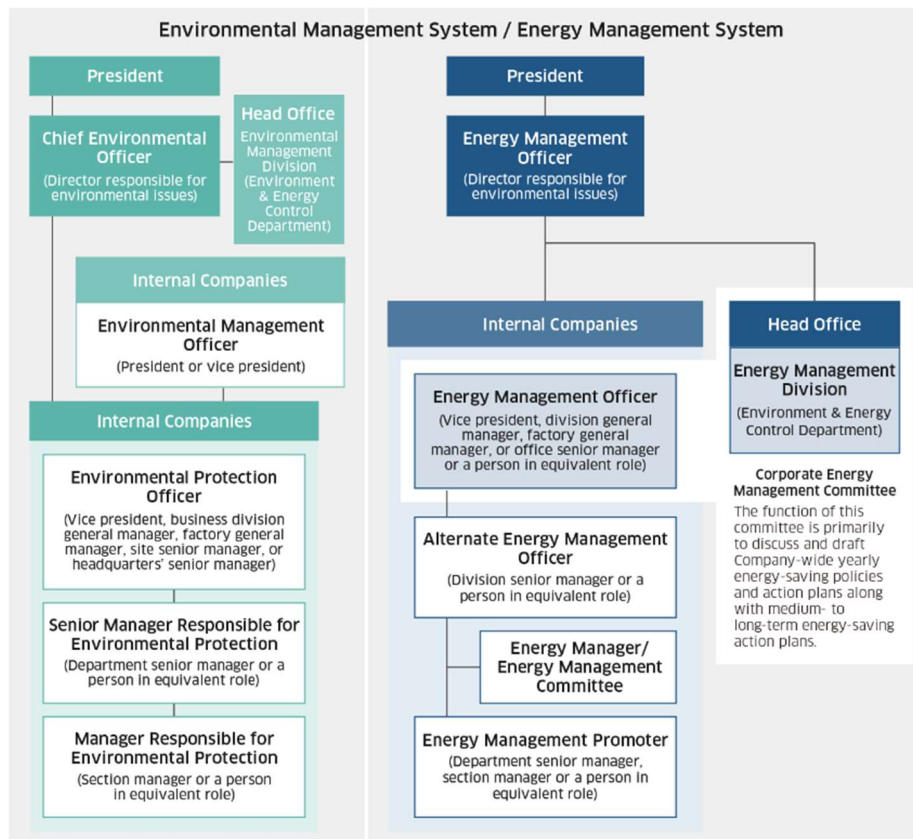
\*2 To put this figure into perspective, a passenger car with a gas mileage of 15 km/l that is driven 10,000 km per year emits about 1.5 t-CO<sub>2</sub>.

(Examples of Kawasaki Ecological Frontiers Registered Products)





#### 4) Environmental Management Promotion Structure



### 3.2 Environmental Materiality in Business Models

#### 1) Materiality

As mentioned above, our group is reassessing the impact of its corporate activities on society and identifying important issues (materiality). In certain processes, we also consulted external advisors based on ESG rating agency (DJSI, FTSE, MSCI, Sustainalytics) survey items, SASB, investor stewardship policies, GRI, Future-Fit, and client company requirements (Self-Assessment Questionnaire). In 2017, we formulated the Kawasaki Global Environmental Vision 2050, which embodies environmental management based on the three visions of CO2 FREE, Waste FREE, and Harm FREE. Toward 2050, we are working to control climate change, promote a recycling-based society, and conserve biodiversity.

(See <https://www.khi.co.jp/sustainability/materiality/task.html> for details.)

