

Working Toward the Stable Generation of Clean Energy

# 1. The coming of a hydrogen society

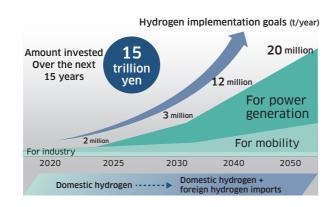
# / Rise of Carbon Neutral Markets

Due to the Japanese government's "2050 Carbon Neutral Declaration" and various carbon-neutral policies worldwide, the market for carbon-neutral technologies such as renewable energy, hydrogen, CCUS (Carbon Capture, Utilization, and Storage), and carbon removal technologies continues to expand both domestically and internationally. Japan, for example, plans to attract over 150 trillion yen in public and private investments related to Green Transformation (GX) over the next decade, with the government initially investing around 20 trillion yen. Additionally, a more specific measure includes an estimated investment of 15 trillion yen over the next 15 years in the hydrogen supply chain by both the public and private sectors.

Kawasaki Heavy Industries views these societal demands and market growth as business opportunities, and aims to achieve carbon neutrality by utilizing

hydrogen energy, which enables large-scale, long-term storage and can contribute to the stability of power supply and demand systems.

#### Hydrogen energy implementation in Japan



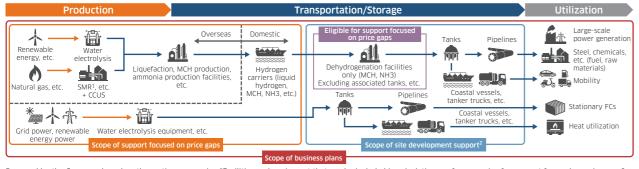
# / Support for the Social Implementation of Hydrogen Takes Shape

Based on the revised Basic Hydrogen Strategy of June 2023, the Hydrogen Society Promotion Act was enacted and promulgated in May 2024. The law specifically outlines measures to promote the supply and use of low-carbon hydrogen, including government certification of business plans for companies producing or importing hydrogen, subsidies to cover the price difference with existing fuels, and site development support. During deliberations on the bill, Yasuhiko Hashimoto, our

company's president and the vice-chairman of the Japan Hydrogen Association (JH2A), was invited as a witness and expressed his opinions.

With these environmental improvements as a tailwind, our company will contribute to the social implementation of hydrogen through the provision of equipment and services for all aspects including production, transportation, storage, and utilization.

#### Facilities and equipment that can be included in calculating a reference price for support focused on price gaps



Prepared by the Company based on the section concerning "Facilities and equipment that can be included in calculating a reference price for support focused on price gaps" included in the materials regarding the Hydrogen Society Promotion Act from the Ministry of Economy, Trade and Industry.

1 SMR: Steam methane reforming 2 The specific scope will be adjusted in the future

# / Seeking a 400-Billion Yen Business in FY2030: Activities in Existing Business Fields to Support Promotion of Hydrogen Business

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In relation to our existing business, our shipbuilding division has a proven track record in constructing liquefied gas carriers of various sizes. Since the construction of the world's first liquefied hydrogen carrier, SUISO FRONTIER, we have been contributing to the commercialization of large liquefied hydrogen carriers by completing their basic design. Additionally, we are expanding our lineup to include medium and small-sized vessels, which are in higher demand during

the early stages of this market. Furthermore, the expertise of our plant division, which has a significant track record in delivering large LNG tanks, is being extensively utilized in the development of large liquefied hydrogen tanks. Leveraging these strengths of our existing businesses, we are steadily progressing towards our goal of establishing a 400 billion yen liquefied hydrogen supply chain by fiscal year 2030.

# Expanding the lineup of liquefied hydrogen carriers



Development of large liquefied hydrogen tanks (200,000 m³ class, future project)



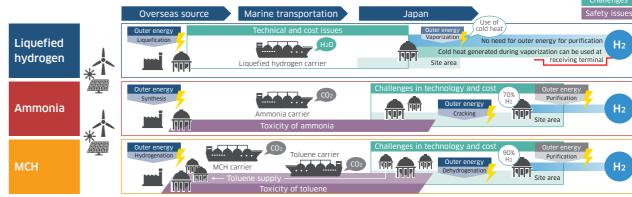
# / Superiority of Liquefied Hydrogen

In the aerospace field, we have 40 years of experience and expertise in handling hydrogen, and we also have an established track record with hydrogen power generation operations and electric power supply. Also, in the spring of 2022, we completed a demonstration of maritime transportation between Japan and Australia and cargo handling using the SUISO FRONTIER, the world's first liquefied hydrogen carrier, which we

constructed, demonstrating the feasibility of an international liquefied hydrogen supply chain. While other methods such as ammonia and MCH exist for the mass transportation of hydrogen, liquefied hydrogen is superior in the following respects. In the medium to long term, liquefied hydrogen is expected to be the most cost-effective and promising energy carrier.

