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# Environmental



## Environmental

### Environmental

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## Environmental

### Basic Concept

Hitachi's Mission is to "contribute to society through the development of superior, original technology and products." We seek solutions to environmental issues, which are of serious concern to society, through our business operations and promote environmental management from a long-term perspective. Meeting society's expectations with innovations that mitigate environmental issues also presents major business opportunities. Hitachi's Environmental Vision states that "Hitachi will resolve environmental issues and achieve both a higher quality of life and a sustainable society through its Social Innovation Business in collaborative creation with its stakeholders." To uphold this vision and work toward achieving a decarbonized society, a resource-efficient society, and a harmonized society with nature, we have established a set of long-term environmental targets looking toward 2050 and 2030 called Hitachi Environmental Innovation 2050 and have been promoting Group-wide environmental activities in line with our Environmental Action Plan, which is updated every three years.

Topic	Overview	Targets, KPIs, and Results
 <p>Achieving a Decarbonized Society</p>	<p>We engage in decarbonization businesses through co-creation with customers to contribute to realize a decarbonized society. We also pursue initiatives to reduce CO<sub>2</sub> emissions from the use of our products and services. In addition, we strive to achieve carbon neutrality by fiscal 2030 in our factories and offices, and by fiscal 2050 throughout our value chain.</p>	<p><b>CO<sub>2</sub> avoided emissions through products and services</b>            FY2024 Target: 100 million metric tons/year  <b>Forecast: 126.1 million metric tons/year*1</b></p> <hr/> <p><b>Reduction rate of total CO<sub>2</sub> at business sites (factories and offices) (compared to FY2010)</b>            FY2022 Target: 32%  <b>FY2022 Result: 40%</b></p>
 <p>Achieving a Resource-Efficient Society</p>	<p>To build a society that uses resources and water efficiently with customers and society, we set a target to improve the efficiency of resources and water use within the Hitachi Group by 50% (compared with FY2010) by fiscal 2050. We will create higher economic value using fewer resources while pursuing production activities with a lower environmental burden.</p>	<p><b>Number of sites achieving zero landfill waste*2</b>            FY2022 Target: 90 sites  <b>FY2022 Results: 199 sites (58% achievement)</b></p> <hr/> <p><b>Reduction rate in water use per unit (compared to FY2010)</b>            FY2022 Target: 22%  <b>FY2022 Results: 27%</b></p>
 <p>Achieving a Harmonized Society with Nature</p>	<p>We classify the emission of greenhouse gases and chemical substances into the atmosphere and the generation of waste materials in the course of our business activities as negative impact activities. Providing products and services that contribute to ecosystem preservation and undertaking activities to preserve biodiversity and ecosystems are categorized as positive impact activities. We are working to quantify and minimize the gap between positive and negative impacts by 2050.</p>	<p><b>Reduction rate in chemical atmospheric emissions per unit (compared to FY2010)</b>            FY2022 targets: 5%  <b>FY2022 results: 21%</b></p>

\*1 Three-year average during the Mid-term Management Plan 2024 \*2 Pursued in assumed conformance with regulations, conditions, etc. Less than 0.5%

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▶ **“Environmental Vision” and “Hitachi Environmental Innovation 2050”**

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# Advancing Our Environmental Vision and Long-Term Environmental Targets

## “Environmental Vision” and “Hitachi Environmental Innovation 2050”

Policy

Target

GRI 2-23

Taking into account the growing urgency of environmental issues in the world and the management policies, Hitachi formulated an Environmental Vision that clearly outlines our vision for society from a long-term perspective. In working toward achieving this vision, we have established a set of long-term environmental targets aimed at building a decarbonized society, a resource-efficient society, and a harmonized society with nature under the banner of Hitachi Environmental Innovation 2050 and are working to advance them.

The movement toward a decarbonized society is accelerating both in Japan and internationally. We are seeing the decarbonization of entire value chains and an accompanying green transformation (GX). Hitachi set a goal to achieve carbon neutrality by fiscal 2030 in our factories and offices, and by fiscal 2050 throughout our value chain. We are currently engaged in measures to achieve these goals.

To meet our goal of Achieving a Resource-Efficient Society, we aim to create a sustainable society, while keeping the transition to a circular economy in mind, by improving the efficiency of water and resources use at Hitachi by 50% by fiscal 2050 (compared to fiscal 2010 levels).

To meet our goal of Achieving a Harmonized Society with Nature, we strive to minimize our impact on natural capital by keeping a close eye on international initiatives such as the 15th Conference of the Parties (COP15) to the Convention on Biological Diversity, held in December 2022, and the Task Force on Nature-Related Financial Disclosure (TNFD).

Hitachi’s environmental initiatives, including the achievement of these long-term environmental targets, are mandated by the short-term Environmental Action Plan which is updated every three years and pursued Group-wide.

▶ Environmental Vision and Long-term Environmental Targets: Hitachi Environmental Innovation 2050

### Environmental Vision

Hitachi will resolve environmental issues and achieve both a higher quality of life and a sustainable society through its Social Innovation Business in collaborative creation with its stakeholders.

**The aim of Hitachi’s environmental management**

- Decarbonized society**  
Climate Change Mitigation/Adaptation
- Resource Efficient Society**  
Saving and Recycling Resources
- Harmonized Society with Nature**  
Preservation of Ecosystems

### Long-term Environmental Targets

Hitachi’s resolution looking toward 2050 and 2030

## Hitachi Environmental Innovation 2050

- For a decarbonized society**  
Achieve **carbon neutrality** by FY2050 through the value chain  
Reduce CO<sub>2</sub> emissions **50%** by FY2030 (compared to FY2010)  
Achieve **carbon neutrality** by FY2030 at business sites (factories and offices)
- For a resource efficient society**  
Build a society that uses water and other resources efficiently with customers and society  
Efficiency in use of water/resources  
FY2050 **50%** improvement (compared to FY2010 in Hitachi Group)
- For a harmonized society with nature**  
Impact on natural capital  
**Minimized**

### Environmental Action Plan

**Set environmental action items and targets every three years in order to achieve the long-term targets**

■ P.035 Achieving a Decarbonized Society   ■ P.050 Achieving a Resource-Efficient Society   ■ P.055 Achieving a Harmonized Society with Nature

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### Progress in Reaching Hitachi Environmental Innovation 2050 Targets

Target	Activities
--------	------------

We are making progress with major Hitachi Environmental Innovation 2050 targets, as shown below. We are generally on track, and we will continue strengthening our environmental activities to achieve these targets. Regarding our long-term value chain target to help build a decarbonized society, we are developing activities which help to reduce CO<sub>2</sub> emissions by providing products with top-tier environmental performance.

#### For a decarbonized society

##### ① Reduced CO<sub>2</sub> Emissions at Business Sites (Factories and offices)

	FY2022 target	FY2022 result	FY2030 target	FY2050 target
Reduction rate of total CO <sub>2</sub> (compared to FY2010)	32%	40%	100% (carbon neutrality)	(Maintain 100%)

#### For a resource efficient society

##### ① Enhanced Efficiency in the Use of Waste and Valuable Generation at Business Sites (Factories and Offices)

	FY2022 target	FY2022 result	FY2030 target	FY2050 target
Reduction rate in waste and valuables generation per unit (compared to FY2010 Hitachi Group)	14%	16%	—	50% reduction

##### ① Enhanced Efficiency in the Use of Water at Business Sites (Factories and Offices)

	FY2022 target	FY2022 result	FY2030 target	FY2050 target
Reduction rate in water use per unit (compared to FY2010 Hitachi Group)	22%	27%	—	50% reduction

Note: See the referenced pages for details on the figures cited.

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### Green Strategy

Approach

#### Green Strategies for Sustainable Growth

Hitachi contributes solutions to environmental issues through our Social Innovation Business. Aiming to be a Climate Change Innovator that leads the way in contributing to the decarbonization of society, we formulated a Green Strategy consisting of two pillars: *GX for CORE*, through which we accelerate Hitachi Group green transformation, and *GX for GROWTH*, through which we contribute to the green transformation of our customers and society. By moving forward in both *GX for CORE* and *GX for GROWTH*, we will accelerate the deeper development of technology and expertise, improving the environmental value Hitachi provides on a continued basis.

The Hitachi Green Strategy contributes to the creation of decarbonized and resource-efficient societies that are harmonized with nature.

#### ▶ The Hitachi Green Strategy



Example: Initiatives to eliminate the use of all fossil fuels at business sites (Italy)

Example: Development of ESG solutions for sustainability management

Example: HVDC conversion plant for the mass adoption of renewable energy

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### Advancing Our Environmental Vision and Long-Term Environmental Targets

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## Environmental Action Plan

To achieve its Environmental Vision and the Hitachi Environmental Innovation 2050 long-term environmental targets, Hitachi draws up an Environmental Action Plan containing indicators and targets for the three-year period covered by the Mid-term Management Plan and steadily promotes its implementation.

### Environmental Action Plan for 2024 (Fiscal 2022–2024)

Target	Activities
--------	------------

Hitachi pursues environmental activities under the Environmental Action Plan for 2024 (Fiscal 2022–2024) that were based on the 2024 Mid-term Management Plan. The targets set for fiscal 2022 and our results are as follows.

#### Environmental Action Plan for 2024

Our environmental activities and targets are updated every three years with a view to achieving our long-term environmental targets.

◆◆◆: Achieved ◆◆: Partially achieved

Items		Indicators	FY2022 targets	FY2022 results (achievement level)	FY2023 targets	Final FY (2024) targets	
Environmental Management	Environmental human capital development	Promote environmental human capital development	Promote environmental human capital development mindful of changes in personnel composition, including generational shifts				
A Decarbonized Society	Factories and offices	Reduce total CO <sub>2</sub>	Reduction rate of total CO <sub>2</sub> * <sup>1</sup> (compared to FY2010)	32%	40% ◆◆◆	35%	50%
		Improve transportation energy consumption per unit (Japan)	Improvement rate of transportation energy consumption per unit (Japan)* <sup>2</sup> (compared to FY2020)	2%	14% ◆◆◆	3%	4%
	Products and services	Reduce CO <sub>2</sub> emissions of products and services	Reduction rate of CO <sub>2</sub> emissions per unit (compared to FY2010)	12%	15% ◆◆◆	13%	14%
		Promote eco-design	CO <sub>2</sub> avoided emissions	Target: CO <sub>2</sub> avoided emissions of 100 million metric tons per year (FY2024) Forecast: CO <sub>2</sub> avoided emissions of 126.1 million metric tons per year* <sup>4</sup>			
A Resource Efficient Society	Factories and offices	Enhance efficiency in the use of resources	Environmentally conscious design assessments and LCA application rates for newly developed and designed products	Target: Full application Eco-Design for all newly developed products FY2022 Results: 357 products identified as subject of Eco-Design			
			Number of sites achieving zero landfill waste* <sup>3</sup>	90	199 ◆◆◆	124	158
			Reduction rate in waste and valuables generation per unit (compared to FY2010)	14%	16% ◆◆◆	17%	20%
			Reduction rate in water use per unit (compared to FY2010)	22%	27% ◆◆◆	23%	24%
		Effective utilization rate of plastic waste	77%	88% ◆◆◆	81%	85%	
	Water risks	Respond to water risks	Responding to water risks	Minimization of business impacts regarding water risks			
A Harmonized Society with Nature	Chemical substance	Reduce chemical emissions	Reduction rate in chemical atmospheric emissions per unit (compared to FY2010)	5%	21% ◆◆◆	6%	8%
	Ecosystem preservation	Impact on natural capital	Calculation of negative impacts (business unit/Group company-level LCA implementation) / Calculation of positive impacts (forest conservation activities)				

\*1 Reduction rate of total CO<sub>2</sub>: Indicator representing CO<sub>2</sub> emissions from Hitachi's consumption of energy alone

\*2 This is a target for Japan only. Targets in other countries are set on a voluntary basis.

\*3 Pursued in assumed conformance with regulations, conditions, etc. Less than 0.5%

\*4 Three-year average

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## Environmental Governance

### Framework for Promoting Environmental Governance

Structure

GRI 2-12/2-13/2-24

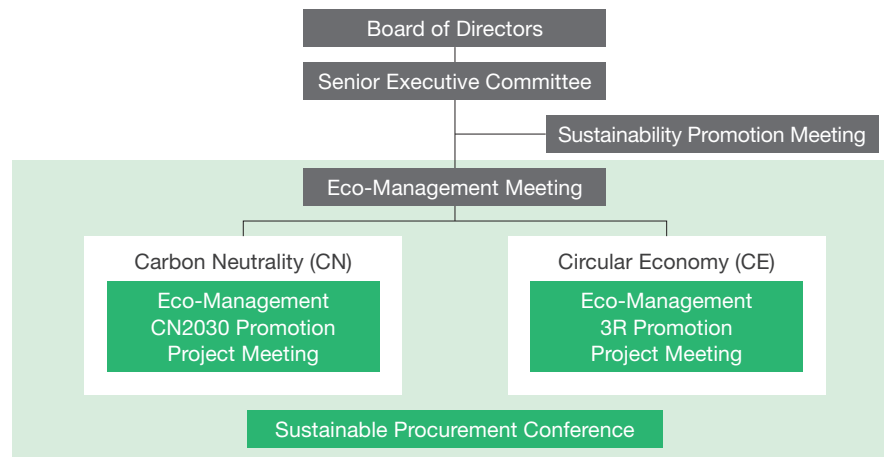
To achieve our Environmental Vision and Hitachi Environmental Innovation 2050 long-term targets, Hitachi is building a global system to support decision-making and environmental management for Hitachi, Ltd. and 697 consolidated subsidiaries (as of March 31, 2023).

In fiscal 2022, we established the Sustainability Promotion Meeting, chaired by the chief sustainability officer and consisting mostly of managers from each business unit (BU) and major Group company. The purpose of these meetings is to discuss and share information related to environmental issues and other important matters related to sustainability. The Senior Executive Committee discusses and makes decisions related to important environmental matters for achieving our long-term environmental targets, including decarbonization, water use, and resource circulation. Matters are referred to the Board of Directors when necessary.

Hitachi established separate meetings to address important topics such as carbon neutrality and the circular economy. The main members attending these meetings are individuals responsible for environmental activities at each BU and key Group companies. Through these meetings, we pursue environmental activities across Hitachi Group, examining measures and sharing information.

Aiming to be a global leader in green transformation (GX), Hitachi formulated a Green Strategy consisting of GX for CORE and GX for GROWTH, striving to put into place a framework to execute our strategy.

#### Framework for Promoting Environmental Governance



Hitachi, Ltd., a company with Nominating Committee, etc. under the Companies Act, has adopted a committee system to separate the responsibilities for management oversight from the execution of business operations. Under this system, the Audit Committee of independent directors conducts an audit of sustainability-related operations once a year. Reports on climate change and other environment-related material issues are made to the committee by executive officers of Hitachi, Ltd.