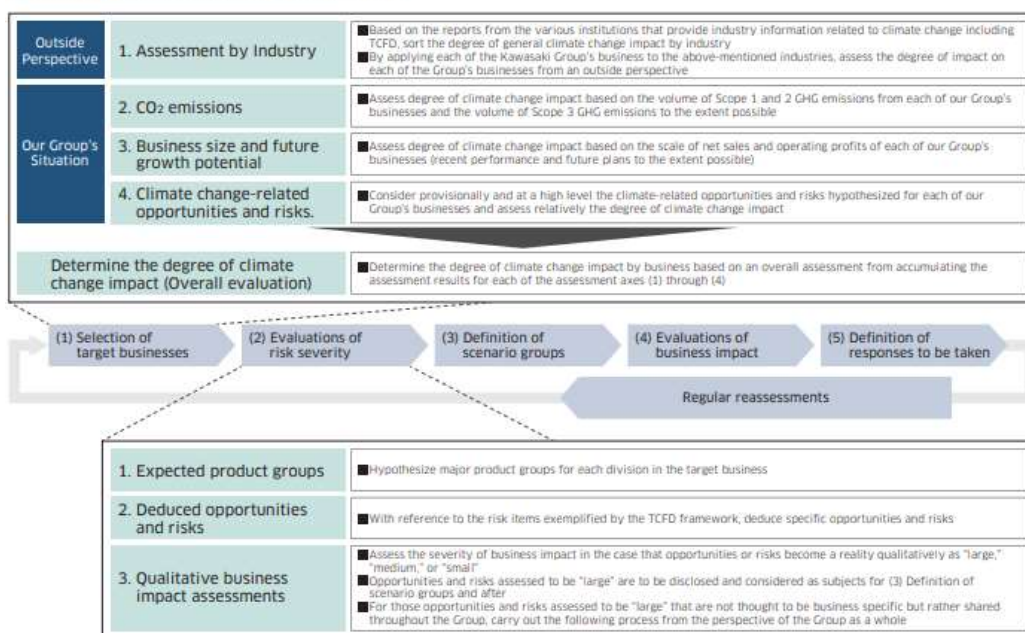


## 2) Information Disclosure in Accordance with TCFD Recommendations (Scenario Analysis)

Under Group Vision 2030, our group will actively contribute to the realization of a society in which the global average temperature rise under the Paris Agreement will be reduced to 1.5°C compared to the pre-industrial level through the promotion of hydrogen projects and CCUS. At the same time, in the face of severe natural disasters, we are implementing measures such as business continuity plans (BCP) and supply chain resilience based on risk analysis.

Reviewing our group entirely entirety, our group has comprehensively evaluated (1) by industry, (2) CO<sub>2</sub> emissions, (3) business size and future growth potential, and (4) opportunities and risks related to climate change to identify businesses that are significantly impacted by climate change. In addition, considering the consistency with Group Vision 2030, our group set 2030 as the target year, with the analysis based on a scenario of 1.5°C and 4°C.

Process for Scenario Analysis (1.5°C Scenario)



### 3.3 Scientifically Grounded Climate Transition Strategies

In line with the "CO<sub>2</sub> FREE" stated in the Kawasaki Global Environment Vision 2050, our group aims to achieve 0 CO<sub>2</sub> emissions by 2050. For Scope1 and 2 in Japan, which include Group companies, we are aiming to achieve carbon neutrality by 2030 through initiatives centered on hydrogen power generation. For Scope3, we have set targets of main categories (1) and (11) for 2040.

Our group's efforts to achieve these CO<sub>2</sub> emission reduction are consistent with the following roadmap, which refers to international scenarios that are consistent with the goals of the Paris

Agreement. We believe that our group's strategy and CO2 emission reduction targets have a scientific basis consistent with the Paris Agreement.