- A liquefied hydrogen cargo handling base is located just 800 meters from the runway of the adjacent Kobe Airport, ensuring safety in handling based on our track record
- It is non-toxic, and during maritime transport, vaporized hydrogen gas can be used directly as fuel
- here is no energy loss required for decomposing the energy carrier to extract hydrogen or to increase its purity at the demand sites such as Japan
- Consequently, the equipment at the demand sites can be made simpler and more compact
- From an environmental perspective, it has the lowest greenhouse gas emissions in the international hydrogen supply chain

# Comparison of liquefied hydrogen and other carriers



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# / Toward Implementation of a Hydrogen Society

# Liquefied hydrogen receiving terminal for commercialization demonstration has been confirmed (land lease agreement signed with JFE Steel)

In July 2024, JFE Holdings, Inc., JFE Steel Corporation, and our subsidiary Japan Hydrogen Energy Co., Ltd. agreed to lease land at the JFE Steel East Japan Works in Ogishima for the purpose of a commercialization demonstration of the liquefied hydrogen supply chain.

The Ogishima area, part of the Keihin Industrial Zone–one of Japan's leading industrial zones–is suitable as a liquefied hydrogen receiving terminal due to its potential hydrogen demand. We aim to complete facility construction by fiscal year 2028, receive the liquefied hydrogen carrier in fiscal 2029, and complete the demonstration project and begin supplying hydrogen within Japan in fiscal 2030.



Planned construction site (red frame area)



Land lease agreement signed with JFE Steel

# Building a liquefied hydrogen transport network in Germany and Europe (Memorandum of Understanding signed with Daimler Truck)

In June 2024, the Company and Daimler Truck signed a Memorandum of Understanding on collaboration to build a liquefied hydrogen supply chain for Germany and establish a transport network for liquefied hydrogen stations in Europe. A signing ceremony was held in Berlin, Germany's capital.

The Memorandum aims to expand the use of liquefied hydrogen to decarbonize road freight transportation. Going forward, the two companies will jointly explore the development of a liquefied hydrogen supply chain, including consideration of liquefied hydrogen terminals, maritime transport, and liquid

hydrogen storage, with the goal of establishing a liquefied hydrogen supply chain for Europe by the early 2030s.



Ceremony in Berlin

# World's first public demonstration run of a hydrogen engine motorcycle by a mass-production motorcycle manufacturer

On July 20, 2024, Kawasaki Motors, a member of the Kawasaki Group, conducted the world's first public demonstration run by a mass-production manufacturer of a hydrogen engine motorcycle.

Research on the motorcycle began in March 2023, with test runs held starting in 2024. Mounted in the machine is a hydrogen engine based on the 998 cc In-Line Four Supercharged Engine found in Kawasaki's Ninja H2 motorcycle, with modifications made to allow direct injection of hydrogen fuel into the cylinders.

Hydrogen engine motorcycles run by burning hydrogen, allowing the rider to enjoy the engine's pulsation and feel, while primarily emitting only water.

We are currently conducting research and development with the aim of realizing a functioning

hydrogen engine motorcycle of the options to achieve carbon neutrality by the early 2030s.



Public demonstration run held at the Suzuka Circuit

# / Contributing to Realizing a Carbon-Neutral Society

# Promoting the CO<sub>2</sub> separation and capture business

Storing captured CO<sub>2</sub> underground makes it possible to achieve effectively negative emissions. As a result, expectations for Direct Air Capture (DAC) of CO<sub>2</sub> are increasing as a means to achieve carbon neutrality, with CO<sub>2</sub> capture via DAC project to reach about 1 billion t-CO<sub>2</sub> annually by 2050.

We aim to supply DAC systems utilizing CO<sub>2</sub> capture technology developed through our years of expertise in submarines, and to collaborate with various energy providers to develop a carbon dioxide capture, utilization, and storage (CCUS) service business of CO<sub>2</sub>.

In the future, by around 2025, we plan to establish a large-scale DAC demonstration plant. By around 2030, we aim to operate large-scale DAC facilities in priority

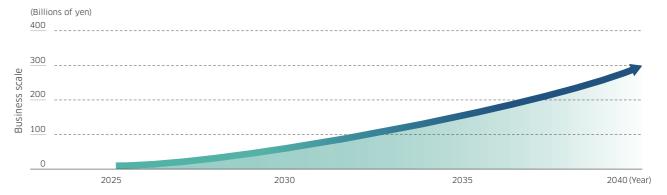
areas, targeting a business scale of approximately 50 billion yen.

Furthermore, we plan to expand the business scale through licensing by 2050.