P.015 Framework for Promoting Sustainability Strategy

P.029 Green Strategy

P.035 Achieving a Decarbonized Society

#### Environmental Value Promotion Meetings

Meeting	Attendees	Purpose	Frequency
Sustainability Promotion Meeting	Chief Sustainability Officer, Business promotion heads at BUs and key Group companies, and RHQ Sustainability Officers	Deliberation, information sharing related to material sustainability initiatives	Once or twice per year
Eco-Management Meeting	Heads of Business promotion/Environment-related/ MONOZUKURI (production)/ Procurement divisions from BUs and key Group companies	Deliberation, planning, and implementation of action plans (environmental action plans) to achieve the Hitachi environmental long-term goals	Twice per year
Eco-Management CN2030 Promotion Project Meeting	Heads and members of Environment-related/ MONOZUKURI (production) divisions from BUs and key Group companies	Monitoring and implementation of CN action plan and discussion of acceleration	Twice per year
Eco-Management 3R Promotion Project Meeting	Heads and members of Environment-related/ MONOZUKURI (production) divisions from BUs and key Group companies	Promotion of actions for 3R activities toward realizing CE	Four times per year
Sustainable Procurement Conference	Chief Procurement Officer, heads of the procurement divisions at BUs and key Group companies, and individuals responsible for and engaged in sustainable procurement	Communicate the Hitachi Group sustainable procurement policies and strategies to all procurement divisions, improve knowledge and share best practices	Twice per year

### Executive Compensation System Linked Environmental Value

System

In fiscal 2023, we revised our executive compensation system, linking the system more closely to corporate value to accelerate our growth as a global company further. Refer to the following link for more details.

P.013 Reflecting Sustainability Targets in Executive Compensation Evaluation

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## Environmental Management System

### Enhancing Our Environmental Management System

System	Activities	GRI 2-25/3-3
<p>Hitachi has approximately 1,300 business sites of different sizes engaging in a wide variety of activities. We classify these sites into one of three environmental-risk categories: A (major), B (medium), and C (minor). This categorization is based on globally accepted criteria for environmental management classification<sup>*1</sup>, and we implement our environmental management according to the environmental risk at each given site. In fiscal 2022, approximately 150 major sites were classified as Category A. Sites of companies acquired by Hitachi that have a large environmental impact (equivalent to Category A) will eventually be classified as Category A. We will make this classification after an alignment period of a few years, during which we will adapt the sites to our environmental management system.</p>	<p>adhering to our in-house environmental management system, our main global category A manufacturing sites have acquired third-party certifications, such as ISO 14001.</p> <p>We also established a system to encourage procurement partners to reduce their environmental impact, including carbon neutrality upstream in the value chain. We summarize and publicize various guidelines describing the Hitachi approach to sustainable and green procurement and other matters with which we expect procurement partners to comply. At the same time, we continue to improve supplier engagement by holding briefings on procurement and conducting sustainability audits.</p>	
<p>The business units and Group companies that manage A sites participate in drafting the Eco-Management Meeting's Environmental Action Plan, setting and striving to achieve targets based on this plan. We publicize the Environmental Action Plan throughout the Hitachi Group through environmental strategy officers, chosen from among the heads of environment divisions of those organizations. In addition to</p>	<p><sup>*1</sup> We score each site based on criteria for environmental management classification, such as electricity consumption, waste generation, water use and legal compliance. Based on this score, we categorize the site into one of the three categories.</p> <ul style="list-style-type: none"> <li> P.068 Number of ISO 14001 Certified Companies</li> <li> P.108 Responsible Procurement</li> </ul>	

### Environmental Data Collection System

**Activities**

As part of our environmental management, Hitachi uses the Environmental Data Collection System (Eco-DS) to collect about 20 categories of environmental load-related data ranging from energy use, water use, and waste generation, to whether an item falls under relevant environmental laws and regulations, and environmental accounting. In fiscal 2022, data collection covered about 1,300 business sites in 67 countries. We are working to progressively expand the scope of data collection in order to estimate the environmental load of the entire Hitachi Group.

The aggregated data is used to provide feedback to improve environmental measures, such as in determining business site environmental management classifications, identifying environmental management issues, and sharing instructive examples within the Group. In addition, we compile data on key metrics twice a year for the approximately 150 major sites identified as Category A.

We established an international help desk to support the system and encourage an understanding of environmental management, offering support in Japanese, English, and Chinese.



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### Chemical Substance Management System

Hitachi manages data on chemical substances in procured materials, parts, and products using *A Gree'Net*, a green procurement system compatible with the chemSHERPA\*<sup>1</sup> format. This framework allows us to identify the chemical substances are used in our products—from design and development, procurement, and production to quality assurance and shipping—and to respond to the legal and regulatory frameworks of our export partners.

To ensure proper use of chemical substances in our business operations, we operate a database for chemical substance management called CEGNET, which keeps track of the latest laws and regulations and our own voluntary regulations and supports searches for new substance risks. The system also registers chemical substances used and aggregates data on amounts handled, emitted, and transferred in our operations, helping to reduce volume.

\*<sup>1</sup> chemSHERPA: A shared transmission scheme throughout the supply chain to ensure proper management of chemical substances in products and continuing compliance with the ever-growing requirements of major global laws and regulations like the REACH regulation (EU regulation of Registration, Evaluation, Authorisation and Restriction of Chemicals) and RoHS directive (EU rules restricting the use of hazardous substances in electrical and electronic equipment).

### Achievements in FY2022: Briefings for Procurement Partners

We registered data regarding chemical substances contained in approximately 1.25 million materials, parts, and products in *A Gree'Net* as of the end of fiscal 2022. Each year, we hold briefings for procurement partners using *A Gree'Net*, chemSHERPA, and on regulatory revision trends. In fiscal 2022, we held eight online briefings attended by a cumulative 1,920 people.

### Environmental Education for Employees

#### Activities

#### Training

Hitachi offers e-learning based environmental education to all Group employees, from new hires to senior management. We also provide annual specialized training on environmental risks and compliance with environment-related laws and regulations for working-level employees in charge of environmental

management and internal environmental audits. Particularly in China, where we have more than 20 Category A sites, we provide training focused on compliance with the country's increasingly strict environmental laws and regulations.

#### Environmental Education in Fiscal 2022

Contents of training	Target	Number of participants
Hitachi Group training on recent amendments to laws and operational procedures as well as basic environmental management	Employees working in air quality, water quality, and waste management	Japan: 1637 people from 71 companies (921 people in waste management, plus 716 people in legal compliance) China: 139 people from 52 companies
Environmental management training program to reduce environmental risks in China and raise the knowledge of working-level employees	Working-level employees	153 people from 48 companies
Training for new employees	New employees in the China Hitachi Group	17 people from 8 companies

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## Environmental Compliance

### Activities

In addition to ensuring compliance with the laws and regulations of each country and region, Hitachi strives to minimize environmental risks by setting compliance with voluntary management criteria that are more stringent than regulatory requirements and by conducting internal audits. We make periodic examinations of soil and groundwater to detect contamination at business sites where hazardous chemical substances are, or once were, used. If contamination is found, we conduct cleaning and monitoring activities until decontamination is complete.

If we discover a violation or receive a complaint, we take steps to share information about the causes and countermeasures throughout the Group, tying these efforts to the prevention of similar incidents. We designate business sites where legal or regulatory violations have occurred as high-risk business sites for a three-year period as a corrective measure. Appropriate guidance provided to such sites by business units and Group companies in charge of their management serves to strengthen their compliance activities on an ongoing basis and prevent recurrences.

### Implementation Status of Internal Environmental Audits

Implementing division	Target	Frequency
Corporate division of Hitachi, Ltd. (Sustainability Promotion Division)	Business units, headquarters of Group companies, and business sites classified as Category A in our environmental management classification	
Corporate divisions of business units and Group companies (environment divisions)	Major business sites and subsidiaries of business units and Group companies*1 Sites of business units and Group companies outside Japan that are classified as Category A in our environmental management classification*2	Usually every three years
ISO 14001-certified sites (audit teams)	Divisions within business sites	

\*1 According to the Hitachi Group Global Audit Standards, which specify matters concerning internal audits conducted by business units and Group companies.

\*2 According to the Environmental Action Plan.

P.068 Number of Regulatory Violations and Complaints

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### Achieving a Decarbonized Society

#### Efforts to Achieve a Decarbonized Society

Contributing to a Decarbonized Society Through the Decarbonization Business

Contributing to a Decarbonized Society at Business Sites (Factories and Offices)

Climate-related Financial Information Disclosure (Based on TCFD Recommendations)

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## Achieving a Decarbonized Society

### Efforts to Achieve a Decarbonized Society

Approach

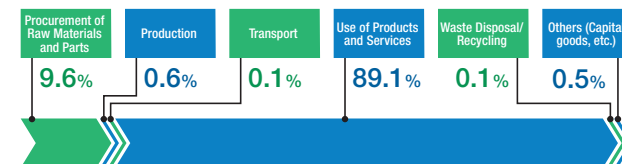
Materiality

GRI 2-13/2-24/3-3

As the response to climate change becomes more of a global trend, the roles required of governments and companies continues to change in dramatic ways. At the 27th Conference of the Parties (COP27) to the United Nations Framework Convention on Climate Change in Sharm el-Sheikh, Egypt, in November 2022, participants called for effective and equitable climate change action, along with further increases in greenhouse gas reduction targets by nation.

To help build a decarbonized society, Hitachi has set the target and strive to achieve carbon neutrality throughout the value chain by fiscal 2050 as part of the long-term environmental targets we call Hitachi Environmental Innovation 2050. Under GX for CORE, one of the two pillars of our green strategy, we accelerate measures to reduce our own CO<sub>2</sub> emissions to achieve carbon neutrality by fiscal 2030 at our business sites (factories and offices). Under GX for GROWTH, we reduce emissions related to the use of products and services sold, which account for a large portion of CO<sub>2</sub> emissions in Hitachi's value chain. Since improvement in this area is the key to reducing CO<sub>2</sub> emissions in the value chain, we contribute to customer decarbonization and that of society through products and services having with low environmental impact. Hitachi will continue to grow businesses that contribute to green policies and to the decarbonization of society as a whole through collaborative creation with stakeholders.

#### Ratio of CO<sub>2</sub> Emissions at Each Stage of Hitachi Value Chain in Fiscal 2022



\* Percentages may fluctuate due to changes in our business portfolios

Note: Hitachi normally refers to suppliers (including suppliers, vendors or providers) as *procurement partners* who build business together on an equal footing.

### Environmental Strategy for Achieving a Decarbonized Society

Targets

Activities

#### Initiatives for Achieving a Decarbonized Society

##### (1) Achieve carbon neutrality at our own business sites and production activities (by fiscal 2030)

- Introduce energy-saving and renewable energy equipment.
- Procure 100% non-fossil electricity across all business sites.

##### (2) Achieve the world's highest level of energy conservation in products

- Achieve energy conservation by developing products that take the environment into consideration from the design stage.

##### (3) Work with procurement partners toward a decarbonized society

- Distributed Sustainable Procurement Guidelines and Green Procurement Guidelines, requesting all procurement partners to set greenhouse gas reduction targets
- Based on the results of a questionnaire survey on climate change-related initiatives among environmental focus partners in FY2021, we selected 21 new environmental advanced partners with whom to hold discussions in FY2022.

##### (4) Support businesses that contribute to the carbon neutrality of society as a whole

- Power grids business to support the expansion of renewable energy.
- Provision of energy-efficient high-speed trains and storage battery hybrid trains for the spread of carbon-free mobility.
- Provide Lumada solutions that support the realization of a decarbonized society through digitalization.

##### (5) Develop technologies to realize the transition to a decarbonized society

- Development of high-efficiency products, energy management systems and hydrogen-related technologies.

#### Green Strategy

- GX for CORE: Achieve carbon neutrality at business sites (factories and offices) by FY2030. Reduce CO<sub>2</sub> emissions by 50% compared with fiscal 2010 levels by fiscal 2030 and achieve carbon neutrality across the entire value chain by fiscal 2050
- GX for GROWTH: Contribute to the decarbonization of customers and society through products and services having with low environmental impact (CO<sub>2</sub> avoided emissions: 100 million metric tons in fiscal 2024)

P.029 Green Strategy

P.036 Expanding the Decarbonization Business

P.039 CO<sub>2</sub> Emission Reduction at Business Sites (Factories and Offices) and Hitachi Carbon Neutrality 2030

P.108 Responsible Procurement

Hitachi Integrated report 2023 / Green Strategy (P.024)

<https://www.hitachi.com/IR-e/library/integrated/>

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Contributing to a Decarbonized Society at Business Sites (Factories and Offices)

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## Contributing to a Decarbonized Society Through the Decarbonization Business

Approach

GRI 305-4/305-5

### Expanding the Decarbonization Business

Approach

Activities

Hitachi provides value to customers and society, contributing to a decarbonized society through businesses that reduce CO<sub>2</sub> emissions and collaborative creation with customers. Hitachi operates under three business domains: Green Energy and Mobility, Digital Systems and Services, and Connective Industries. Among these domains, we are growing the following businesses, which contribute to decarbonization.

- Businesses that help to accelerate the energy shift aimed at realizing decarbonization, and that provide safe, comfortable, and clean mobility (Green Energy and Mobility)
- Businesses that help to reduce CO<sub>2</sub> emissions by using cutting-edge digital technologies to improve the efficiency of systems that underpin society (Digital Systems and Services)
- Businesses that help to decarbonize industries and cities by creating a resilient supply chain (Connective Industries)

### Examples of Decarbonization Business: A Hitachi Focus

<b>Green Energy &amp; Mobility</b> 	Power grid solutions	<ul style="list-style-type: none"> <li>· Contribution to the mass adoption of renewable energy through HVDC*1</li> <li>· Enhancing efficiency of transformers, high voltage products, and power transmission/distribution</li> </ul>
	Grid automation	<ul style="list-style-type: none"> <li>· Advancing smart grid control, etc.</li> </ul>
	Power generation	<ul style="list-style-type: none"> <li>· Widespread use of power generation systems that utilize non-fossil energy sources such as wind and nuclear power</li> </ul>
	Railway business	<ul style="list-style-type: none"> <li>· Enhancing energy-saving features of rolling stock</li> <li>· Developing smart operating systems</li> <li>· Enhancing maintenance service efficiency through rolling stock monitoring</li> </ul>
<b>Digital Systems &amp; Services</b> 	Finance and public oriented solutions	<ul style="list-style-type: none"> <li>· Promoting digital solutions</li> </ul>
	Data centers	<ul style="list-style-type: none"> <li>· Developing smart data centers</li> </ul>
	Servers/storage	<ul style="list-style-type: none"> <li>· Enhancing energy-saving features of servers and storage</li> </ul>
<b>Connective Industries</b> 	Smart logistics	<ul style="list-style-type: none"> <li>· Improving energy-saving features through fully IT-enhanced logistics</li> </ul>
	Factory automation	<ul style="list-style-type: none"> <li>· Enhancing energy efficiency through shorter lead times</li> </ul>
	Water business	<ul style="list-style-type: none"> <li>· Enhancing efficiency of water and sewage systems</li> </ul>
	Industrial products	<ul style="list-style-type: none"> <li>· Enhancing efficiency of industrial products</li> <li>· Electrification of fossil-fuel equipment</li> </ul>
	Smart cities	<ul style="list-style-type: none"> <li>· Reducing CO<sub>2</sub> through comprehensive urban energy management solutions</li> </ul>
	Home appliances	<ul style="list-style-type: none"> <li>· Enhancing energy efficiency of home appliances</li> <li>· Promoting connected home appliances</li> </ul>
Smart therapies	<ul style="list-style-type: none"> <li>· Enhancing energy-saving features of medical devices</li> </ul>	
Elevators	<ul style="list-style-type: none"> <li>· Enhancing energy-saving features of elevators and escalators through replacement</li> <li>· Enhancing energy efficiency through total building solutions</li> </ul>	

\*1 HVDC: High Voltage Direct Current

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## CO<sub>2</sub> Emissions Reduction as Avoided Emissions

Approach

Materiality

Hitachi calculates the contribution to decarbonization through collaborative creation with customers as CO<sub>2</sub> avoided emissions. We convert the amount of the contribution to customer decarbonization via Hitachi products and services into CO<sub>2</sub> emissions. We expect an average 126.1 million metric tons of CO<sub>2</sub> avoided emissions per year during the Mid-term Management Plan 2024, compared to our original target of approximately 100 million metric tons per year in fiscal 2024.