formulating entity	Date of Formulation	Roadmap Name
Agency for Natural Resources and Energy	February 2022	Transition Roadmap for Power
the Ministry of Economy, Trade and Industry	February 2022	Technology Roadmap for Transition Finance in the Gas Sector
	March 2022	Technology Roadmap for Transition Finance in the Cement Sector
	March 2023	Technology Roadmap for Transition Finance in the Automotive Sector
the Ministry of Land, Infrastructure, Transport and Tourism	December 2021	Summary of the Study Group for the Promotion of Carbon Neutrality in Japan
	December 2021	Schedule for Promoting Decarbonization of Aviation (Review Committee on CO2 Reduction in Aircraft Operations)
	March 2022	Toward achieving carbon neutrality of international shipping by 2050
IATA*	October 2021	Net zero carbon 2050 resolution

\*International Air Transport Association

### 3.4 Transparency of Implementation

Our group will pursue sustainable growth by transforming itself into what the times demand while investing in growth businesses under the policies of "pursuit of growth potential," "reasonable profits," and "stability and synergy."

Based on the implementation of the Group Vision 2030 measures, we expect net sales related to carbon neutrality to be 600 billion yen (FY 2030) and investment related to carbon neutrality to be 350 billion yen (FY 2020 to FY 2030).

The overall investment plan for the hydrogen business, which is the core of our carbon neutral strategy, is not disclosed in view of confidentiality with partners of each project and international competition, but we plan to invest 50 billion yen to become the world's first company to realize a "zero-emission plant." In the Power Sports & Engines business, we plan to invest 150 billion yen (FY 2023 to FY 2027) in the development of mobility using hydrogen engines as well as general-purpose engines, and the replacement of major vehicle models with EV/HEV.

#### 4. When Specifying the Use of Funds: Disclosure Based on the Green Bond Principles, etc.

##### 1) Use of Proceeds

The Green, Social, Sustainability, Transition and Blue Finance (Sustainable Finance) proceeds will be used to finance new and existing expenditures for projects and for projects related to the following eligible criteria: Refinancing of existing expenditures is limited to expenditures made within three years prior to sustainable financing.

Depending on the financing to be executed, funds will be allocated to the following project categories.

- Green Finance: Green (Blue) Project
- Social Finance: Social project
- Sustainability Finance: Green (Blue)/Social Project
- Sustainable Finance: Green (Blue)/Transition/Social Project
- Transition Finance: Green (Blue)/Transition Project
- Blue Finance: Blue Project

※ The symbols in each project refer to the following project categories:


 : Green Project

 : Social projects



 : Transition Project

 : Blue Project








##### [Safe and Secure Remotely-Connected Society]

Eligible Criteria	Eligible Category (Eligible Persons)	Project Example
Surgical Support Robot	Access to Essential Services (Persons with diseases, healthcare professionals, etc.)	 hinotori™ Surgical Robot System (R & D and Capital Investment)

##### [Near Future Mobility]

Eligible Criteria	Eligible Category (Eligible Persons)	Project Example
Delivery Robot and Unmanned Transport Helicopter	Access to Essential Services Socioeconomic Improvement and Empowerment (Deliverer, Residents of Remote Islands, etc.)	 Delivery Robot  VTOL Unmanned Aircraft (R & D and Capital Investment)

##### [Energy and Environmental Solutions]

Eligible Criteria	eligible category	Project Example
Clean Transport and Storage of Hydrogen	Environmentally Adapted Products, Environmentally Conscious Production Technologies and Processes (Sustainable Ocean Transportation)	 Hydrogen Liquefier  Liquefied Hydrogen Shipping and Receiving Base  Liquefied Hydrogen Storage Tank  Liquefied Hydrogen Carrier  Hydrogen Fuel Vessel  Tank System for Liquefied Hydrogen Carrier  Hydrogen Compressor (R & D, Demonstration, and Capital Investment)