Illustration of a large-scale DAC (approx. 0.5–1 million t-CO<sub>2</sub>/year)

# Outlook for the Company's DAC business



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#### Launch of joint research with Kajima Corporation

In July 2024, joint research was initiated to apply our DAC technology for the production of CO<sub>2</sub>-SUICOM\*, a CO<sub>2</sub>-storing concrete developed by Kajima Corporation and others. CO<sub>2</sub>-SUICOM is a technology that stores CO<sub>2</sub> during concrete production through carbonation curing\*, effectively reducing CO<sub>2</sub> emissions to below net zero.

Currently, the CO<sub>2</sub> used in the production of Kajima's CO<sub>2</sub>-SUICOM is purchased externally and procurement of CO<sub>2</sub> is a major obstacle to its widespread deployment. To overcome this challenge, a collaborative research project focusing on applying our DAC technology, which is capable of procuring the required amount of CO<sub>2</sub> wherever it is needed in a timely manner, was initiated. The DAC technology we developed captures CO<sub>2</sub> directly from the atmosphere and uses a solid absorbent composed of porous material and amine compounds optimized for CO<sub>2</sub> absorption to effectively separate and capture CO<sub>2</sub> in the air.

Going forward, we will evaluate configurations of DAC equipment suitable for application to precast

concrete product manufacturing plants, and proceed with demonstration of its application to CO<sub>2</sub>-SUICOM production. By combining our cutting-edge DAC technology with CO<sub>2</sub>-SUICOM developed by Kajima and others, we will contribute to the realization of a carbon-neutral society.



A CO<sub>2</sub>-SUICOM carbonation curing chamber

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 $<sup>^{\</sup>star}$  A method of curing concrete in a closed chamber filled with CO<sub>2</sub>, which allows CO<sub>2</sub> to be stored in the concrete in a controlled environment.











Working Toward the Stable Generation of Clean Energy

# 2. Initiatives to achieve zero CO<sub>2</sub> emissions

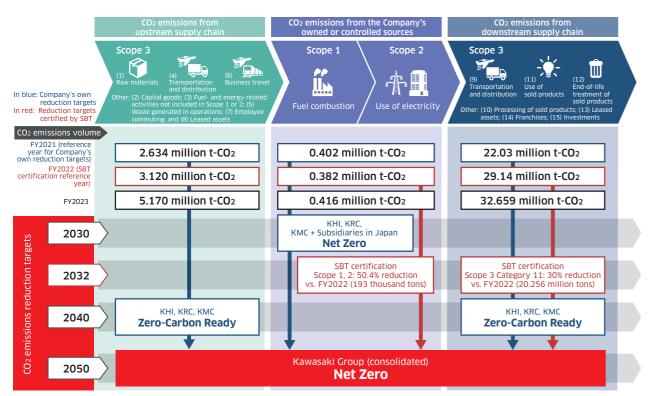
# Carbon neutrality targets

In August 2024, Kawasaki received certification of its greenhouse gas reduction targets from the Science Based Targets initiative (SBTi1), an international climate change initiative. The certified targets include two types based on fiscal 2022: a short-term target (NEAR-TERM) and a long-term target (NET-ZERO). The short-term target aims to reduce Scope 1 and 2 emissions by 50.4% compared to fiscal 2022 by fiscal 2032, and Scope 3 Category 11 emissions by 30% compared to fiscal 2022. The long-term target aims to achieve net-zero greenhouse gas emissions across the entire value chain by fiscal 2049.

The Group has set its own CO<sub>2</sub> emission reduction targets in advance of obtaining SBT certification. In particular, for Scope 1 and 2, we have established ambitious targets that exceed SBT certification

standards. Through voluntary initiatives centered on hydrogen power generation, we aim to achieve net zero domestically by 2030. To address Scope 3 emissions, we will decarbonize products and services with hydrogenation, electrification, green power grid, alternative fuels, and CCUS<sup>2</sup> as our keywords and strive to achieve by 2040 a status where customers select our Zero-Carbon Ready decarbonization solutions. The target for Scope 3 Category 11, already SBT-certified, is positioned as an intermediate goal for 2040. Ultimately, we aim to achieve net zero across our entire value chain by 2050, in line with the long-term goals of SBT certification. We will expand our decarbonization solutions together with our business partners and customers, contributing to the early realization of carbon neutrality.