Hitachi calculates CO<sub>2</sub> avoided emissions based on a comparison of customer CO<sub>2</sub> emissions from the use of Hitachi products and services during the fiscal year in question with emissions from Hitachi products and services during the base year. In principle, the base year for this calculation is fiscal 2013\*<sup>1</sup>.

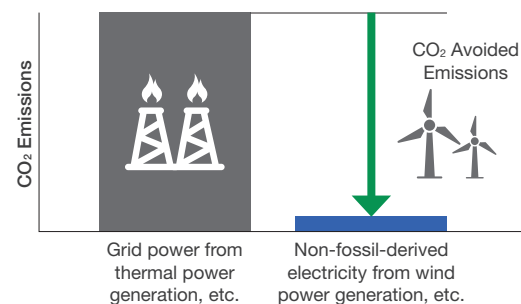
\*<sup>1</sup> In accordance with the base year of Japan's national CO<sub>2</sub> reduction target. For the consolidated energy-related company, we set fiscal 2020 as the base year based on the year the company joined the Hitachi Group.

### Calculating CO<sub>2</sub> Emissions Reduction as Avoided Emissions

#### ① Conversion to Non-Fossil Energy

- We calculate the amount of CO<sub>2</sub> emissions reduced by using non-fossil energy sources compared to electricity supplied from the grid

Examples: HVDC, wind turbines, etc.



Hitachi contributes to the reduction of customer CO<sub>2</sub> emissions mainly in the following three areas:

#### (1) Contribution via conversion to non-fossil energy

Contribution by providing key components for the introduction of non-fossil energy including renewable energy, such as HVDC

#### (2) Contribution via energy conservation

Contribution by providing energy-saving features through the optimization of highly efficient products and controls, such as high-efficiency industrial equipment

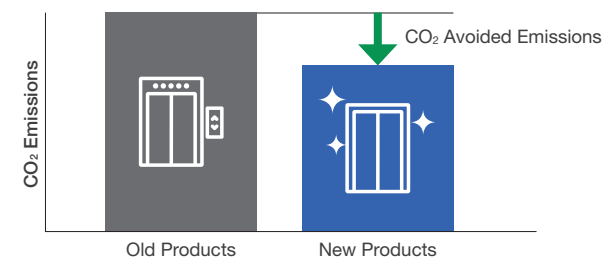
#### (3) Contribution via electrification

Contribution through the electrification of products currently using fossil energy, including the electrification of industrial equipment

#### ② Energy savings

- We calculate the amount of CO<sub>2</sub> emissions reduced by improving energy efficiency compared to products and services with equivalent functions

Examples: Compressors, elevators, etc.



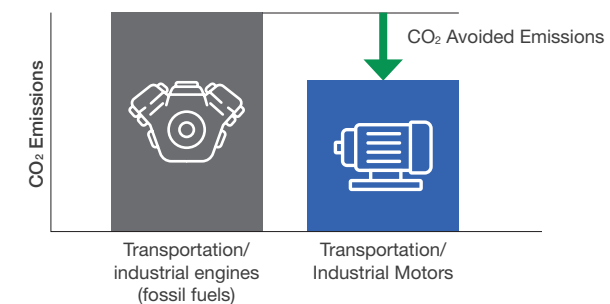
The World Business Council for Sustainable Development issued guidance in March 2023 on avoided emissions. In Japan, the GX League\*<sup>2</sup> is considering the use of avoided emissions in relation to disclosures and the assessment of climate-related opportunities. A unified guide on specific calculation methods for products and services is under discussion, and Hitachi is participating in these discussions.

\*<sup>2</sup> A place where companies aiming to achieve sustainable growth with a view to becoming carbon neutral by 2050 and coming social changes collaborate with companies engaged in similar initiatives, as well as entities from across industry, government, and academia.

#### ③ Electrification

- We calculate the amount of CO<sub>2</sub> emission reductions compared to products and services before electrification

Example: Electrification of industrial equipment



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## Improving the Environmental Performance of Products and Services Through Eco-Design

System	Activities	Materiality
--------	------------	-------------

For all products and services involving a design process, Hitachi promotes eco-designs by applying our Environmentally Conscious Design Assessments to steadily improve environmental performance throughout the Group. This assessment identifies a total of 30 environmental impact categories that affect climate change, resource depletion, and ecosystem degradation at each stage of the life cycle of products and services. In this way, we assess the reduction of environmental impact from business activities across multiple perspectives.

### Initiatives for Improving Environmental Performance of Products and Services

- Promoting environmentally conscious processes: In accordance with the IEC 62430\*1 criteria, promote environmentally conscious processes in designing and developing products and services, including by meeting environmental regulatory requirements and ascertaining the environment-related needs of our stakeholders within our existing management system.
- Implementing Life Cycle Assessments (LCAs): For our main, priority products, quantitatively evaluate their global environmental burden in such areas as the consumption of mineral resources, fossil fuels, and water resources, as well as their impact on climate change and air pollution, disclose the results to our stakeholders, and utilize them in improving the design of next-generation products.

\*1 IEC62430: The standard developed by the International Electrotechnical Commission (IEC) concerning environmentally conscious design for electrical and electronic products.

P.051 Approach to Transitioning to a Circular Economy/ Innovation in Product Design

## Reduction of Product and Service CO<sub>2</sub> Emissions During Use

Approach	Activities
----------	------------

CO<sub>2</sub> emissions related to the use of products and services account for the largest proportion of emissions in our value chain. To reduce these emissions, Hitachi sets reduction rate targets per unit based on fiscal 2010 levels for each product or service targeted. We use functional size\*1 as the denominator and CO<sub>2</sub> emissions as the numerator in our target equation.

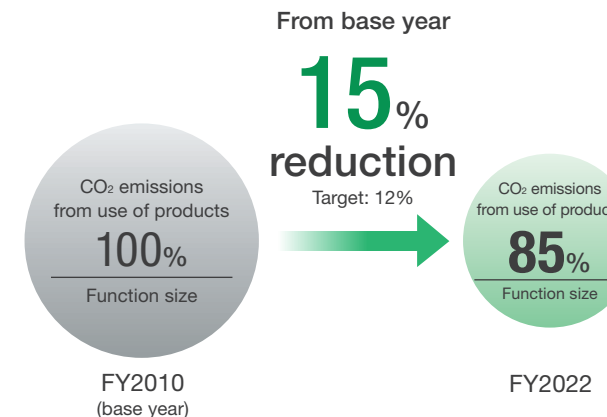
In fiscal 2022, we achieved our target with a reduction rate of 15% against a target of 12%. The achievement of this target was driven by the introduction of new models of high energy-saving equipment used in industrial equipment and social infrastructure.

We added the emissions of a consolidated energy-related company to the calculation of Hitachi Group emissions, resulting in a significant increase in emissions throughout the value chain. This increase is due to higher emissions from the use of transformers and other key products provided by the company that are used widely in the global power infrastructure. Hitachi will continue to bring energy-efficient products to the market.

\*1 Function size: Major functions of products correlated with CO<sub>2</sub> emissions, such as their output and volume

### Environmental Action Plan for 2024 Management Values

#### Reduction in CO<sub>2</sub> Emissions per Unit (Hitachi Group)



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## Contributing to a Decarbonized Society at Business Sites (Factories and Offices)

### CO<sub>2</sub> Emission Reductions at Business Sites (Factories and Offices) and Hitachi Carbon Neutrality 2030

Policy Activities **Materiality**

In working toward realizing a decarbonized society, Hitachi has set the goal of realizing carbon neutrality by fiscal 2030 at all business sites (factories and offices) as part of its long-term environmental targets called Hitachi Environmental Innovation 2050.

Our roadmap to achieving this goal sets targets of reducing CO<sub>2</sub> emissions by 50%, compared to the base year, by fiscal 2024 and 80% by fiscal 2027 toward realizing carbon neutrality by fiscal 2030.

CO<sub>2</sub> emissions reduction measures at Hitachi include installing energy-saving and renewable energy equipment, engaging in corporate PPA\*<sup>1</sup> to procure renewable energy with additionality\*<sup>2</sup>, and procuring renewable energy and renewable energy certificates\*<sup>3</sup>. Among these, installing energy-saving and renewable energy equipment is expected to incur high costs relative to the amounts of reduction. However, it will also lead to reduced risks associated with factors including anticipated sharp rises in energy pricing and increased costs from carbon taxes and the expansion of carbon tax transactions. It also aligns with our Corporate Mission—“To contribute to society through the development of superior, original technology and products”—and for this reason as well, we are placing a priority focus on this approach. Currently, we have set the target at a 33% reduction to be made by fiscal 2030, however we are working to increase that level to 50%.

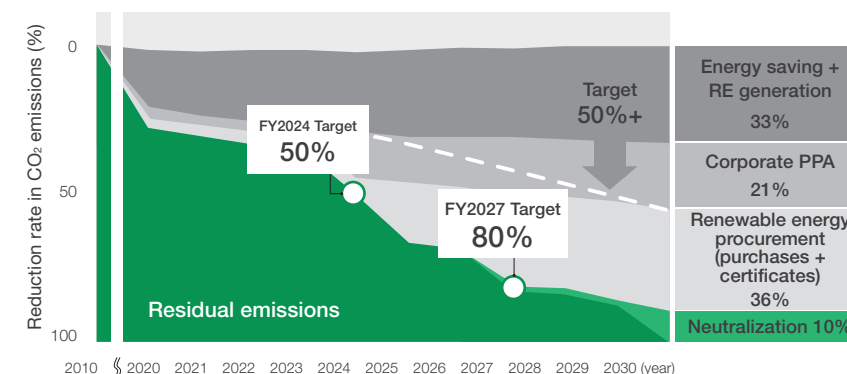
\*1 Corporate PPA: A contract whereby a corporation, municipality, or other legal entity purchases electricity generated by renewable energy from a power producer on a long-term basis (usually 10 to 25 years). PPA stands for power purchase agreement.

\*2 Additionality: An increase in effect of installing new renewable energy equipment.

\*3 Renewable energy certificate: Accredits the environmental value associated with electricity generation from renewable energy sources. Unlike the purchase of renewable electricity, acquisition of this environmental value, which is separate from the electricity itself, is regarded as equivalent to using energy sources that do not emit CO<sub>2</sub>.

GRI 302-1/305-4/305-5

#### CO<sub>2</sub> reduction roadmap (as of Mar. 2023)



Concrete efforts to achieve carbon neutrality at business sites, categorized by location type (factories, offices), can be outlined as shown below.

#### Major Initiatives for Reducing CO<sub>2</sub> Emissions at Business Sites (Factories and Offices)

Factories	<ul style="list-style-type: none"> <li>Improve equipment efficiency by introducing and upgrading to high-efficiency equipment (Determine priority measures and manage introduction and upgrade rates)</li> <li>Improve production efficiency and energy use efficiency during production through use of the Lumada platform and production technologies cultivated from our long years of experience</li> <li>Optimize equipment operations and reduce wasted energy by installing smart meters</li> <li>Review product designs and processes</li> <li>Optimize control of equipment operations in response to production conditions</li> </ul>
Offices	<ul style="list-style-type: none"> <li>Build/move to new facilities with high energy efficiency</li> <li>Combine and integrate existing facilities</li> <li>Install energy-saving equipment and optimize equipment operations in collaboration with building owners</li> </ul>
Factories and offices	<ul style="list-style-type: none"> <li>Install renewable energy systems</li> <li>Procure electricity from renewable sources</li> <li>Utilize renewable energy certificates</li> <li>Utilize renewable energy through corporate PPA</li> <li>Engage in capital investment to reduce CO<sub>2</sub> through the use of Hitachi Internal Carbon Pricing (HICP)</li> </ul>

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## The Hitachi Internal Carbon Pricing Framework

### System

To promote CO<sub>2</sub> reduction at its business sites (factories and offices), in fiscal 2019 Hitachi introduced the Hitachi Internal Carbon Pricing\*<sup>1</sup> (HICP) framework. Referencing emissions trading and carbon taxes globally, we establish internal carbon prices, convert into monetary value as the effect of CO<sub>2</sub> reductions due to investment in equipment that contributes to decarbonization. We add this price to the value of energy reduction effects, and use the result to evaluate the impact of our investment. By applying incentives like these, we aim to further expand our investment in equipment that contributes to decarbonization.

Increased burdens from carbon taxes and new emission regulations can be anticipated in the future. Taking such risk factors into account from the stage of equipment investment considerations and making investments that contribute to decarbonization a higher priority will help minimize the impacts of future climate change risks and make our company more resilient. The introduction of the HICP framework is instrumental in this process.

Initially, we set the HICP rate at 5,000 yen/t-CO<sub>2</sub> in consideration of 2025 carbon taxes and carbon trading prices (ETS\*<sup>2</sup>). Subsequently, looking ahead to 2030, we increased the rate to 14,000 yen/t-CO<sub>2</sub> in August 2021 in consideration of anticipated carbon taxes and carbon trading prices. We will leverage this framework to provide early responses to future risks such as carbon taxes as well as to actively promote the installation of energy-saving and renewable energy equipment, our highest priority initiative aimed at achieving carbon neutrality.

\*1 Internal carbon pricing: An in-house tool for assessing in monetary terms the amount of carbon generated or reduced in order to voluntarily make investment decisions and conduct risk management.

\*2 ETS: Emission Trading Scheme

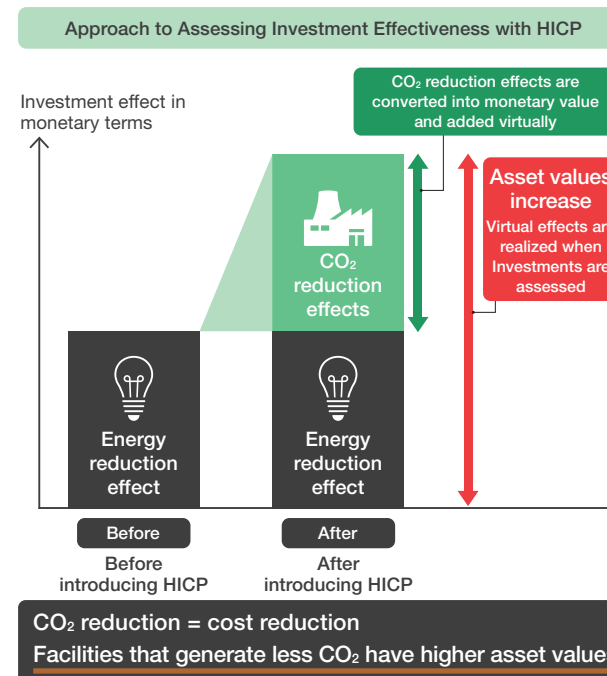
### Achievements in Fiscal 2022

Hitachi uses the HICP system to reduce CO<sub>2</sub> emissions by converting CO<sub>2</sub> reduction benefits of projects to a monetary values to encourage additional investment, where such projects may not have received investment under the previous measurement standard.