Eligible Criteria	eligible category	Project Example
Clean Energy Use of Hydrogen	Environmentally Adapted Products, Environmentally Conscious Production Technologies and Processes Clean Transportation (Sustainable Ocean Transportation)	  Hydrogen Gas Turbine for Power Generation (Burned) * 1   Hydrogen Gas Engine for Power Generation (Burned) * 1  Core Technologies for Hydrogen Aircraft   Marine Hydrogen Engine and Hydrogen Fuel Ship Propulsion System (MHFS)  Hydrogen Engine for Motorcycle  Hydrogen Engine Vehicle  Fuel Cell Vehicle (R & D, Demonstration, and Capital Investment)
Clean energy Use of Hydrogen (Co-Firing)	Environmentally Adapted Products, Environmentally Conscious Production Technologies and Processes	 Hydrogen Gas Turbine for Power Generation (Co-Firing)  Hydrogen Gas Engine for Power Generation (Co-Firing) (R & D, Demonstration, and Capital Investment)
CCUS	Environmentally Adapted Products, Environmentally Conscious Production Technologies and Processes	 CO2 Separation and Recovery in Fuel Gas (Kawasaki CO2 Capture)  DAC(Direct Air Capture) (R & D, Demonstration, and Capital Investment)
Use of Gas Energy	Environmentally Adapted Products, Environmentally Conscious Production Technologies and Processes Clean Transportation	 High Efficiency Gas Turbine  Kawasaki Green Gas Engine  Large LPG and LNG Carriers (R & D and Capital Investment)
Transport Equipment (Electric)	Clean Transportation	 EV Motorcycle Vehicle  Infrastructure for EV Motorcycle Vehicles  Track Material Monitoring and Remote Monitoring Device (R & D, Demonstration, and Capital Investment)
Transport Equipment (Hybrid)	Clean Transportation	 Hybrid Motorcycle Vehicle   Marine Hybrid/Electric Propulsion System * 2 (R & D and Capital Investment)
Waste Disposal	Pollution Prevention and Control	 Garbage Carbonization Fuel System (R & D and Capital Investment)
Construction and Cement	Energy Conservation	 Controller for Construction Machine  Electric Joystick  CK Mill  CKK System (R & D and Capital Investment)
Sewage Treatment	Pollution Prevention and Control (Marine Pollution)	  Mega MAG Turbo (R & D and Capital Investment)
Other Energy-Saving Products	Energy Conservation	  Cogeneration System *3  Eco Servo  Membrane Type CO2 Removal Device (SEPERNA) (R & D and Capital Investment)

\*1 Equipment that can switch between exclusive firing and co-firing is qualified as a green/transition project.

\*2 In the case of pure battery electric propulsion, the project is qualified as a green project.




\*3 If fossil fuels are used as primary fuels, they are qualified as transition projects.






Our group strives to conduct environmental management activities in compliance with environmental laws and regulations, and is aware of potentially negative environmental and social impacts when implementing relevant projects. In addition, to ensure compliance with



environmental laws and amendments, and to raise levels of environmental personnel, we hold "Environmental Compliance Liaison Meetings" as appropriate, and work together with our group's environmental personnel, led by the Head Office Environmental Management Division, to prevent environmental accidents.