1 SBTi: An international initiative jointly established in 2015 by CDP, the United Nations Global Compact, the World Resources Institute (WRI), and the World Wide Fund for Nature (WWF). It defines and promotes best practices for science-based target setting and independently evaluates corporate targets. 2 CCUS (Carbon dioxide Capture, Utilization and Storage): Capture CO2 emissions + Store underground + Utilize CO2



Regarding Scope 3, the calculation method has changed and the scope of aggregation expanded in recent years to ensure more accurate emissions data

## For more details, refer to ESG Data in the Sustainability section of our website

# Scope 1, 2

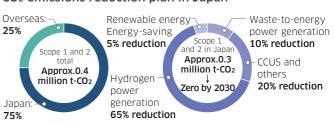
Scope 1, 2 In-house fuel and power use

# / Carbon Neutrality in Japan by 2030

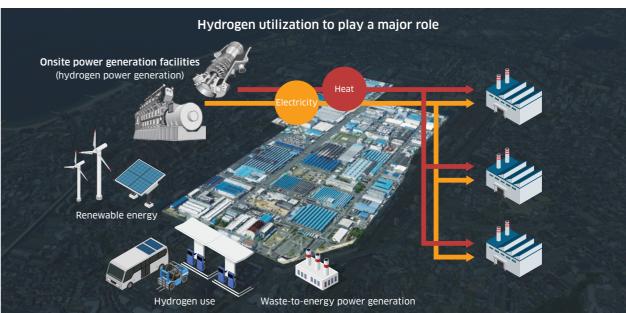
As shown to the right, the Kawasaki Group's Scope 1 and 2 CO<sub>2</sub> emissions are approximately 400,000 tons annually, of which Japan account for three-quarters.

We will continue efforts to save even more energy and promote electrification and the use of sustainable energy, such as solar power generation, to reduce CO<sub>2</sub> emissions through 2030. We will also introduce in-house hydrogen-fueled power generation facilities and achieve zero-emissions plants by combining this with power generation from waste, renewable energy, and other energy sources. Through these initiatives, we plan to achieve independent carbon neutrality with zero CO<sub>2</sub> emissions by the Group in Japan by 2030. We are also working to reduce CO2 emissions overseas.

## CO<sub>2</sub> emissions reduction plan in Japan

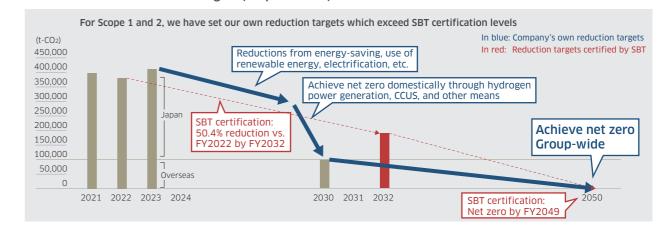


#### Zero-emission plant



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#### CO<sub>2</sub> emissions and reduction targets (Scope 1 and 2)



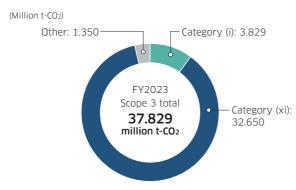
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# Scope 3

# Leading Society by Advancing Toward Zero-Carbon Ready

Scope 3 Net Zero can only be achieved when all parties in the value chain including trading partners and clients become Zero-Carbon Ready. The Company will implement the maximum possible measures concerning Scope 3 to become Zero-Carbon Ready by 2040. Specifically, for category (i), we will slash CO<sub>2</sub> emissions by suppliers of materials and parts by 80%, and for category (xi), we will develop a lineup of CO<sub>2</sub>-free standard solutions in all businesses. Moreover, we will reduce CO<sub>2</sub> emissions by more than the Company's own Scope 3 emissions by working toward achieving a hydrogen-based society and engaging in the CCUS business, thereby contributing to the early achievement of carbon neutrality around the world.

# Scope 3 breakdown by categories



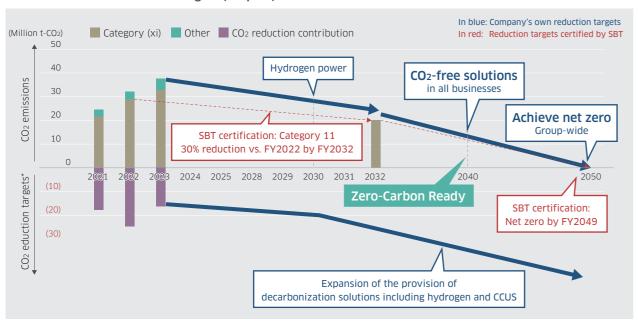
# Scope 3 CO<sub>2</sub> emissions reduction targets

#### 2040 Zero-Carbon Ready (KHI, KRC, KMC)

Reduce CO<sub>2</sub> at least 100% in real terms by engaging in the CCUS business

- Category (i): 80% reduction (compared with fiscal 2021)
- Category (xi): Develop a lineup of CO<sub>2</sub>-free standard solutions and facilitate global CO<sub>2</sub> reductions

#### CO<sub>2</sub> emissions and reduction targets (Scope 3)



<sup>\*</sup> CO2 reduction contribution: Equal to the difference between greenhouse gas emissions volumes of earlier products and services and new products and services. A quantification of the contribution to the mitigation (impact) of climate change throughout society as a whole through the provision of products and services.