In fiscal 2022, monetary investments decreased due to the deconsolidation of materials and construction machinery companies. However, we raised the carbon price from 5,000 yen/t-CO<sub>2</sub> to 14,000 yen/t-CO<sub>2</sub>, resulting in 94 adopted projects and 2,519 t-CO<sub>2</sub> in CO<sub>2</sub> reductions, nearly twice as much as in fiscal 2021.

We will continue to use HICP, raising the carbon price as necessary to reduce CO<sub>2</sub> emissions.

### Hitachi Internal Carbon Pricing (HICP) Framework



### HICP Implementation Results

Category	FY2019	FY2020* <sup>1</sup>	FY2021* <sup>1</sup>	FY2022* <sup>1</sup>
Number of HICP Projects	35	22	59	94
Investment (Million (JPY))	260	250	1,464	1,185
CO <sub>2</sub> Emissions Reduction (t-CO <sub>2</sub> )	1,356	447	1,230	2,519

The HICP rate: ¥5,000/t-CO<sub>2</sub> | ¥14,000/t-CO<sub>2</sub>  
August 2021

\*<sup>1</sup> Excluding an energy-related company which became a consolidated subsidiary in fiscal 2020



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## Activities and Achievements

### Activities

GRI 302-1/305-4/305-5

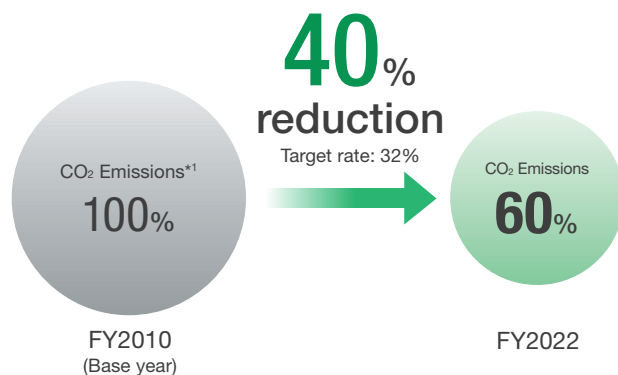
The Hitachi Environmental Action Plan for 2024 describes a target of the total CO<sub>2</sub> reduction rate at business sites (factories and offices).

In fiscal 2022, which was the first year of the Environmental Action Plan for 2024 (fiscal 2022–2024), we achieved a 40% reduction in total CO<sub>2</sub> emissions compared to a target of 32% reduction (compared to a base year of fiscal 2010). To reduce emissions, we improved facility efficiency through new and upgraded high-efficiency equipment, installed renewable energy equipment, and procured electricity from renewable sources.

### Environmental Action Plan for 2024 Management Values

### Reduction Rate of Total CO<sub>2</sub> (Hitachi Group)

Compared With Base Year



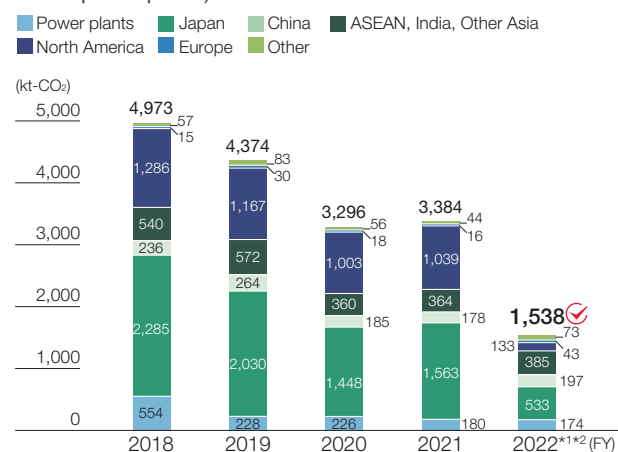
Note: Regarding CO<sub>2</sub> electrical power conversion factors: We used adjusted conversion factors for individual power businesses based on the Act on Promotion of Global Warming Countermeasures in Japan. In China, we used the average emissions factor published by the government for the national power grid. For other countries, we used the latest values for each fiscal year supplied by the International Energy Agency (IEA) for individual countries and by power supply companies.

Note: The Environmental Action Plan's management values do not include amounts for our power plants in fiscal 2010 (base year) or fiscal 2022.

Note: Only for Environmental Action Plan for 2024 management values, emissions of 11.6 kt-CO<sub>2</sub> from the cancellation of credits for neutralization were deducted from Scope 1. For the figures that underwent independent assurance, emissions from the cancellation of credits for neutralization were not deducted.

\*1 CO<sub>2</sub> emitted from the organization (Scope 1 and 2).

### CO<sub>2</sub> Emissions (Hitachi Group's factories, offices, and power plants)



\*1 Energy-derived CO<sub>2</sub> emissions in fiscal 2022 amounted 459 kt-CO<sub>2</sub> (Scope 1) and 1,079 kt-CO<sub>2</sub> (Scope 2, market basis)

\*2 Fiscal 2022 CO<sub>2</sub> emissions of an energy-related company and auto parts-related companies, which became consolidated subsidiaries in fiscal 2020, are included in the figures above. The materials and construction machinery companies were deconsolidated, and the amount of CO<sub>2</sub> emitted by those companies in fiscal 2022 was not included. This resulted in a significant decrease in the total CO<sub>2</sub> emissions.

■ P.061 GHG Emissions Throughout the Value Chain  
■ P.063 Environmental Load from Operations

## Introduce Renewable Energy

### Activities

To reduce CO<sub>2</sub> emissions, Hitachi installs renewable energy power generation equipment on our property. We also procure electricity produced through new renewable energy equipment located off-premises. We are expanding the use of corporate PPA to accelerate the replacement of fossil fuel-derived electricity with electricity derived from renewable energy sources.

Renewable electricity used will be based on the standards set by the GHG Protocol.

### Achievements in Fiscal 2022

Renewable electricity generation across the Hitachi Group in fiscal 2022 amounted to 706 GWh, an increase of 3.7 times compared to fiscal 2021. The amount of renewable electricity used by the Hitachi Group in fiscal 2022 increased significantly from 4% in the previous fiscal year to 24%.

At 57 sites the United States, Europe, China, Japan and some other countries in Asia, all electricity used came from renewable sources. Eleven of these sites achieved carbon neutrality through enhanced energy-savings and purchases of credits for neutralization.

In addition, Hitachi Energy is working actively to decarbonize operations through the use of non-fossil fuel electricity for all of its in-house electricity usage.

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### Locations operating on non-fossil energy

Country/Region	Sites Using 100% Renewable-Derived Electricity	Carbon Neutrality
Europe	24 sites	3 sites (Hitachi Energy Group) 1 site (Hitachi Astemo Group)
North America	9 sites	1 site (Hitachi Industrial Equipment Systems Group)
China	6 sites	1 site (Hitachi Industrial Equipment Systems Group)
Japan	3 sites	3 sites (Hitachi High-Tech Group)
Asia (Excluding China and Japan)	7 sites	2 sites (Hitachi Energy Group)
Other	8 sites	—

Case studies of Energy Savings in Eco-Factories & Offices  
<https://www.hitachi.com/environment/casestudy/index.html#case02>

### Reducing Transportation Energy Consumption

#### Activities

In addition to reducing energy used at our business sites (factories and offices), Hitachi strives to reduce energy usage during transportation. Each business unit (BU) and Group company incorporates the rate of reduction in transportation energy use per unit in Japan, with voluntary targets established in other countries.

Our business sites pursue modal shifts to highly efficient transportation methods by improving truck loading ratios, taking other measures to reduce transportation energy consumption and switching to the use of eco-cars for in-house operations.

### Achievements in Fiscal 2022

Fiscal 2022 reduction measures focused on improving loading efficiency for product transportation, utilizing joint transportation, and optimizing transportation vehicles. With the deconsolidation of the materials and construction machinery divisions, CO<sub>2</sub> emissions from transportation in Japan totaled 26.9 kt-CO<sub>2</sub> , a decrease of 47.4 kt-CO<sub>2</sub>, or 64%, compared with fiscal 2021.

### Hitachi Fleet Management Reduces CO<sub>2</sub> Emissions From Business Vehicles

#### Approach

Hitachi is preparing to electrify our fleet of commercial vehicles as part of efforts to achieve carbon neutrality by fiscal 2050. However, we must address a variety of issues that companies face when introducing electric vehicles, including the limited choice of electric vehicles and the lack of charging infrastructure.

To this end, we created our own fleet management plan to prepare for fleet electrification at each BU and Group company. Specifically, we intend to use BPO\*<sup>1</sup> and AI drive recorders\*<sup>2</sup> to visualize vehicle operating conditions, followed by an analysis of collected driving data and CO<sub>2</sub> emissions monitoring. We will use the results of this analysis and monitoring to act to reduce CO<sub>2</sub> emissions from existing vehicles and advance the gradual replacement of existing vehicles with electric vehicles to reduce CO<sub>2</sub> emissions from business-use vehicles.

\*1 BPO: Abbreviation of business process outsourcing. BPO outsources the entirety of a business process to a contractor specializing in said activity.

\*2 AI drive recorder: A service that uses AI to analyze recorded driving video and visualize signs of dangerous driving and driver tendencies.

### Hitachi Fleet Management

Vehicle Visualization	Centralized fleet management via BPO
	AI drive recorders to monitor vehicle operation status
Vehicle Data Analysis	Analysis of vehicle operation status and travel routes
	Analysis of driver tendencies
	Continuous monitoring of electrification rates and CO <sub>2</sub> emissions
Actions to Reduce CO <sub>2</sub> Emissions	Optimize the number of vehicles in the fleet based on vehicle utilization status
	Encourage eco-driving by controlling sudden acceleration and braking
	Fostering awareness of CO <sub>2</sub> reductions via visualizations of emissions
	Phased-in vehicle electrification in consideration of impact on operations

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## Climate-related Financial Information Disclosure (Based on TCFD Recommendations) GRI 3-3

In June 2018, Hitachi announced its endorsement of the recommendations by the Financial Stability Board's (FSB) Task Force on Climate-related Financial Disclosures (TCFD). The following contains key climate-related financial information in line with the TCFD's recommendations.

Seven institutions rated the Hitachi TCFD disclosures highly in the Excellent TCFD Disclosure, announced in March 2023, as selected by the Government Pension Investment Fund of Japan (GPIF) domestic equity investment management institutions.

### Governance

#### Structure

Hitachi sees climate change and other environmental issues as important management issues.

Important matters concerning the Group's sustainability strategy, including climate change measures, are discussed, and decided on by the Senior Executive Committee and are presented to the Board of Directors according to necessity. Hitachi reviewed long-term environmental targets, termed Hitachi Environmental Innovation 2050, which include reducing CO<sub>2</sub> emissions. Our Board of Directors receives a report regarding these targets when formulated or revised. In addition, the Audit Committee of independent directors conducts an audit of sustainability-related operations once a year, and Hitachi executive officers report on climate-related issues to the committee during the audit.

As for TCFD initiatives we conduct outside the company, Hitachi has participated in the TCFD Study Group on Green Finance and Corporate Disclosures arranged by Japan's Ministry of Economy, Trade and Industry (METI) since 2019. In addition, we have participated in the TCFD Consortium, which holds discussions on efforts to link effective corporate

information disclosure and disclosed information with appropriate investment decisions by financial institutions and others. We participated in the consortium as a Steering Committee member and contributed to the formulation of TCFD Guidance 3.0, published in October 2022.

P.015 Framework for Promoting Sustainability Strategy

P.031 Framework for Promoting Environmental Governance

### Strategy

#### Approach

GRI 201-2

In fiscal 2016, under our Environmental Vision and considering the Paris Agreement, the RCP2.6 Scenario\*<sup>1</sup>, and RCP8.5 Scenario\*<sup>2</sup> of the Fifth Assessment Report of the IPCC, Hitachi created Hitachi Environmental Innovation 2050, long-term environmental targets and a transition plan toward a decarbonized society. In this way, we intend to meet the contributions required of a global company toward the creation of a decarbonized society. Moreover, to help limit the global temperature rise to 1.5°C as recommended in the IPCC 1.5°C special report, in fiscal 2020, we revised our target to achieve carbon neutrality at Hitachi factories and offices by fiscal 2030. In fiscal 2021, we revised our target once more to achieve carbon neutrality in our value chain by fiscal 2050. This goal is in line with the SSP1-1.9 scenario\*<sup>3</sup> of the Sixth Assessment Report of the IPCC. Hitachi is committed to contributing to the creation of a decarbonized society on a global scale by declaring and pursuing higher goals.

\*1 A Representative Concentration Pathway (RCP) scenario under which, at the end of the 21st century, the increase in global temperatures from preindustrial levels is kept below 2°C.

\*2 An RCP scenario that assumes that emissions will continue to rise resulting in an approximately 4°C rise in global temperatures compared to preindustrial levels.

\*3 SSP1-1.9 scenario: Presented in the Sixth Assessment Report of the IPCC. A scenario that limits temperature increase to less than 1.5°C under sustainable development.

P.027 "Environmental Vision" and "Hitachi Environmental Innovation 2050"

P.035 Environmental Strategy for Achieving a Decarbonized Society

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### Identification and Assessment of Climate-related Risks and Opportunities

The Hitachi Group operates a broad array of businesses around the world with each business having its own set of risks and opportunities. We are responding to the impact of climate change by assessing climate-related risks and opportunities in accordance with TCFD classifications. We make sector-specific assessments of risks and opportunities for important business sectors that have a relatively high likelihood of being affected by climate change. Our assessments are also categorized according to time span, namely short term, medium term, and long-term as defined below.

#### Time Spans for Assessing Climate-related Risks and Opportunities

	Time span	Reason for adoption
Short term	Over the next three years, from fiscal 2022 to 2024	Corresponds to the three-year management period covered by the Environmental Action Plan for 2024 established in line with the 2024 Mid-term Management Plan
Medium term	Through fiscal 2030	Time span of our fiscal 2030 long-term environmental targets
Long term	Up to fiscal 2050	Time span of our fiscal 2050 long-term environmental targets

#### Degrees of Impact

Impact	Definition
Major	Has an impact sufficient to disrupt business or cause it to substantially decrease or increase
Medium	Part of the business is impacted
Minor	There is little impact

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## Responding to Climate Scenario Risks and Opportunities for Each Business

Hitachi operates a broad array of businesses with each business having its own set of risks and opportunities. We therefore selected businesses that have a relatively high likelihood of being affected by climate change and conducted scenario analyses. In selecting businesses, we considered the factors of, high sales volume within the Group, and relatively high need for fossil fuels when products and services are used, as well as high CO<sub>2</sub> emissions.

The businesses we selected using these criteria were railway systems, power generation and power grids, IT systems, and industrial equipment. For each of these businesses, we considered the business environment under the 1.5°C and 4°C scenarios and how we would respond.

- 1.5°C scenario As projected by the IPCC's RCP 2.6 climate model, the IEA 450 Scenario, and other scenarios, we are anticipating a world where stringent measures and regulations will be implemented to help realize a decarbonized society. Therefore, we investigated risks and opportunities on the premise of carbon neutrality by fiscal 2050.
- 4°C scenario We focused on there being increased climate-induced natural disasters as a result of lax regulations as projected by the IPCC's RCP8.5 scenario and other scenarios. Our assessment of the major risks and opportunities for the selected businesses are outlined in the following table.