< Consistency of each criteria with SDGs >

SDGs		Criteria
	3.8 Achieve universal health coverage (UHC), including protection from financial risks for all, access to quality basic health services and access to safe, effective, quality and affordable essential medicines and vaccines	<ul style="list-style-type: none"> <li>Surgical Support Robot</li> </ul>
	6.3 By 2030, improve water quality by reducing pollution, eliminating dumping and minimizing the release of hazardous chemicals and substances, halving the proportion of untreated wastewater and significantly increasing recycling and safe reuse worldwide	<ul style="list-style-type: none"> <li>Sewage Treatment</li> </ul>
	7.1 Ensure universal access to affordable and reliable modern energy services by 2030	<ul style="list-style-type: none"> <li>Clean Transport and Storage of Hydrogen</li> <li>Clean Energy Use of hydrogen</li> <li>Clean Energy Use of Hydrogen (Co-Firing)</li> <li>CCUS</li> <li>Use of Gas Energy</li> <li>Transportation Equipment (Electric)</li> <li>Transportation Equipment (Hybrid)</li> <li>Construction and Cement</li> <li>Other Energy-Saving Products</li> </ul>
	7.2 Significantly increase the share of renewable energy in the global energy mix by 2030	
	7.3 Double the rate of global energy efficiency improvement by 2030	
	7.a By 2030, strengthen international cooperation to promote access to clean energy research and technologies, such as renewable energy, energy efficiency, and advanced and environmentally sound fossil fuel technologies, and promote investments in energy-related infrastructure and clean energy technologies	
	8.2 Achieve high levels of economic productivity through diversification, technological improvement and innovation, including by focusing on high-value-added and labour-intensive sectors.	
	9.1 Develop infrastructure, such as high-quality, reliable, sustainable and resilient regional and transboundary infrastructure, to support economic development and human well-being with an emphasis on affordable access for all	<ul style="list-style-type: none"> <li>Surgical Support Robot</li> <li>Delivery Robot and Unmanned Transport Helicopter</li> <li>Clean Transport and Storage of Hydrogen</li> <li>Clean Energy Use of Hydrogen</li> <li>Clean Energy Use of hydrogen (co-firing)</li> <li>CCUS</li> <li>Use of Gas Energy</li> <li>Transportation Equipment (Electric)</li> <li>Transportation Equipment (Hybrid)</li> <li>Waste Disposal</li> <li>Construction and Cement</li> <li>Sewage Treatment</li> </ul>
	9.4 By 2030, improve sustainability by improving infrastructure and industry through improved resource use efficiency and increased adoption of clean technologies and environmentally friendly technologies and industrial processes. All countries will respond to each country's capabilities	
	9.5 Promote scientific research and improve	

SDGs		Criteria
	technical capacity in the industrial sector in all countries, including developing countries, by encouraging innovation, significantly increasing the number of R & D workers per 1 million people, and increasing public and private R & D spending by 2030	<ul style="list-style-type: none"> <li>Other Energy-Saving Products</li> </ul>
	11.2 Provide all people with access to safe, affordable, easily accessible and sustainable transport systems by 2030, with particular attention to the needs of vulnerable populations, women, children, the disabled and the elderly, and by improving transport safety, including through the expansion of public transport  11.6 Reduce per capita environmental impact in urban areas by 2030, including through special consideration of air quality and municipal waste management	<ul style="list-style-type: none"> <li>Delivery Robot and Unmanned Transport Helicopter</li> <li>Waste Disposal</li> <li>Sewage Treatment</li> </ul>
	12.2 Achieve sustainable management and efficient use of natural resources by 2030  12.5 By 2030, significantly reduce waste emissions through prevention, reduction, recycling and reuse	<ul style="list-style-type: none"> <li>Clean Transport and Storage of Hydrogen</li> <li>Clean Energy Use of Hydrogen</li> <li>Clean Energy Use of Hydrogen (Co-Firing)</li> <li>CCUS</li> <li>Use of gas energy</li> <li>Transportation Equipment (Electric)</li> <li>Transportation Equipment (Hybrid)</li> <li>Waste Disposal</li> <li>Construction and Cement</li> <li>Sewage Treatment</li> <li>Other Energy-Saving Products</li> </ul>
	13.1 Strengthen resilience and capacity for adaptation to climate-related and natural disasters in all countries	<ul style="list-style-type: none"> <li>Clean Transport and Storage of Hydrogen</li> <li>Clean Energy Use of Hydrogen</li> <li>Clean Energy Use of Hydrogen (Co-Firing)</li> <li>CCUS</li> <li>Use of Gas Energy</li> <li>Transportation Equipment (Electric)</li> <li>Transportation Equipment (Hybrid)</li> <li>Waste Disposal</li> <li>Construction and Cement</li> <li>Sewage Treatment</li> <li>Other Energy-Saving Products</li> </ul>
	14.1 Preventing and significantly reducing all types of marine pollution, including marine litter and eutrophication, especially pollution from land-based activities, by 2025  14.3 Ensure that the impact of ocean acidification is minimized and take action, including by encouraging scientific cooperation at all levels	<ul style="list-style-type: none"> <li>Hydrogen Fuel Vessel</li> <li>Marine Hydrogen Engine and Hydrogen Fuel Propulsion System</li> <li>Sewage Treatment</li> </ul>
	17.7 Facilitate the development, transfer, dissemination and diffusion of environmentally sound technologies to developing countries under mutually agreed favourable conditions, such as concessional and preferential terms	<ul style="list-style-type: none"> <li>Surgical Support Robot</li> <li>Delivery Robot and Unmanned Transport Helicopter</li> <li>Clean Transport and Storage of Hydrogen</li> <li>Clean Energy Use of Hydrogen</li> </ul>