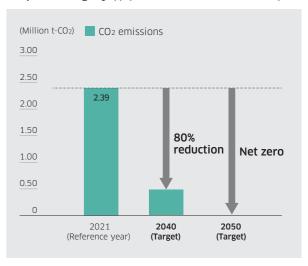
# Scope 3 Category (i) CO<sub>2</sub> emissions from procurement of materials and parts

# Support industrial initiatives with hydrogen and CCUS solutions to further accelerate reductions

The Company will deepen collaboration with business partners that supply materials and parts, including sharing emissions data, offering support for CO<sub>2</sub> reductions and striving for early achievement of zero emissions. This will be achieved by means not limited to in-company utilization by the Group of solutions such as hydrogen power, hydrogen fuel, and other alternative fuels, as well as CCUS, but also by providing these solutions to business partners.

In promoting CO<sub>2</sub> emissions reductions from procured goods, in April 2024, we held a "Carbon-Neutral Briefing" in Kobe (see p.78 for details), with the goal of collaboration between our suppliers and the Group in efforts to reduce emissions. Going forward, we will expand these initiatives company-wide and build cooperative structures with business partners for reducing emissions.

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



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

## Provide CO<sub>2</sub>-free solutions to all customers

We will take action to decarbonize products and services with hydrogenation, electrification, green power grids, alternative fuels, and CCUS as our keywords.

## • Initiatives in the leadup to 2030 (short term)

Through Kawasaki Ecological Frontiers, a program for certification of environmentally friendly products, and other initiatives, we will continue to reduce the energy consumption and improve the efficiency of existing products and promote the shift to hybrid electric and battery electric motorcycles and other vehicles as part of the transition to a decarbonized society. We will also conduct development for the commercialization of hydrogen energy and expand the use of hydrogen in gas turbines, gas engines, and other equipment. Furthermore, we will work toward the development of Kawasaki CO<sub>2</sub> Capture and DAC for the capture and use of CO<sub>2</sub>.

# • Initiatives in the leadup to 2040 (medium to long term)

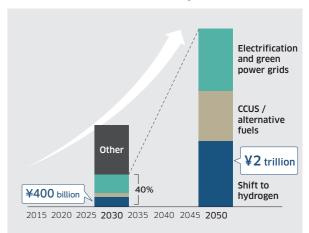
The Group will actively further the following three major initiatives.

- (1) We will provide CO<sub>2</sub>-free fuels and electrical power to society with a focus on the hydrogen business.
- (2) We will make a selection of choices for electrification and CO<sub>2</sub>-free fuels available to customers utilizing our various solutions including mobility and robots.

(3) In addition to CO<sub>2</sub> capture, we will promote the effective use of CO2 including the manufacture of synthetic fuels and chemical products to achieve a circular CO2 society

With these three pillars, the Group will make choices available to our customers of products and services (excluding defense and related; emergency products business) that contribute to the achievement of carbon neutrality by 2040, and promote global reductions in CO2.

#### Envisioned scale of business by future solution



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

For more details, refer to the TCFD Report 2024 listed under Sustainability on the Company's website

Under its Group Vision 2030, the Kawasaki Group will actively contribute to the realization of a society in which the average global temperature rise is held to 1.5°C above pre-industrial levels—the goal of the Paris Agreement—through its business, by advancing its hydrogen business, CCUS and other efforts. At the same time, the Group is moving forward with measures, based on risk analysis, to address increasingly severe natural disasters, including business continuity planning (BCP), supply chain resilience and others. Here we report on climate change-related information based on TCFD recommendations.

# / Governance

# Organizational governance of climate-related risks and rewards

In the Kawasaki Group, the Board of Directors is the highest decision-making body that deliberates and decides fundamental sustainability policies and fundamental plans throughout the Group. The Sustainability Committee, under the supervision of the Board of Directors, determines those measures to be taken rooted in the basic plan the Board of Directors has decided and reports on their progress to the Board of Directors.

### Sustainability promotion system



# / Risk Management

# Methods for identifying, assessing, and managing climate-related risks

The identification and assessment of risks related to sustainability including climate change are conducted by the Sustainability Committee. Changes in the business environment and in the demands and expectations from stakeholders are evaluated from a risk management perspective, and deliberated and reported on as necessary responses. With respect to regular reviews of materiality, too, risk assessments regarding various issues are conducted based on the results of these scenario analyses.

The results of these risk assessments and the identified risks are reported to the Board of Directors which, based on their deliberations over the approach to addressing them, provide the necessary feedback to those departments subject to those risks.

# / Metrics and Targets

Indicators and targets employed when assessing and managing climate-related risks and opportunities

The Group has established CO<sub>2</sub> emissions reduction targets, as shown in the chart below.