### The Business Environment, Major Risks and Opportunities, and Strategies under the 1.5°C and 4°C Scenarios

Target businesses	Railway systems	Power generation and power grids	IT systems	Industrial equipment
The business environment and major risks and opportunities under the 1.5°C scenario	<b>Business environment</b> Global demand will continue to grow for railway transport systems that emit relatively less CO <sub>2</sub> per distance covered will grow with tighter CO <sub>2</sub> emission regulations in each country and region.	<b>Business environment</b> Global demand will continue to grow for electricity from non-fossil sources, such as renewable energy and nuclear power, with tighter CO <sub>2</sub> emission regulations in each country and region. Power networks will increasingly accommodate renewable energy produced through distributed power generation.	<b>Business environment</b> Demand for energy-saving, high-efficiency IT solutions will grow with tighter CO <sub>2</sub> emission regulations in each country and region. There will also be increased demand for data centers and data analysis systems to accommodate the expansion of financial services such as investments and loans for decarbonization businesses, green bond issues, and data utilization businesses.	<b>Business environment</b> Global demand for energy-saving industrial equipment will grow with tighter CO <sub>2</sub> emission regulations in each country and region.
	<b>Risks</b> A decline in competitiveness in the railroad sector if there are delays in the development of innovative technologies of the type expected to contribute to the reduction of CO <sub>2</sub> emissions. Specifically, delays in the development of new technologies such as dynamic headways (flexible operations based on passenger demand) and support for new mobility services (e.g., MaaS). Also, a decline in competitiveness due to delays in the timely marketing of effective and sustainable products that comply with increasingly stringent laws and regulations for decarbonization.	<b>Risks</b> A decline in competitiveness due to delays in the development of technologies for the transmission of more renewable energy without compromising the stability of the transmission grid or the quality of electricity. A lack of international and regional cooperation to maintain a balance between supply and demand in the power grid for renewable energy generation having large output fluctuations, resulting in delays in renewable energy utilization.	<b>Risks</b> Competitiveness will decline if there is a lack of technological and human resource development to provide energy-saving and highly efficient IT solutions and if decarbonized measures for energy-intensive data centers are delayed.	<b>Risks</b> Competitiveness will decline if there are delays in the development of high-efficiency, low-loss products.
	<b>Opportunities</b> A transition of most long-distance public transportation to the railway sector under the 1.5°C scenario, since rail is a mode of transportation that contributes to decarbonization with low CO <sub>2</sub> emissions per unit of transportation. Expanded business opportunities by developing and delivering railroad cars that are more energy efficient than existing models, by converting to bi-mode railroad cars, and by increasing the efficiency of rail services with digital technology.	<b>Opportunities</b> Expanded business opportunities in conjunction with rising demand for renewable energy—the key to a decarbonized future—and with the development of grid solutions, digital service solutions, and energy platforms that can accommodate the diversification of energy suppliers.	<b>Opportunities</b> Demand will grow for energy saving and high-efficiency information systems that contribute to zero-emissions. There will also be increased demand for environment-related financial services as investments and loans for decarbonization businesses and green bond issues.	<b>Opportunities</b> Utilization of IoT, digitalization, and connected systems to develop innovative products and solutions that contribute to CO <sub>2</sub> emission reductions without relying on the energy-saving features of individual products.

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Target businesses	Railway systems	Power generation and power grids	IT systems	Industrial equipment
The business environment and major risks and Opportunities under the 4°C scenario	<p><b>Business environment</b></p> <p>Demand for electric-powered transport will gradually increase even without tighter energy regulations. Damage from typhoons, floods, and other natural disasters caused by climate change will rise sharply.</p>	<p><b>Business environment</b></p> <p>The cost competitiveness of non-fossil energy will increase as fuel prices gradually increase due to increased fossil energy consumption, and demand for renewable energy and nuclear power will increase moderately. Natural disasters caused by climate change will rise sharply. Needs will increase for climate adaptation to protect electric energy systems from extreme weather events.</p>	<p><b>Business environment</b></p> <p>Demand for new, high-efficiency technology will expand as multiplex IT systems in response to natural disaster BCPs will result in increased energy consumption. Demand will also grow for social and public systems to reduce damage from natural disasters.</p>	<p><b>Business environment</b></p> <p>Typhoons, floods, and other natural disasters caused by climate change will rise sharply.</p>
	<p><b>Risks</b></p> <p>The high frequency of natural disasters will exacerbate damage to production facilities, worsen working environments, and disrupt supply chains leading to delays in deliveries and the procurement of parts.</p>	<p><b>Risks</b></p> <p>The high frequency of natural disasters will increase damage to power generation and transmission/distribution facilities, hamper efforts to restore power transmission/distribution, and disrupt supply chains leading to delays in deliveries and the procurement of parts. Increased delays in the development and provision of power generation, transmission, and distribution equipment, facilities, and services capable of withstanding frequent natural disasters.</p>	<p><b>Risks</b></p> <p>Natural disasters will exacerbate damage to production facilities, worsen working environments, and disrupt supply chains leading to delays in deliveries and the procurement of parts.</p>	<p><b>Risks</b></p> <p>Natural disasters will exacerbate damage to production facilities, worsen working environments, and disrupt supply chains leading to delays in deliveries and the procurement of parts.</p>
	<p><b>Opportunities</b></p> <p>Transport systems more resilient to natural disasters can be developed. Competitiveness can be enhanced by providing added value in such forms as energy-saving railcars and adaptability to new technologies.</p>	<p><b>Opportunities</b></p> <p>Energy demand will grow as warmer weather leads to increased use of air conditioning. Demand will increase for disaster-resilient power generation and transmission/distribution technologies. Increase the competitiveness of existing power transmission and distribution systems by making these systems more resilient to extreme weather conditions.</p>	<p><b>Opportunities</b></p> <p>Demand will increase for social and public systems that help reduce damage from natural disasters and for IT systems required as part of BCP.</p>	<p><b>Opportunities</b></p> <p>Efforts to accommodate IoT products will lead to higher demand for remote control and remote maintenance during natural disasters.</p>
Non-environmental market factors (neither the 1.5°C nor 4°C scenario)	<ul style="list-style-type: none"> <li>Economic growth will lead to urbanization and population growth around the world which will drive the railway business globally as an efficient form of public transport for large numbers of passengers regardless of climate conditions. Market size in Japan and Europe will remain flat, but the Asian market overall will see substantial growth.</li> <li>Long-distance transport will decline going forward as the global pandemic restricts travel and encourages remote work. Although the decline in demand will not be as severe as that for air transport.</li> <li>Competition will grow as major railway manufacturers in various countries will expand their businesses to meet global demand.</li> </ul>	<ul style="list-style-type: none"> <li>Economic growth, urbanization, and population growth will push up demand for energy, especially electricity, mainly in developing countries.</li> <li>Political trends in each country and region related to climate change and energy issues, and changes in public awareness.</li> <li>Energy supply and demand will diversify due to various factors, such as CO<sub>2</sub> emissions, the environmental burden, economic performance, safety, and supply stability.</li> <li>Digital technology will develop further to enhance the stability and efficiency of the power supply.</li> </ul>	<ul style="list-style-type: none"> <li>Further digitization globally will exponentially increase the volume of data circulated, accumulated, and analyzed. Experience with the global pandemic will prompt a shift to remote, noncontact, and online formats, both in our life and work and will boost demand for digital solutions that facilitate such a shift.</li> <li>New services and businesses utilizing big data, IoT, AI, and other digital technology will expand.</li> </ul>	<ul style="list-style-type: none"> <li>Digitalization, infrastructure renewal, population decline, and worker shortages will expand the automation market in industrial countries.</li> <li>As the global pandemic forces people to stay at or work from home, demand will grow for factory automation enabling a handful of workers to operate a factory.</li> <li>The industrial market in emerging economies will grow due to a rise in production plants.</li> </ul>

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Target businesses	Railway systems	Power generation and power grids	IT systems	Industrial equipment
Response to future business risks (business opportunities)	<p><b>Response to business risks under 1.5°C or 4°C scenarios</b></p> <ul style="list-style-type: none"> <li>Continue to strengthen the railway business as global demand for railways will increase under either scenario.</li> <li>Specifically, develop and market more energy-saving railcars and battery powered railcars for non-electrified sections. Strengthen railway services through digital utilization such as dynamic headway (flexible operations in response to passenger demand) and new mobility services like MaaS.</li> <li>Increase competitiveness by strengthening sustainable activities while adhering to international standards, etc.</li> <li>Given the increasing frequency of natural disasters, take risk aversion into account when deciding the location and equipment layout of a new plant. Keep an eye on the supply chain in strengthening our ability to respond to business disruption risks in accordance with our BCPs. Evaluate and analyze organizational structures and physical locations and reflect the results of this work in response measures.</li> </ul>	<p><b>Response to business risks under 1.5°C or 4°C scenarios</b></p> <ul style="list-style-type: none"> <li>Continue to enhance the response to relevant markets in view of expected higher demand for non-fossil energy under either scenario.</li> <li>Strengthen the provision of grid solutions, digital service solutions, and energy platforms that can accommodate the increased use of renewable energy and diversification of energy supply and demand management.</li> <li>Given the increasing frequency of natural disasters, develop technologies for disaster-resilient renewable energy systems and disruption-resistant power transmission/distribution systems. Take risk aversion into account when deciding the location and equipment layout of a new production plant. Keep an eye on the supply chain in strengthening our ability to respond to business disruption risks in accordance with our BCPs.</li> </ul>	<p><b>Response to business risks under 1.5°C or 4°C scenarios</b></p> <ul style="list-style-type: none"> <li>Continue to develop innovative digital technologies, nurture necessary human capital, and enhance digital service solutions that generate new value in view of the expected growth in demand for digital services and the subsequent market expansion under either scenario.</li> <li>Specifically, enhance competitiveness by providing energy-saving and high efficiency IT solutions that contribute to the following: zero-emissions; environment-related financial services for decarbonization businesses; social and public systems to prevent natural disasters, reduce damage, and enhance resilience; and IT systems for BCPs.</li> <li>Given the increasing frequency of natural disasters, strengthen our ability to respond to business disruption risks in accordance with our BCPs.</li> <li>Ensure competitiveness by decarbonizing data centers actively.</li> </ul>	<p><b>Response to business risks under 1.5°C or 4°C scenarios</b></p> <ul style="list-style-type: none"> <li>Under either scenario, continue developing energy-saving, high efficiency products that use IoT technology. Focus particularly on connected products with communication features. Miniaturized, high-efficiency, low-loss products can also help reduce CO<sub>2</sub> emissions.</li> <li>Given the increasing frequency of natural disasters, take risk aversion into account when deciding the location and equipment layout of a new plant. Keep an eye on the supply chain in strengthening our ability to respond to business disruption risks in accordance with our BCPs.</li> </ul>
Financial information (sales volume of each target sector)	Partial impact on the revenue of the Railway Systems Business, which accounted for approximately 6.8% of Hitachi's revenue at 736.0 billion yen in fiscal 2022	Partial impact on the revenue of the Energy Sector, which accounted for approximately 16.4% of Hitachi's revenue at 1,787.6 billion yen in fiscal 2022	Partial impact on the revenue of the Digital Systems & Services Segment, which accounted for approximately 22.0% of Hitachi's revenue at 2,389.0 billion yen in fiscal 2022	Partial impact on the revenue of the Industrial Products Business, which accounted for approximately 4.1% of Hitachi's revenue at 451.1 billion yen in fiscal 2022

Note: The above scenario analyses are not future projections but attempts to examine our resilience to climate change. How the future unfolds may be quite different from any of these scenarios.

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### Climate-related Risks (Hitachi Group)

Based on a business-by-business review, Hitachi did not find any significant climate change-related risks that were difficult to respond to risks that present difficulties in response.

When considering whether existing businesses will be viable when a decarbonized society is realized, many businesses that use electricity as their energy must be able to adapt to a decarbonized society by replacing the electricity they use with electricity derived from non-fossil energy sources. On the other hand, businesses that currently use fossil fuels will need to adapt to a decarbonized society by adopting new technologies such as hydrogen and biomass, as well as various measures to offset CO<sub>2</sub> emissions. Since many of Hitachi's businesses use electricity, it is clear that there is little significant risk arising from the unavailability of fossil fuels.

The following is a summary of Hitachi's overall risks under the 1.5°C scenario and the 4°C scenario. Given Hitachi's business format, we have determined that these risks related to climate change can be addressed.

#### ① Risks related to the transition to a decarbonized economy (applying mostly to the 1.5°C scenario)

Category	Major risks	Time span	Impact	Main initiatives
Policy and legal	Increased business costs from the introduction of carbon taxes, fuel/energy consumption taxes, emissions trading systems, and other measures	Short to long term	Medium	<ul style="list-style-type: none"> <li>Shift from fossil fuel-using to non-fossil fuel-using businesses. Promote activities aimed at achieving carbon neutrality.</li> <li>Avoid increases in business costs by further enhancing production and transport efficiency and promoting the use of non-fossil fuel-based energy. Promote energy-saving equipment by introducing Hitachi Internal Carbon Pricing (HICP)</li> </ul>
Technology	Loss of sales opportunities due to delays in technology development for products and services for a decarbonized society	Short to long term	Medium	<ul style="list-style-type: none"> <li>Contribute to reducing CO<sub>2</sub> emissions by developing and marketing innovative products and services that lead to the achievement of long-term environmental targets and expanding the decarbonization business</li> <li>Promote the development of energy-saving and low-carbon products by implementing Environmentally Conscious Design Assessments when designing products and services</li> </ul>
Market and reputation	Impact on sales due to changes in market values or assessment of our approach to climate issues	Medium to long term	Minor	<ul style="list-style-type: none"> <li>Established goals of carbon neutrality in the Hitachi Environmental Innovation 2050 long-term environmental targets; participated in COP26 and communicated to the world advanced technologies and initiatives that support the realization of a decarbonized society</li> </ul>

#### ② Risks related to the physical impacts of climate change (4°C scenario)

Category	Major risks	Time span	Impact	Main initiatives
Acute and chronic physical risks	Climate-related risks to business continuity including increased severity of typhoons, floods, and droughts (acute risks), as well as rising sea levels and chronic heat waves (chronic risks)	Short to long term	Medium	<ul style="list-style-type: none"> <li>Considering the possibility of flood damage when deciding on the location or equipment layout of a new plant; measures tailored to the water risks of each manufacturing site will be strengthened in the future based on the results of a water risk assessment now being conducted</li> </ul>

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### Climate-related Opportunities (Hitachi Group)

To achieve the CO<sub>2</sub> reduction targets set forth in our long-term environmental targets and 2024 Mid-term Management Plan, it is important not only to decarbonize our business sites (factories and offices), but also to reduce CO<sub>2</sub> emissions from the use of products and services sold, which account for a large portion of emissions in our value chain. Developing and providing products and services that emit zero or very little CO<sub>2</sub> during their use will not only satisfy customer needs, but also help meet society's demands for reduced emissions. This represents a business opportunity for us in the short, medium, and long terms, and constitutes a major pillar of the Social Innovation Business that we are promoting as a management strategy.