SDGs		Criteria
	17.17 Encourage and promote effective public, public-private and civil society partnerships, building on the experience of various partnerships and resource strategies	<ul style="list-style-type: none"> <li>• Clean Energy Use of Hydrogen (Co-Firing)</li> <li>• CCUS</li> <li>• Use of Gas Energy</li> <li>• Transportation Equipment (Electric)</li> <li>• Transportation Equipment (Hybrid)</li> <li>• Waste Disposal</li> <li>• Construction and Cement</li> <li>• Sewage Treatment</li> <li>• Other Energy-Saving Products</li> </ul>

## **2) Project Evaluation and Selection Process**

Eligible projects will be selected by our company's finance and planning departments based on qualified criteria established in accordance with Group Vision 2030, the Carbon Neutral Strategy, and the Kawasaki Ecological Frontiers System. The selected projects will be finalized after approval by the Finance and Planning Officers.

## **3) Management of Funding**

The funds raised through sustainable finance will be allocated within two years.

Our company's Finance Division uses our company internal management system to track and manage the connection between funding and eligible projects. The tracking results will be reviewed by the Finance Officer on a quarterly basis. The proceeds will be managed in cash or cash equivalents until the proceeds are appropriated.

In addition to the internal tracking of appropriations and unappropriated funds described above, we will also ensure that balances are properly managed through semi-annual internal audits and quarterly accounting audits by external auditors.

In case a project for which the funds have been already appropriated is cancelled or postponed, the funds will be reappropriated to other projects that meet eligible criteria in accordance with this framework.

## **4) Reporting**

### **i. Reporting on the Status of Funding**

The appropriation status is disclosed through our website or (in the case of a loan) to the lender once a year until the funds are fully appropriated.

- Amount appropriated for each eligible criteria
- Unappropriated amount and investment method
- Amounts (or percentages) of the portion of the proceeds used for refinancing

Even after the completion of the appropriation of funds, if an event different from the initial assumption occurs in the project subject to the use of funds, the Company will promptly disclose the event, the status of the occurrence of unappropriated funds, the status of reappropriation, etc.

### **ii. Impact Reporting**

Within the scope of confidentiality obligations, all or any of the following output and outcome measures will be disclosed once a year through our company website or disclosed to the lender (in the case of a loan) as impact reporting for the target project until the full amount of the funding is applied to the target project.



[Safe and Secure Remotely-Connected Society]

Eligible Criteria	Output Indicator	Outcome Measure	Impact
Surgical Support Robot	<ul style="list-style-type: none"> <li>Progress in R &amp; D and demonstration</li> <li>Number of installed hinotori™ surgical robot systems</li> </ul>	<ul style="list-style-type: none"> <li>Number of operations with the hinotori™ surgical robot system</li> </ul>	<ul style="list-style-type: none"> <li>Reduction of physical and mental burden and improvement of QOL of patients</li> <li>Reducing the burden on physicians and healthcare professionals</li> </ul>

[Near Future Mobility]