For domestic Scope 1 and 2, including Group companies, our goal is to achieve self-sustaining carbon neutrality by 2030 through initiatives centered primarily around hydrogen power generation. For Scope 3, targets have been established for main categories (i) and (xi).

Our goal is for zero CO<sub>2</sub> emissions across the Group as a whole by 2050, in line with the CO<sub>2</sub>-free target set out in the Kawasaki Global Environmental Vision 2050.

We obtained SBT (Science Based Targets) certification in August 2024, accelerating our efforts to achieve the Paris Agreement's goal of limiting temperature rise to 1.5°C or below.

Focusing on hydrogen, Carbon Capture and Storage (CCUS), and Direct Air Capture (DAC), we are advancing

the decarbonation of products and services across the Company and throughout the entire value chain, including suppliers and customers.



# Kawasaki Group CO2 emissions reduction targets

Scope 1, 2	Scope 3
2030 Carbon Neutrality	2040 Contribute to carbon negative by realizing a hydrogen-based society and promoting commercialization of CCUS
Scope: Domestic Group companies	Category (i): 80% reduction Category (xi): Promote CO <sub>2</sub> reductions in the world Scope: Kawasaki Heavy Industries, Kawasaki Motors, Kawasaki Railcar
	2050 Carbon Neutrality Scope: Entire Group (consolidated)

#### Reduction targets that have received SBT certification

Targets	Reduction targets receiving certification								
Short-term target NEAR-TERM	Scope 1 Scope 2	By fiscal 2032, reduce greenhouse gas emissions by 50.4% versus fiscal 2022 levels (aligned with the 1.5°C target)							
	Scope 3	By fiscal 2032, reduce use in products sold (Category 11) by 30% versus fiscal 2022 levels (well below 2°C target)							
Long-term target NET-ZERO	Scope 1, 2, 3	Bring greenhouse gas emissions to net zero (NET-ZERO) across the Group's value chain by fiscal 2049							

For more details of carbon neutral targets, refer to pp 47-50

# / Strategy

# Actual and potential impact of climate-related risks and opportunities on business, strategy and financial planning

In energy and environmental solutions, one of three focal fields defined in the Group Vision 2030, the Group is actively advancing business aimed at realizing a decarbonized society primarily through the hydrogen business. CCUS, and DAC.

Recorded below is the scenario analysis process conducted in the formulation of Kawasaki's climate change strategy.

#### Scenario analysis process

Scenario analysis is conducted through a process that entails (1) Selection of target businesses, (2) Evaluations of risk severity, (3) Definition of scenario groups. (4) Evaluations of business impact, and (5) Definition of responses to be taken.

In (3) Definition of scenario groups, considering consistency with the Group Vision 2030, the year 2030 was set as the target year, and the 1.5°C and 4°C scenarios were

The business impact of the 1.5°C and 4°C scenarios and the results of the considerations on the measures to be taken are described below.

Going forward, we will regularly conduct reviews and advance the sophistication of the scenario analysis.

#### Process for scenario analysis (1.5°C scenario, 4°C scenario)

(1) Selection of target businesses	(2) Evaluations of risk severity	(3) Definition of scenario groups	(4) Evaluation business in	(5) Definition of responses to be taken

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#### Results of scenario analysis (1.5°C scenario, 4°C scenario)

Financial impact 1 ... 🛨 Less than V10 hillion: 🛨 🛨 V10 hillion or more less than V100 hillion: 🛨 🛨 V100 hillion or more

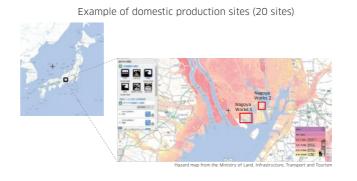
	Farget: 2030 Energy Solution & .5°C scenario Marine Engineering		Aerospace Systems	Powersports & Engine	Precision Machinery & Robot	Rolling Stock					
Ор	portunities	● Hydrogen related ● CCUS and alternative fuels ● Electrification									
	Risks	• Falling demand for LNG power generation facilities, aircraft, gasoline-powered vehicles, and diesel construction machine • Increase in R&D and capital investments									
		• (	arbon neutrality-related	revenue, including hydro	ogen: ¥650 billion (FY20	30)					
Financial impact <sup>1</sup>	Revenue	*** Sales of hydrogen-related products will rise	★ Creation of hydrogen aircraft will come around 2040 or later	★★★ Move first with the shift from gasoline-powered vehicles to EV/HEV, and shift to e-fuel and hydrogen will progress	**	*					
anci		• Carbon neutrality-related investments: ¥350 billion (FY2020-FY2030)									
Fin	Investment amounts	★★★ Including use of GI Fund	★★ Including use of GI Fund with respect to the development of hydrogen aircraft	★★★ Investment of ¥150 billion for the period FY2023-FY2027	**	*					

Target: 2030 4°C scenario	Energy Solution & Marine Engineering	Aerospace Systems	Powersports & Engine	Precision Machinery & Robot	Rolling Stock		
Financial impact <sup>1</sup>	¥650 billion in sales opportunities will be lost from carbon neutrality-related revenue, including hydrogen     Recovery of investments will be delayed (R&D and capital investments related to hydrogen projects, hydrogen airc development, and EV/HEV motorcycles, etc.)  Physical losses2: Minimum losses will be ¥4 billion for damages at production sites (loss of fixed assets) and ¥24.						