Category	Major Opportunities	Impact	Main initiatives
Services and Markets for Products	Increased corporate value and revenue from expanded sales of products and services with innovative technology that can contribute to the mitigation and adaptation of climate change	Major	<ul style="list-style-type: none"> <li>Expand business areas that contribute to decarbonization.</li> <li>Promote decarbonized solutions and services through collaborative initiatives with customers.</li> <li>Focusing on the fields of energy, mobility, and connective industries we pursue the greater utilization of digital technology (Green by Digital) and develop products that offer world-class efficiency.</li> </ul>
Resilience	Provision of solutions to address climate-related natural disasters	Medium	<ul style="list-style-type: none"> <li>Providing flood simulators and evacuation/emergency operation support systems</li> <li>Providing disaster prevention solutions such as high-performance firefighting command systems</li> </ul>

P.036 Expanding the Decarbonization Business
 P.054 Products and Services that Contribute to Resolving Water Issues
 P.056 Addressing Risks Related to Water and Biodiversity



The results of these studies indicate that Hitachi has not uncovered any significant or difficult-to-address climate change-related risks at this stage. We believe we can view our contributions to climate change action as opportunities. Hitachi believes that we have high resilience in the transition to a decarbonized society in the medium to long term, as we closely monitor market trends and develop business flexibly and strategically under both the 1.5°C and 4°C scenarios.



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## Risk Management

### Structure

Hitachi identifies, evaluates, and manages climate change-related risks by business unit and Group company to determine environmental impacts and other factors. The results are tabulated by the Sustainability Promotion Division of Hitachi, Ltd., and those risks and opportunities perceived as being particularly important for the Group as a whole are deliberated and decided by the Senior Executive Committee and, if necessary, by the Board of Directors as well.

## Metrics and Target

### Targets

Hitachi defines medium- to long-term metrics and targets in the Hitachi Environmental Innovation 2050 long-term environmental targets. We also establish and manage short-term metrics and targets in detail every three years through the Environmental Action Plan.

Metrics for climate change mitigation and adaptation use total CO<sub>2</sub> emissions and the reduction rate in CO<sub>2</sub> emissions per unit. Total CO<sub>2</sub> emissions from the use of sold products in Scope 3, which account for most of our emissions given the nature of Hitachi's business, fluctuate greatly due to changes in sales volumes and our business portfolio. This has the disadvantage of making it difficult to see the results of energy saving and efficiency improvements. Therefore, we have established CO<sub>2</sub> emissions per unit as a metric for providing customers and society with products and services that offer equivalent value while emitting less CO<sub>2</sub>. We also set and manage a metric for avoided emissions that contribute to the realization of a decarbonized society as a whole.

We continue to reduce CO<sub>2</sub> emissions generated at our own business sites (factories and offices) by utilizing the Hitachi Internal Carbon Pricing (HICP) system, which provides incentives for capital investments that contribute to CO<sub>2</sub> reductions. The carbon price for HICP is set at 14,000 yen per ton-CO<sub>2</sub>.

In addition, in April 2021, Hitachi, Ltd. introduced evaluations that take environmental value into account in the executive compensation system with a view to accelerating the creation of environmental value toward achievement of long-term environmental targets.

- P.013 Reflecting Sustainability Targets in Executive Compensation Evaluation
- P.027 "Environmental Vision" and "Hitachi Environmental Innovation 2050"
- P.030 Environmental Action Plan
- P.035 Achieving a Decarbonized Society
- P.036 Expanding the Decarbonization Business
- P.039 Contributing to a Decarbonized Society at Business Sites (Factories and Offices)
- P.061 Calculating GHG Emissions Throughout the Value Chain (Fiscal 2022)

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**▶ Efforts to Achieve a Resource-Efficient Society**

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Building a Water-Efficient Society

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## Achieving a Resource-Efficient Society

### Efforts to Achieve a Resource-Efficient Society Approach GRI 2-13/2-24/3-3

Environmental issues continue to intensify associated with increased economic and social activities within the conventional linear economy of mass production, mass consumption, and mass disposal. These problems involve resource shortages, water scarcity, tight supply and demand for energy, environmental pollution caused by increasing waste, global warming, and the loss of biodiversity. To solve these problems and create sustainable societies, we must shift away from linear economies to circular economies. Hitachi works together with customers and society to help build a society that uses water and other resources efficiently.

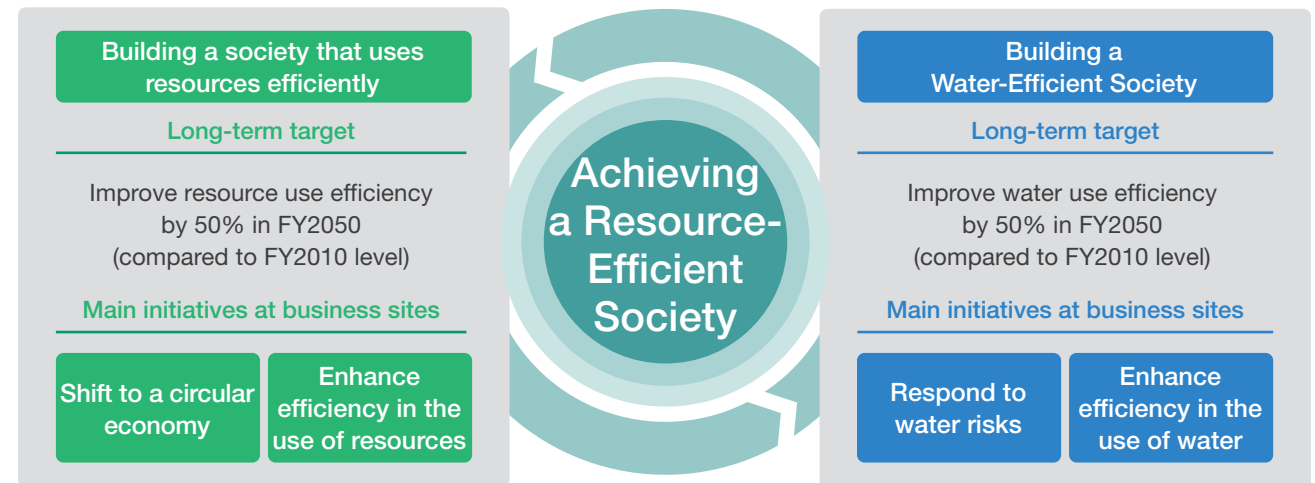
#### Initiatives in the Value Chain

Hitachi considers the circularity of resources across the value chain to be of key importance. We also believe in the importance of water usage reduction that takes into consideration water risks on a region-by-region basis at each stage of the supply chain. Accordingly, we drive circular-design initiatives and development tools, applications, and services that help facilitate circular economies, and optimize water usage and wastewater treatment in the supply chain, provide water-efficient products and services.

#### Initiatives at Business Sites

We established a long-term environmental target to improve the efficiency with which water and other resources are used by fiscal 2050. The actual goal is to improve efficiency by 50% compared to fiscal 2010. In addition, we will create higher economic value using fewer resources while pursuing production activities with a lower environmental burden.

#### ▶ Initiatives to Achieve a Resource-Efficient Society



Note: Our response to water risks that take biodiversity into consideration are detailed in *Efforts to Achieve a Society Harmonized With Nature* (P.055).

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## Building a Society That Uses Resources Efficiently

GRI 301-1/301-2/301-3

### Approach to Transitioning to a Circular Economy

#### Approach

To help build a society that uses resources efficiently, Hitachi will advance a shift from the conventional linear economy to a circular economy. Therefore, we will focus on how we can continue to use resources and assets in our business activities and reduce waste, or even eliminate waste altogether, using three approaches: innovation in upstream product design, innovation in the product manufacturing process, and innovation of our business model.

#### ① Innovation in Product Design

Through Environmentally Conscious Design Assessments and Life Cycle Assessments for new products that involve design activities, we will reduce waste by standardizing parts, extending service life, utilizing recycled materials, and designing for easy recyclability. To this end, we revised the Hitachi Eco Design Management Guidelines and Hitachi Eco Design Activity Guidelines to reflect the latest international trends. At the same time, we set a clear goal to apply the relevant assessments to all new products involving design activities and to achieve this goal by fiscal 2024.

#### ② Innovation in the Manufacturing Process

We share case studies among divisions to highlight initiatives in this area. Case studies include product and parts manufacturing volume optimization based on an understanding of supply and demand, digitization of design processes for paperless work, the reduction of packaging material usage, the reduction of defective products through quality improvement, and the reduction of chemical substances. Further, we established specific targets for the number of sites achieving the goal of the Zero Waste to Landfill initiative, as well as for

effective utilization rates related to plastic waste. In particular, we initiated activities targeting all manufacturing sites this fiscal year with the aim of achieving Zero Waste to Landfill\*1.

\*1 Pursued in careful compliance with regulations, conditions, etc., in each country or region

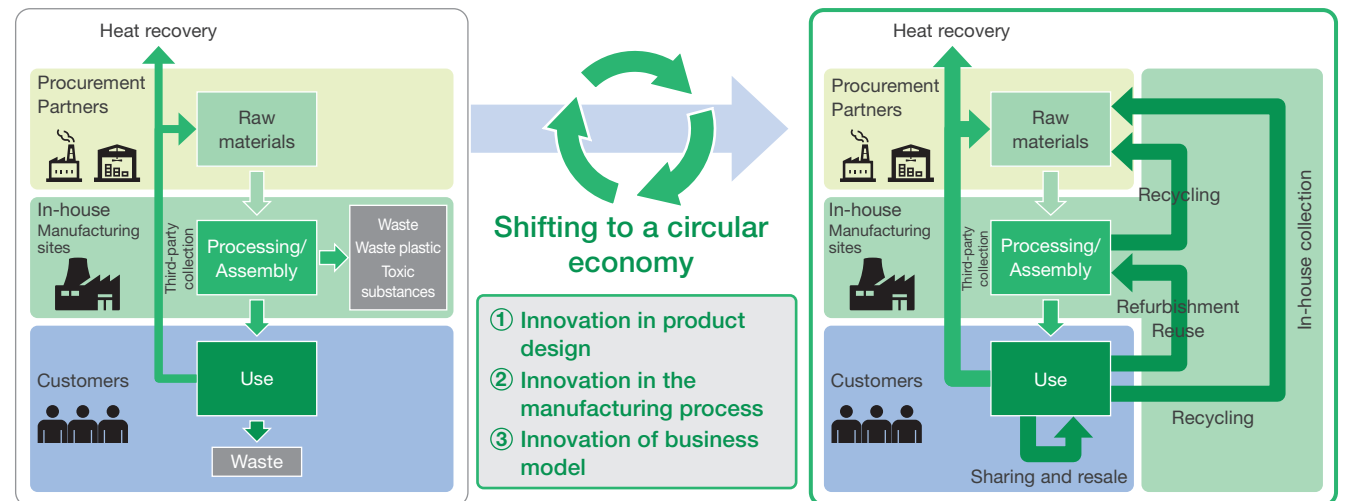
#### ③ Innovation of Business Model

To adapt to a society that is transitioning from goods to experiences, or in other words, from ownership to leasing, we pursue the effective use of resources and assets through leasing, pay-per-use systems, subscriptions, products as a service, reuse, and sharing-based models. At the same time, we collect used products and consider their sale, repair, or

recycling, making continuous efforts to devise strategies for the most efficient utilization of resources and assets. To this end, we share our goals with various stakeholders in the value chain and pursue collaborative creation. Additionally, we pursue research and development involving raw materials, products, tools, applications, and services necessary for our goals, leveraging the advantages of Hitachi's IT × Operational Technology (OT) × Products to support create circular economies not only in our value chain, but in customer activities as well.

■ P.038 Improving the Environmental Performance of Products and Services Through Eco-Design

#### ➤ Approach to Transitioning to a Circular Economy



Note: Hitachi normally refers to suppliers (including vendors and providers) as procurement partners, with whom we build business together on an equal footing.

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## Management of Waste and Valuables Generated at Business Sites

### Activities

We collect environmental load data for waste and valuables\*1 generated at the business sites using the Environmental Data Collection System (Eco-DS) to manage centrally the volumes of waste and valuables generated and exported by type. For hazardous waste, in particular, we ensure thorough compliance with laws and regulations, and engage in proper disposal within the Group.

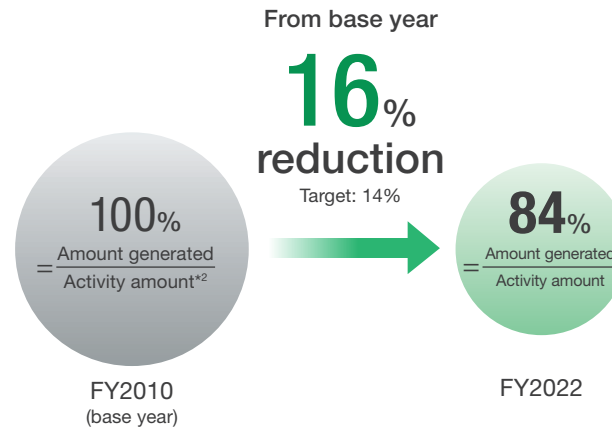
For fiscal 2022, which was the first year of the Environmental Action Plan for 2024 (fiscal 2022–2024), we established a 14% per-unit reduction target (compared with a base year of fiscal 2010) for waste and valuables generated. We outperformed this target by achieving a reduction of 16%.

We reduced the amount of waste and valuables generated by 70 kt, or 23%, compared to the base year. We accomplished this result by installing recycling facilities within our business sites, as well as through closed-loop recycling, whereby byproducts and scrap from the production process are reused as resources by other business sites, while packing and cushioning materials for transportation are used repeatedly.

\*1 Waste and valuables: Materials generated through business activities. Each country has a legal definition of waste, and in Japan, the term refers to refuse, bulky refuse, ashes, sludge, excreta, waste oil, waste acid and alkali, carcasses, and other filthy and unnecessary matter, which are in a solid or liquid state according to the Waste Management and Public Cleansing Law. Valuables, meanwhile, are those materials left over after business activities other than waste, and can be sold or transferred free of charge to other parties as items of value.

### Environmental Action Plan for 2024 Management Values

Reduction Rate in Waste and Valuables Generation\*1 per Unit (Hitachi Group)

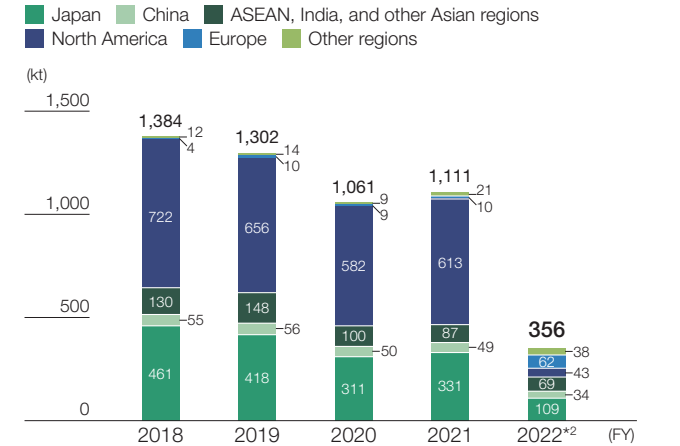


\*1 Amount of waste and valuables generated from the production process.

\*2 Activity amount is a value closely related to waste and valuables generation at each business site (for example, output, sales, and production weight).

GRI 306-1/306-2/306-3

### Waste and Valuables Generation\*1 (Hitachi Group)



\*1 Waste and valuables: Through fiscal 2021, this volume was the amount of waste and valuables generated by major business sites. Beginning in fiscal 2022, this volume is the total amount of waste and valuables generated in the manufacturing processes of all business sites and the amount generated at offices other than manufacturing processes.