Eligible Criteria	Output Indicator	Outcome Measure	Impact
Delivery Robot and Unmanned Transport Helicopter	<ul style="list-style-type: none"> <li>Progress in R &amp; D and demonstration</li> <li>Number of users of delivery robots and VTOL drones</li> </ul>	<ul style="list-style-type: none"> <li>Case study of delivery robot and VTOL unmanned aircraft</li> </ul>	<ul style="list-style-type: none"> <li>Elimination of labor shortages</li> <li>Last one mile (disasters, remote islands)</li> </ul>

[Energy and Environmental Solutions]

Eligible Criteria	An example of impact reporting
Clean Transport and Storage of Hydrogen	<ul style="list-style-type: none"> <li>Progress in R &amp; D and demonstration</li> <li>Number of products developed or manufactured and installed</li> <li>Reduction of CO2 emissions by using hydrogen (theoretical value)</li> </ul>
Clean Energy Use of Hydrogen	<ul style="list-style-type: none"> <li>Progress in R &amp; D and demonstration</li> <li>Number of products developed or manufactured and installed</li> <li>Reduction of CO2 emissions by using hydrogen (theoretical value)</li> </ul>
Clean Energy Use of Hydrogen (Co-Firing)	<ul style="list-style-type: none"> <li>Research and development, progress of demonstration, research and development papers</li> <li>Number of products developed or manufactured and installed</li> <li>Reduction of CO2 emissions by using hydrogen (theoretical value)</li> </ul>
CCUS	<ul style="list-style-type: none"> <li>Research and development, progress of demonstration, research and development papers</li> <li>Reduction of CO2 emissions by using CO2 separation and recovery systems (theoretical value)</li> </ul>
Use of Gas Energy	<ul style="list-style-type: none"> <li>Number of products manufactured and installed</li> <li>Reduction of CO2 emissions by product contribution</li> </ul>
Transportation Equipment (Electric)	<ul style="list-style-type: none"> <li>Research and development, progress of demonstration, research and development papers</li> <li>Number of products developed or manufactured and installed</li> <li>Estimated CO2 emissions reduction by product contribution (theoretical value)</li> <li>Reduction in energy consumption by service contribution (theoretical value)</li> </ul>
Transportation Equipment (Hybrid)	<ul style="list-style-type: none"> <li>Research and development, progress of demonstration, research and development papers</li> <li>Manufacture and sales of products</li> <li>Estimated CO2 emissions reduction by product contribution (theoretical value)</li> </ul>
Waste Disposal	<ul style="list-style-type: none"> <li>Number of products manufactured and installed</li> <li>Amount of waste reduction by product contribution (theoretical value)</li> </ul>
Construction and	<ul style="list-style-type: none"> <li>Manufacture and sales of products</li> </ul>

Eligible Criteria	An example of impact reporting
Cement	<ul style="list-style-type: none"> <li>Reduction in CO2 emissions, energy consumption, and power consumption by product contribution (theoretical value)</li> </ul>
Sewage Treatment	<ul style="list-style-type: none"> <li>Number of products manufactured and installed</li> <li>Treatment capacity of installed sewage treatment plant (theoretical value)</li> </ul>
Other Energy-Saving Products	<ul style="list-style-type: none"> <li>Number of products developed or manufactured and installed</li> <li>Reduction in CO2 emissions, energy consumption, and power consumption by product contribution (theoretical value)</li> </ul>

## 5. When the Use of Funds is not Specified: Disclosure Based on the Principles of Sustainability-Linked Bonds

### 1) Selecting KPIs and Setting SPTs

To demonstrate the Group's commitment to 0 CO2 emissions in 2050, our company selected 2 following KPIs and established SPTs for each KPI.

Our group will use the following KPIs and SPTs, depending on financing types:

- Transition Link Finance: KPI1/SPT1 or KPI1 and 2/SPT1 and 2
- Sustainability Linked Finance: KPI2/SPT2

\*For SPT2, either or both of SPT2-1 and 2-2 are set based on duration of funds, etc.