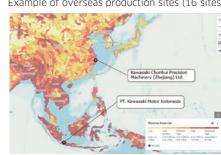
• Food risks, water risks, economic instability, supply chain chaos, and other factors produced by temperature rise will

- have an enormous impact on operations.
- 1 Carbon neutrality-related revenue in 2030, including hydrogen, revised upward from ¥600 billion to ¥650 billion to reflect target revenue from the DAC business. 2 Physical losses: Expected damages for 2030 calculated by multiplying the hypothesized cost of damage at high-risk sites based on damage reports, by the growth rate of

#### Example of physical loss assessment under the 4°C scenario



Example of overseas production sites (16 sites)



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

As indicated in the Kawasaki Group Policy on Environmental Management, the Group conducts business activities that respect biodiversity as it promotes environmental protection. In this section, we report on our dependence and impact on biodiversity and natural capital by advancing analyses based on the TNFD recommendations and the LEAP approach, an analysis consisting of four steps: Locate, Evaluate, Assess, and Prepare.

# / Evaluate (Evaluate Your Dependencies and Impacts on Nature)

In the Evaluate phase, we conducted a macro-level impact assessment across sectors that include our Group's businesses (such as aircraft and energy equipment).

Using ENCORE, a tool for understanding the scale of dependencies and impacts on nature, we then performed a risk evaluation. Additionally, for upstream supply chains, we conducted risk assessments using similar sectors.

As a result, we identified four high-risk items related to dependencies, as well as ten high-risk items related to

impacts. Our Group uses significant amounts of mineral resources such as iron and aluminum as raw materials, making greenhouse gas emissions and water resource usage during mining and refining critical concerns.

Based on these findings, we have determined that while some of our Group's activities, such as those in the plant business, may have a direct impact on biodiversity, the majority of our activities impact biodiversity indirectly through greenhouse gas emissions and water resource usage.

## Risk assessment of the Group's business activities and the dependency on the impact on nature

								VH			М	L	VL	ND
								Very H	igh Hi	gh Me	edium	Low	Very Low	Non-Detection
					Own operations		Upstream activities							
		Aircraft	Energy Solution	Plant Engineering	Ship & Offshore Structure	Railcar	Precition Machinery & Robot	Motorcycle for Leisure, Four Wheeler	Plastic	lec	on	Stainless Steel	Al	ninum
	Dependency drivers	Aerospace & Defense (Manufacture of machinery, parts and equipment)	Heavy Electrica Equipment (Manufacture of machinery, parts and equipment)	Construction & Engineering (Infrastructure builds)	Construction Machinery & Heavy Trucks (Manufacture of machinery, parts and equipment)	Construction Machinery & Heavy Trucks (Manufacture of machinery, parts and equipment)	Industrial Machinery (Manufacture of machinery, parts and equipment)	Motorcycle Manufacturers (Manufacture of machinery, parts and equipment)	Commodity Chemicals (Catalytic cracking, fractional distillation and crystallization)	Iron (Iron extraction)	Iron (Iron metal production)	Steel (Steel production	Aluminium h) (Mining)	Aluminium (Alumina refining)
	Animal-based energy	ND												
	Fibres and other materials	ND												
Direct Physical Input	Genetic materials	ND												
	Ground water	M	М	ND	М	M	М	М	Н		М	M	н	M
	Surface water	М	М	ND	M	М	М		Н		М	М	Н	M
	Maintain nursery habitats	ND												
	Pollination	ND	ND	ND		ND	ND	ND	ND	ND				
Enables Production	Soil quality	ND												
Process	Ventilation	٧L			VL									
	Water flow maintenance	М	М	ND	M	M	M		L		М	M	Н	M
	Water quality	L	L	ND	L	L	L	L	L					
	Bio-remediation	ND							VL					
Mitigates Direct Impacts	Dilution by atmosphere and ecosystems	L	L	ND	L	L	L		ND	ND	ND	ND	ND	ND
Impacts	Filtration	٧L			VL									
	Mediation of sensory impacts	М	М	ND	М	М	М	М	L					
	Mass stabilisation and erosion control	VL	VL	М	VL	VL	VL	VL	L	М	VL	L	М	L
	Climate regulation	٧L			VL				L	М		VL	н	М
Protection from	Disease control	ND		ND						ND	ND			
Disruption	Flood and storm protection	М	М	ND	M	М	М	М	М					
	Bio-remediation	ND												
	Pest control	ND												