\*2 Beginning in fiscal 2022, the report above includes waste and valuables generated by an energy-related company and auto parts companies in fiscal 2022. Significant decrease due to deconsolidation of materials-related and construction machinery-related companies.

P.063 Environmental Load from Operations

Case Studies of Efficient Use of Resources

<https://www.hitachi.com/environment/casestudy/index.html#case04>

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### Number of Sites Achieving the Goal of the Zero Waste to Landfill Initiative

Activities

Materiality

We pursue activities to achieve the goals of the Zero Waste to Landfill\*<sup>1</sup> initiative, which seeks to minimize landfill disposal for the ongoing, sustainable utilization of resources. This fiscal year, we set specific targets for the number of manufacturing sites to achieve zero landfill waste, and we are stepping up efforts to accelerate this initiative. In fiscal 2022, 199 of the sites covered by our activities achieved zero landfill waste.

#### Environmental Action Plan for 2024 Management Values

Number of sites achieving zero landfill waste

**199** business sites  
(58% achievement)

FY2022 target:  
90 business sites (approx. 25%)

Note: All manufacturing sites are covered

\*1 Zero Waste to Landfill goal: Defined as a final disposal rate (landfill disposal/waste and valuables) of less than 0.5% in any given fiscal year in the Hitachi Group. Pursued in assumed conformance with regulations, conditions, etc.

### Effective Utilization Rate of Plastic Waste

Activities

We began strengthening our activities in fiscal 2022 toward achieving a 100% effective utilization\*<sup>1</sup> rate of waste plastics throughout the entire Hitachi Group by fiscal 2030. In fiscal 2022, we set an effective utilization rate target of 77% and achieved 88%. To improve the effective utilization rate, we are implementing measures that include design changes for equipment and products that do not generate waste, digitization of operations for paperless work, reduction of waste through yield improvements, in-house reuse, sorting and accumulation waste to enhance value, and recycling measures through detailed sorting.

#### Environmental Action Plan for 2024 Management Values

Effective utilization rate of plastic waste

**88%** achievement

FY2022 target: 77%

Hitachi Global Life Solutions, whose plastic consumption accounts for around 70% of the Hitachi Group's total, uses recycled plastic in parts for washing machines and refrigerators and packing materials for ceiling lights. The company procures recycled plastic materials produced within the Hitachi Group, such as plastic parts recovered from end-of-life home appliances and plastic containers, and also uses recycled plastics sourced from other materials manufacturers.

While large components in washing machines (enclosure bases in the lower parts of units, etc.) were previously made using a mixture of new and recycled materials, the company shifted to almost 100% recycled plastics, achieved by solving technical problems and procurement issues.

Hitachi Global Life Solutions works to recycle four categories of end-of-life home appliances (air conditioners, TVs, refrigerators/freezers, and washing machines/dryers) at 19 recycling plants as part of cooperative efforts among five companies\*<sup>2</sup> in response to the 2001 Act on Recycling of Specified Home Appliances. A total of 91.3 kt of recyclable materials\*<sup>3</sup> were recovered in fiscal 2022, of which approximately 81.9 kt were recycled. By product type, the recycling rate for refrigerators and freezers was 80% exceeding the legal requirement of 70% by 10 percentage points, and for washing machines and dryers it was 94% exceeding the legal requirement of 82% by 12 percentage points.

\*1 Effective utilization encompasses material recycling, chemical recycling, and thermal recovery. Pursued in assumed conformance with regulations, conditions, etc.

\*2 Hitachi Global Life Solutions, Sharp Corporation, Sony Corporation, Fujitsu General Limited, and Mitsubishi Electric Corporation.

\*3 Parts and materials recovered from four categories of end-of-life home appliances (air conditioners, TVs, refrigerators/freezers, and washing machines/dryers) and recycled through in-house use, sale, or transfer free of charge to other entities for use. Data values are aggregated from Hitachi Global Life Solutions and Johnson Controls-Hitachi Air Conditioning.

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## Building a Water-Efficient Society

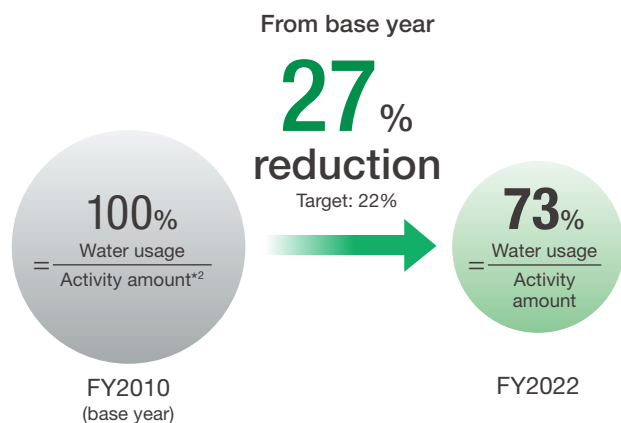
### Management of Water Use at Business Sites

Activities **Materiality**

For fiscal 2022, the first year of the Environmental Action Plan for 2024 (fiscal 2022–2024), we set a target reduction of 22% (compared with a base year of fiscal 2010) in water use per unit for manufacturing process and general daily usage in manufacturing sites. We improved on this target with a reduction of 27%. We reduced the volume of water used by 11 million m<sup>3</sup>, equivalent to a reduction of 45% compared with the base year. Our measures to reduce water usage included more stringent management of water intake using flowmeters, installing water pipes above ground for better leakage control, recirculating cooling water, and reusing purified waste water.

### Environmental Action Plan for 2024 Management Values

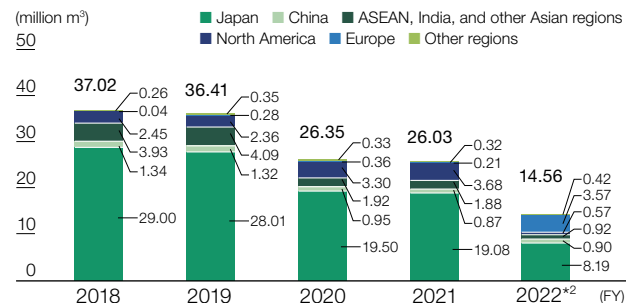
#### Reduction in Water Usage\*1 per unit (Hitachi Group)



\*1 Total amount of water used in manufacturing process and general daily usage at manufacturing sites.

\*2 Activity amount is a value closely related to water use at each business site (for example, output, sales, and production weight).

#### Water Usage\*1 (Hitachi Group)



\*1 Total volume of water used in manufacturing processes and general daily usage at manufacturing sites and in general daily usage at locations other than manufacturing sites.

\*2 The water usage of an energy-related company included in the scope of consolidation since fiscal 2020 is included in the figures above beginning fiscal 2022. The water usage for fiscal 2022 by auto parts companies included in the scope of consolidation since fiscal 2020 is not included in the figures above, but amounted to 412 million m<sup>3</sup>. The total water usage was decreased significantly due to the deconsolidation of the materials- and construction machinery companies.

P.063 Environmental Load from Operations

Case Studies of Improving Water Use Efficiency

<https://www.hitachi.com/environment/casestudy/index.html#case03>

### Products and Services That Contribute to Resolving Water Issues

Activities

Hitachi is a comprehensive water services provider that has built a solid track record of experience and expertise in operational technology (OT), products, and services in the sector. We contribute to the effective use of limited water resources by addressing the many issues facing our customers in the water and sewage treatment business. We achieve these results by leveraging a combination of our IT, extensive experience, and considerable expertise in a variety of fields. A recent example includes our joint venture with Mizu Mirai Hiroshima Corporation, which was awarded a contract by Hiroshima Prefecture to build a

wide-area monitoring and control system for nine prefectural water treatment plants. This project involves designing and building a system that monitors and operates facilities centrally via a common cloud-based platform. The system handles data from different systems with different specifications supplied by various vendors, as well as data from software that utilizes Hitachi's digital technology. This project will contribute to wide-area control and management and as digitization (DX) in the water industry.

#### Hitachi's Water-related Products and Services

Activity field	Products or services (implementation to date)
Creating water resources	Wastewater recycling systems Seawater desalination systems
Developing water infrastructure	Water and sewage treatment, etc. (over 200 sites in about 40 countries and regions) Water purification plants (approximately 700 plants in Japan) Sewage treatment plants (approximately 900 plants in Japan) Comprehensive digital solutions for water and sewage treatment operators
Integrated flood control measures	Flood forecasting and simulation technology related to evacuations and emergencies

We are also engaged in verification tests and joint research with national and local governments, companies, and other organizations in various countries to establish new technologies and systems for the water business. These joint activities include recent work with Higashine City, Yamagata Prefecture, on integrated flood control measures. The actual research involved technologies for real-time flood forecasting and for simulating evacuations and emergencies. We also demonstrated the effectiveness of the technologies that were part of this research. In addition, we began joint research with Water Agency Inc., whose business includes water and sewage treatment operations, to develop a practical AI/IoT-based sludge-reduction service for sewage treatment plants.

Water Environment Solutions

[https://www.hitachi.com/businesses/infrastructure/product\\_site/water\\_environment/index.html](https://www.hitachi.com/businesses/infrastructure/product_site/water_environment/index.html)

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## Achieving a Harmonized Society with Nature

### Efforts to Achieve a Harmonized Society with Nature

Approach

GRI 2-13/2-24/3-3/303-1/303-2/303-5

Our social lives and economic activities depend on numerous benefits (ecosystem services) bestowed by nature, and the loss of biodiversity is becoming recognized as a major economic risk. Nature Risk Rising, published by the World Economic Forum in 2020, notes that the creation of approximately \$44 trillion of economic value generation in economic value, or more than half of global GDP, depends on natural capital and ecosystem services at risk due to biodiversity destruction.

Against this backdrop, the Kunming-Montreal Global Biodiversity Framework, adopted at the 15th Conference of the Parties to the United Nations Convention on Biological Diversity (CBD-COP15) held in Montreal, Canada, in December 2022, established 23 global targets with the aim of implementing urgent measures to halt and reverse biodiversity loss in order to put nature on the path to recovery by 2030. Of particular important to business enterprises are Target 3, which is to conserve at least 30% of terrestrial and water areas through protected areas and OECM\*1 (30 by 30 target), and Target 15, which is to ensure that businesses, especially large corporations and financial institutions, assess and disclose risks related to biodiversity, dependencies and impacts on biodiversity, and measures to provide information required to consumers to promote sustainable consumption patterns.

In addition, with heightened interest in ESG investment and financing, a private-sector initiative is growing to require disclosure of biodiversity-related information. The Task Force on Nature-related Financial Disclosures (TNFD) established a disclosure framework for organizations to report and act on nature-related risks with a view to shifting the flow of funds to nature-positive activities. This framework requires companies and financial institutions to assess and disclose risks and

opportunities related to natural capital and biodiversity in an appropriate manner.

To achieve a harmonized society with nature, as well as to reflect related global trends, Hitachi assesses and discloses biodiversity-related risks, the dependence, and the impact of business activities overall on biodiversity.

\*1 OECM: Areas other than protected areas that contribute to biodiversity conservation. Acronym for Other Effective area-based Conservation Measures

### Initiatives to Minimize Impacts on Natural Capital

Activities

Materiality

To preserve the ecosystem and achieve a society harmonized with nature to continue to enjoy nature's benefits, we established targets to minimize our impact on natural capital as part of our long-term environmental targets. We classify the emission of greenhouse gases and chemical substances into the atmosphere and the generation of waste materials in the course of our business activities as negative impact activities. Providing products and services that contribute to ecosystem preservation and undertaking activities to preserve biodiversity and ecosystems are categorized as positive impact activities. We are working to quantify and minimize the difference between positive and negative impacts by 2050.

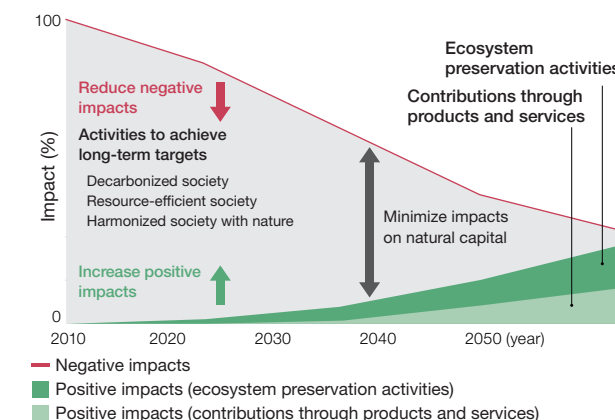
Hitachi identified the negative impacts that our business activities had on natural capital and evaluated these activities using version 2 of the Life-cycle Impact Assessment Method based on Endpoint Modeling (LIME2) and an inventory database (IDEA v2\*1), aiming to reduce such impacts. According to our estimates, approximately half of our negative impacts in fiscal year 2022 were related to climate change. With regard

to climate change, we pursue initiatives aimed at to create a decarbonized society. Regarding urban air pollution, and resource consumption, certain findings have come to light in impact assessments concerning raw materials procurement. To this end, we plan to accelerate the pace of efforts intended to achieve a resource-efficient society. To reduce our environmental load further and minimize our impact on natural capital, we will step up a wide range of activities that include increasing the energy efficiency of our products and services, improving factory efficiency, using resources more effectively, and managing chemical substances properly.

To expand positive impact, we engage in social contribution activities, such as forest conservation, and business activities that contribute directly to ecosystem preservation, such as building water treatment plants. We are also studying how to quantify the impact of these activities on the environment.

\*1 IDEA v2: One of Japan's leading inventory databases required to implement LCAs for calculating negative impacts.

#### ▶ Timetable for Minimizing Impacts



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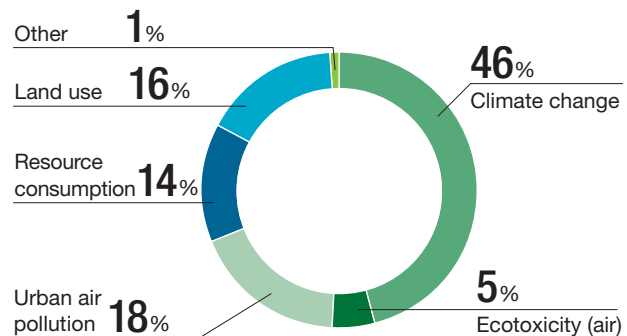
#### Efforts to Achieve a Harmonized Society with Nature

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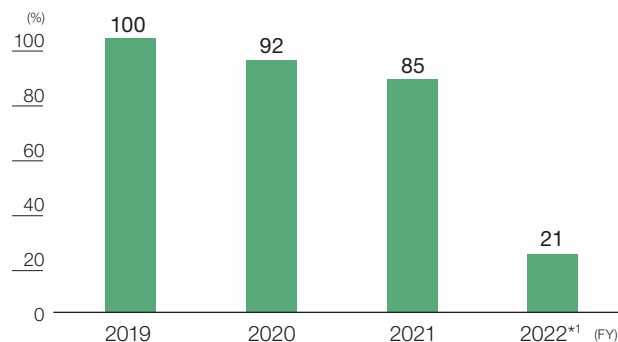
### Environmental Data

#### Negative Impacts on Natural Capital (FY2022)



Note: Calculated from LIME2 by using IDEAv2

#### Negative Impacts on Natural Capital



\*1 The Deconsolidation of materials- and construction-related companies resulted in a significant decrease.