KPI	SPT
KPI1: CO2 emissions (Scope1, 2)	SPT1: 2030 Domestic Group Company Net 0 *
KPI2: Building the hydrogen supply chain	SPT2-1: Construction of one commercialized demonstration large liquefied hydrogen carrier completed by FY 2027
	SPT2-2: Hydrogen transportation capacity to Japan by FY 2031: 225,000 t/year or more

\*Targeting domestic CO2 emissions from Kawasaki Heavy Industries, Kawasaki Rolling Stock, Kawasaki Motors, and domestic companies

\*The base to be counted fluctuates as appropriate due to the refinement of measurement, etc.

The above KPI/SPT is a quantitative indicator for achieving carbon neutrality in 2050 under Group Vision 2030, Scope1, 2 and 3.

KPI1 is a direct indicator of a carbon neutral strategy and is an ambitious target that greatly exceeds the NDC and others. These figures were calculated in accordance with the GHG Protocol, and amounted to approximately 281,000 tons in fiscal 2020, 276,000 tons in fiscal 2021, and 265,000 tons in fiscal 2022.

KPI2 is a core project to realize Group Vision 2030, the Carbon Neutral Strategy. The main issues to be cleared up for the realization of a hydrogen society are the required specification targets for core products and the achievement of future hydrogen price targets that are equivalent to conventional energy, such as LNG prices. The concept itself is the world's first attempt at building a hydrogen supply chain, and many of the core products in the "Production,

Transportation/Storage, and Utilization" phases require the development of the world's first technologies. Among them, our company will be the first in the world to develop a liquefied hydrogen carrier that will carry as "Transportation."

The supply of more than 225,000 tons of hydrogen produced from blue hydrogen and renewable energy using CCUS in combination with unused fossil fuels such as brown coal, which our company plans, is equivalent to the consumption of 3 million fuel cell vehicles or 1 hydrogen gas turbine combined cycle power plant of 1 million kW. This is a significant boost to the government's 2030 target of 3 million tons. Considering that our company is the only Japanese company with a hydrogen supply plan of this scale, our company target is an ambitious target. Progress is announced on our company website every time.

【 Concept of SPT2-2 over 225000 tons/year of hydrogen transportation capacity to Japan 】

- Large Liquefied Hydrogen Carriers per Vessel: Liquefied Hydrogen Carriage: 160,000 m<sup>3</sup>
- Number of transports per vessel 11 times/year x 2 vessels = 225,000 t/year

If there is a significant change in the setting of the SPT, our company may obtain an evaluation by an external evaluation body after consulting with the relevant parties regarding the establishment of an evaluation standard for the SPT with an ambition level equal to or higher than the existing evaluation standard based on these changes.

## 2) Characteristics of Bonds and Loans

The financial and structural characteristics of transition/sustainability-linked financing (bonds or loans) implemented in accordance with the Framework will change depending on the progress of the SPT. The details, including the terms, will be set appropriately after discussion at an internal meeting, and will be disclosed in the bond disclosure document or the loan contract document, etc., each time the financing is executed.

- SPT value
- Decision date and method of SPT
- Specific financial and structural characteristics \*

\*These include, but are not limited to, the step-up or step-down of interest rates, donations to organizations for environmental conservation activities, and the purchase of emission credits.

## 3) Reporting

The progress of the SPT against the KPI is disclosed on the website or disclosed to the lender (in the case of a loan) at least once a year after the execution of the transition/sustainability-linked financing until the redemption or completion of the repayment.

## 4) Validation

The status of SPT against KPIs is verified by external organizations, etc. at least once a year after

implementation of transition/sustainability-linked financing until redemption or completion of repayment and is disclosed on our company website or disclosed to lenders (in the case of loans). The details will be disclosed in the disclosure documents of bonds or the contract documents of loans, etc., each time the financing is executed.