## Risk assessment of the Group's business activities and the relationships of the impact on nature

		Own operations								Upstream activities					
		Aircraft	Energy Solution	Plant Engineering	Ship & Offshore Structure	Railcar	Precition Machinery & Robot	Motorcycle for Leisure, Four Wheeler	Plastic	lec	on	Stainless Steel	Alm	inum	
lmį	Impact drivers	Aerospace & Defense (Manufacture of machinery, parts and equipment)	Heavy Electrica Equipment (Manufacture of machinery, parts and equipment)	Construction & Engineering (Infrastructure builds)	Construction Machinery & Heavy Trucks (Manufacture of machinery, parts and equipment)	Construction Machinery & Heavy Trucks (Manufacture of machinery, parts and equipment)	Industrial Machinery (Manufacture of machinery, parts and equipment)	Motorcycle Manufacturers (Manufacture of machinery, parts and equipment)	Commodity Chemicals (Catalytic cracking, fractional distillation and crystallization)	Iron (Iron extraction)	iron (Iron metal production)	Steel (Steel production)	Aluminium (Mining)	Aluminium (Alumina refining)	
	Terrestrial ecosystem use	ND							н					ND	
Ecosystem Use	Freshwater ecosystem use	ND		Н										ND	
	Marine ecosystem use	ND												ND	
Resource Use	Water use	н		н								Н		VH	
Hesource Use	Other resource use	ND												ND	
Climate Change	GHG emissions	н	н	н		Н	н	н				н		н	
	Non-GHG air pollutants	М	М	н	М	М	М	М	н	н				ND	
Dallation.	Water pollutants	Н	Н	М		Н	Н	Н	Н		М	ND		н	
Pollution	Soil pollutants	н	н	н	н	Н	н	н	н		ND			н	
	Solid waste	Н	Н	М	Н	Н	Н	н	н			Н		н	
Others	Disturbances	М	М	Н	М	М	М	М		Н				ND	

# / Locate (Locate Your Interface with Nature)

In the Evaluate phase, we analyzed macro-level impacts in each sector, but in the Locate phase, we assess the impact on nature of geographical factors at operational sites.

An impact assessment of our Group's 26 domestic and 16 overseas production sites revealed that domestic sites have relatively low risk. In contrast, water-related risks in India, China, and Mexico, and biodiversity risks in Brazil, are comparatively higher.

### Impact assessment at overseas production sites

Assessment items	Number of sites with an impact	Location of sites
Importance of biodiversity	3	South America, Asia, Europe
Ecosystem integrity	1	South America
Rate of tree loss	2	South America, Asia
Water availability	9	North America, Asia
Water pollution	12	North America, Asia, Europe

# / Assess (Assess Your Nature-related Risks and Opportunities)

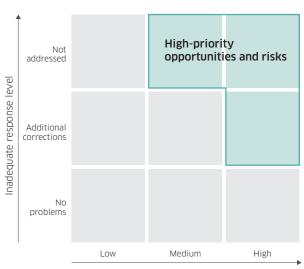
Practice of Strategy and Performance

Based on the results from Evaluate and Locate, in the Assess phase, we analyze opportunities and risks, focusing on relatively high-risk businesses and sites within the Group.

Incorporating TNFD examples, we identified potential opportunities and risks related to water, soil, waste, and other factors. These were assessed along two axes: importance and level of inadequate response (see figure at right). For overseas sites, water was determined to represent both an opportunity and a risk (see table below). In addition, anticipating promotion of resource circulation, demand for resource sorting was identified as an opportunity.

Production sites	Opportunities	Risks
India, China, others	Water resource scarcity improvement technology     Demand for monitoring     Demand for resource sorting systems	Water resource scarcity     Water pollution

Opportunity and risk assessment



Importance of opportunities and risks (level of impact x likelihood of occurrence)

# / Prepare (Prepare to Respond and Report)

In the Prepare phase, we are advancing the following responses.

To address water resource scarcity, we are promoting water conservation and recycling during the manufacturing process. In addition, with products such as the MAG Turbo and Mega MAG Turbo aeration pumps for wastewater treatment, we aim to contribute to addressing global water issues and realize sustainable wastewater treatment plants.

Regarding resource sorting, through solutions such as K-Repros, an AI-equipped resource sorting support system utilizing collaborative robots, we are advancing resource circulation while also addressing social challenges, such as reducing the burden on workers.



Mega MAG Turbo aeration pump



K-Repros Al-equipped resource sorting support system

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