We estimate the benefits gained through our forest conservation activities (flood prevention, water impoundment, water purification, soil loss prevention, and carbon fixation) on an ongoing basis using evaluation methods commonly used in forestry-related public works projects. We also collect data on forested areas targeted for conservation using the

Environmental Data Collection System (Eco-DS). this type of data is required to evaluate forest conservation efforts, and in fiscal 2022, we surveyed 0.31 km<sup>2</sup> of such forested areas.

[Scope of Negative Impact Calculations](https://www.hitachi.com/environment/data/method.html)  
<https://www.hitachi.com/environment/data/method.html>

### Signing the Call to Action Statement, Initiated by Business for Nature

In 2020, the global Business for Nature coalition issued a Call to Action\*<sup>2</sup> statement. The aim was to encourage policy makers around the world to adopt policies to “to reverse nature loss in this decade.” Hitachi Ltd. agrees with this goal and has signed the statement.

\*<sup>2</sup> The Call to Action states that healthy societies, resilient economies, and thriving businesses rely on nature. The statement urges governments to adopt policies to reverse the loss of nature, and calls for the protection, restoration, and sustainable use of natural resources.

[Business for Nature's Call to Action](https://www.businessfornature.org/call-to-action)  
<https://www.businessfornature.org/call-to-action>

### 30 by 30 Alliance for Biodiversity Approved by Ministry of the Environment (MOE), Japan

The 30 by 30 target aims to conserve or protect at least 30% of the land and sea areas in Japan by 2030 to achieve

### Addressing Risks Related to Water and Biodiversity

Approach    Activities

Since Hitachi's exposures to water risks in businesses vary by region and the type of business, it is important to identify respective risks and implement countermeasures. To facilitate risk response, we compiled the procedures for water risk identification and countermeasures under Water Risk Guidelines\*<sup>1</sup>, which are followed by some 150 manufacturing sites around

nature-positive goals of curbing biodiversity loss and encouraging restoration by the same year.

The 30 by 30 Alliance for Biodiversity was established to promote achievement of the 30 by 30 target agreed to at the G7 Summit 2021 and consists of governments, companies, and NPOs. The goals of the alliance are to expand national parks, register satochi-satoyama landscapes and commercial forests (areas of biodiversity preservation planned by various organizations) in international databases, pursue conservation in such areas, and share information concerning these activities.

Hitachi, Ltd. supports this mission and will work to advance related efforts. In August 2023 the Hitachi Kokubunji Site, *Kyouso-no-Mori*, was officially recognized by the government as a conserved area (an area where biodiversity conservation is pursued actively, and to be identified as OECMs).



[30 by 30 Alliance \(Japanese only\)](https://policies.env.go.jp/nature/biodiversity/30by30alliance/)  
<https://policies.env.go.jp/nature/biodiversity/30by30alliance/>

GRI 303-1/303-2/303-5

the world that we classify as Category A in our environmental management classification.

\*<sup>1</sup> Prepared with reference to Setting Site Water Targets Informed By Catchment Context created by members of the UN Global Compact, the CEO Water Mandate, the Pacific Institute, WRI, WWF, and other global institutions with the aim of helping companies set effective site water targets. In fiscal 2021, we issued a revised version of Water Risk Guidelines reflecting the revised content of Water Risk Filter 6.0 and additional examples of measures.



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### Environmental Data

We use our Environmental Data Collection System (Eco-DS) and various globally recognized tools for water risk assessment, in addition to region- and operation-specific water risk identification checklists. We use these data and checklists to identify and evaluate the water risks for each business unit and Group company by country and region, and for the entire Group once a year.

In recent years, the TNFD, an international information disclosure framework, has indicated that the perspective of

biodiversity is also important in identifying and assessing water risks. Therefore, we conduct risk assessments specific to biodiversity by identifying and analyzing specific biodiversity-related data using tools such as the Water Risk Filter\*2 and the water risk identification checklist.

Based on the results of these assessments, we pursue more effective risk reduction activities related to water risk and biodiversity.

#### Identification of Water Risks Using the Environmental Data Collection System (Eco-DS)

	Regional water risks		Operational water risks	
		Risks related to biodiversity		Risks related to biodiversity
Number of evaluation items related to water resources, water quality, water damage, regulations, reputational risk, etc.	Approximately 50	5 (included in the left column)	Approximately 70	13 (included in the left column)
Risk identification method	Various water risk assessment tools, including Aqueduct*3, Water Risk Filter, Flood Hazard Map of the World*4, are combined to identify risks based on address information	Water Risk Filter	Risks identified using information such as a business site's volume of water intake and effluents discharged, and water-related initiatives	Identifying risks related to biodiversity based on information on water intake and wastewater discharge at business sites
Risk assessment	Assessed using a five-level scale*5 from low to extremely-high	Assessed using a five-level scale*5 from low to extremely-high	Assessed using a five-level scale from low to extremely-high	Assessed using a five-level scale*5 from low to extremely-high
Risk results	High at 20 sites	High at 1 site	Low to medium-high at all sites, including the 20 to the left	Low to medium-high at all sites, including the 1 to the left
<b>No business sites face an overall high water risk.</b>				

\*2 A water risk assessment tool developed by the World Wide Fund for Nature (WWF) and the German Development Finance Institution (DEG)

\*3 A water risk assessment tool developed by the World Resources Institute (WRI).

\*4 Flood risk maps published by the European Union.

\*5 Five-level scale: low, low-medium, medium-high, high, extremely-high

#### Achievements in Fiscal 2022

In fiscal 2022, we assessed the water and biodiversity risks in each region and identified water risk as high at a total of 20 business sites operating in China, India, Mexico, Vietnam, and Egypt from among manufacturing sites classified as Category A in our environmental management classification. Additionally, one business site operating in Czech was identified as having high risk related to biodiversity.

As a result of evaluating the operational water and biodiversity risks, all business sites, including the 21 business sites identified earlier, were found to have low to medium-high operational risks related to water and biodiversity risks.

For this reason, Hitachi believes that none of our business sites face overall high water or biodiversity risks.

Water usage at the 20 business sites with high regional water risks was 1.1 million m<sup>3</sup>, accounting for about 8% of the 14.1 million m<sup>3</sup> of water used in Hitachi's main manufacturing processes.

#### Understanding Water Risks in the Supply Chain

Hitachi believes it is important to understand the water risks faced by procurement partners to ensure stable procurement of parts and products.

In fiscal 2022, we used the Aqueduct and the Water Risk Filter to identify regional water risks for about 600 of our environmental focus partners of fiscal 2021 (about 1,000 companies selected, accounting for 70% of transaction value). These partners responded to our survey regarding environmental initiatives, and we shared the results with relevant internal departments. Moving forward, we will strive to understand the water risks of our procurement partners further by expanding the scope of the survey.

P.108 Responsible Procurement

Note: Hitachi normally refers to suppliers (including vendors and providers) as procurement partners, with whom we build business together on an equal footing.

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## Managing and Reducing Chemical Substances

### Managing Chemical Substances

#### Approach

Hitachi believes that the control and reduction of chemical substances such as volatile organic compounds (VOCs), one of the causes of urban air pollution, are important not only for reducing discharge of pollutants into the air and water, but also for managing chemical substance usage properly to minimize our impact on natural capital.

Based on this belief, Hitachi formulated the Environment and CSR-Based MONOZUKURI Standards to manage chemical substances at all stages of its operations—from design and development, procurement, and from production to quality assurance and shipping. We divide chemical substances in our products into two categories: prohibited substances and controlled substances. These categories facilitate separate management to respond to legal and regulatory frameworks at shipping destinations. With regard to chemical substances used in our business operations, we reduce risk by assigning three ranks to the use of such substances: prohibited, reduced, and controlled. We also educate chemical substance handlers and managers on laws, regulations, and proper risk assessment.

### Managing Chemical Substances in Our Products

#### System


#### Activities

Hitachi designates the chemical substances in our products requiring management as Voluntarily Controlled Chemical Substances. We model the standards of the EU, where regulations are stringent, to identify and manage controlled chemical substances regardless of export destination, type of industry, or purpose of use.

We revise the list of managed substances and management levels when necessary, based on updates to the EU's REACH\*<sup>1</sup> and other regulations. Our aim is to add substances to our list of Voluntarily Controlled Chemical Substances six months before such substances are regulated officially. For example, we revised the list in accordance with the new regulation of perfluorohexanesulfonic acid (PFHxS), their salts, and PFHxS-related substances as part of the POPs Convention\*<sup>2</sup>, which will be effective from November 2023.

\*1 REACH: The European Union regulation of Registration, Evaluation, Authorisation, and Restriction of Chemicals.

\*2 POPs Convention: Stockholm Convention on Persistent Organic Pollutants.

 Voluntarily controlled chemical substances in Hitachi Group products  
<https://www.hitachi.com/environment/data/chemical.html>

#### Classification Examples

##### Prohibited Substances (Level 1)

Substances for which use in products (including packaging) is generally prohibited inside and outside Japan, but which might be found in products from suppliers.

##### Controlled Substances (Level 2)

Substances we are required to track and manage and substances requiring attention for recycling or appropriate disposal methods.

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## Managing Chemical Substances in Our Business Operations

System	Activities
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Hitachi cuts emissions of chemical substances from factories and other sites through stricter levels of management, including expanding the number and scope of chemical substances subject to reduction\*1.

We translate case studies for reduction into English and Chinese, sharing these cases globally among Hitachi Group companies. We also follow legally prescribed procedures in measuring and managing emissions\*2 of sulfur oxides (SOx) and nitrogen oxides (NOx), measurements for which are required under the laws and regulations of our business site locations. At the same time, we continue efforts to restrict emissions further.

We reference Japan's Pollutant Release and Transfer Register (PRTR) Law\*3 in Group-wide monitoring in Japan of chemical substances released into the atmosphere or into public waters, removed outside our plants as waste, or discharged into sewage systems. We report the results to local governments for each office or plant. Although certain substances are exempt from reporting due to small quantities, our policy is to aggregate and manage data on the handling, emission, and transfer of all PRTR substances totaling 10 kilograms or more per year.

\*1 Chemical substances subject to reduction: A total of 50 substances selected in terms of hazard and atmospheric emissions. Approximately 100% of substances in fiscal 2022 results were classified as VOCs.

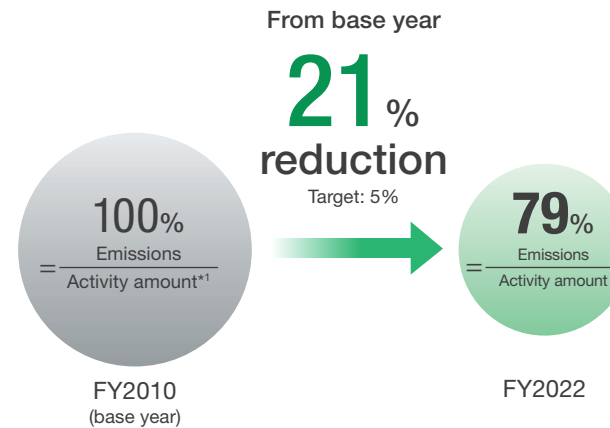
\*2 Emissions of SOx and NOx: Calculated using data by business site (measured values, exhaust volume, content rate, etc.).

\*3 PRTR Law: Act on the Assessment of Releases of Specified Chemical Substances in the Environment and the Promotion of Management Improvement

In fiscal 2022, which was the first year of the Environmental Action Plan for 2024 (fiscal 2022–fiscal 2024), we achieved a reduction rate of 21% toward the target of reducing atmospheric emissions of chemical substances per unit by 5% compared with a base year of fiscal 2010. To reduce the emissions, we are switching from paints containing VOCs to water-soluble and powder paints, expanding the use of said paints, while altering the painting and washing processes.

### Environmental Action Plan for 2024 Management Values

Reduction Rate in Atmospheric Emissions of Chemical Substances per Unit (Hitachi Group)

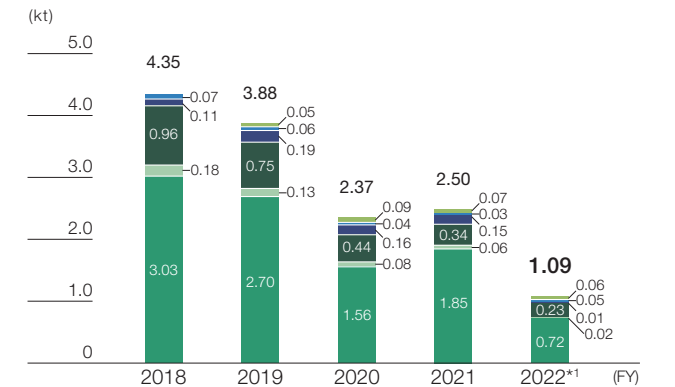


\*1 Activity amount is a value closely related to atmospheric emissions of chemical substances at each business site (for example, substances handled, sales, and output)

GRI 305-7

## Reducing Atmospheric Emissions of Chemical Substances (Hitachi Group)

Japan China ASEAN, India, and other Asian regions North America Europe Other regions



Note: Atmospheric emissions of VOCs and other chemical substances are calculated from the content rate included in the materials, etc.

\*1 Decreased significantly due to the deconsolidation of the materials and construction machinery companies.

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Case Studies of Reducing Chemical Substances in Our Business Activities

<https://www.hitachi.com/environment/casestudy/index.html#case05>

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## Preserving Ecosystems

### Efforts to Conserve Ecosystems


Approach	Activities	GRI 304-3
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At Hitachi, we seek to reduce negative impacts on natural capital caused by business activities and to promote positive impacts, including social contribution activities to protect nature and products and services that help preserve the ecosystem. In this way, we intend to minimize our impact on natural capital by fiscal 2050.

Hitachi created an Ecosystem Preservation Activities Menu citing specific activities preserve the ecosystem. This chart including activities that are difficult to quantify but are nonetheless important, such as the protection of rare species and efforts to make biodiversity a benchmark when making investment decisions. Each business site sets goals and pursues initiatives based on the Ecosystem Preservation Activities Menu to create a harmonized society with nature.

### 📌 Ecosystem Preservation Activities Menu

	Category	Activities	No. of menu items
Business sites	Production	Reduce the use of resources that cannot be reused	4
	Transportation	Use packaging that takes ecosystem into consideration	7
	Collection, disposal, and recycling	Reduce hazardous materials in products	2
	Product planning, development, and design	Estimate the impact of R&D on biodiversity during the product life cycle and implement mitigation measures, if needed	3
	Site management	Use native species and establish biotopes	17
	Water use	Use rain water	1
Value chain	Investment and acquisition	Confirm the impact on biodiversity when investing in or acquiring a business, and implement measures to minimize such impacts	1
	Market entry and expansion	Include biodiversity as an investment benchmark	1
	Business development	Develop products and services to purify water, air, and soil and expand such businesses	1
	Procurement	Procure paper and other office supplies with a bias for products that take biodiversity into consideration	17
	Transportation	Implement ballast water measures during marine transportation	2
	Sales	Expand the sales of products that take biodiversity into consideration	9
	Collection, disposal, and recycling	Reuse and recycle components	7
	Entire value chain	Pursue the use of renewable energy	1
Community	Engagement	Promote employee activities outside the company	3
	Social contribution	Conduct desert greening and afforestation activities	12
Water use that takes watershed ecosystems into consideration	Intake	Observe and collect biota information (impact on ecosystem depending on intake volume)	14
	Discharge	Establish biota management indicators and make observations (species and numbers of inhabiting organisms)	14

 Case Studies of Promoting Ecosystem Preservation  
<https://www.hitachi.com/environment/casestudy/index.html#case06>

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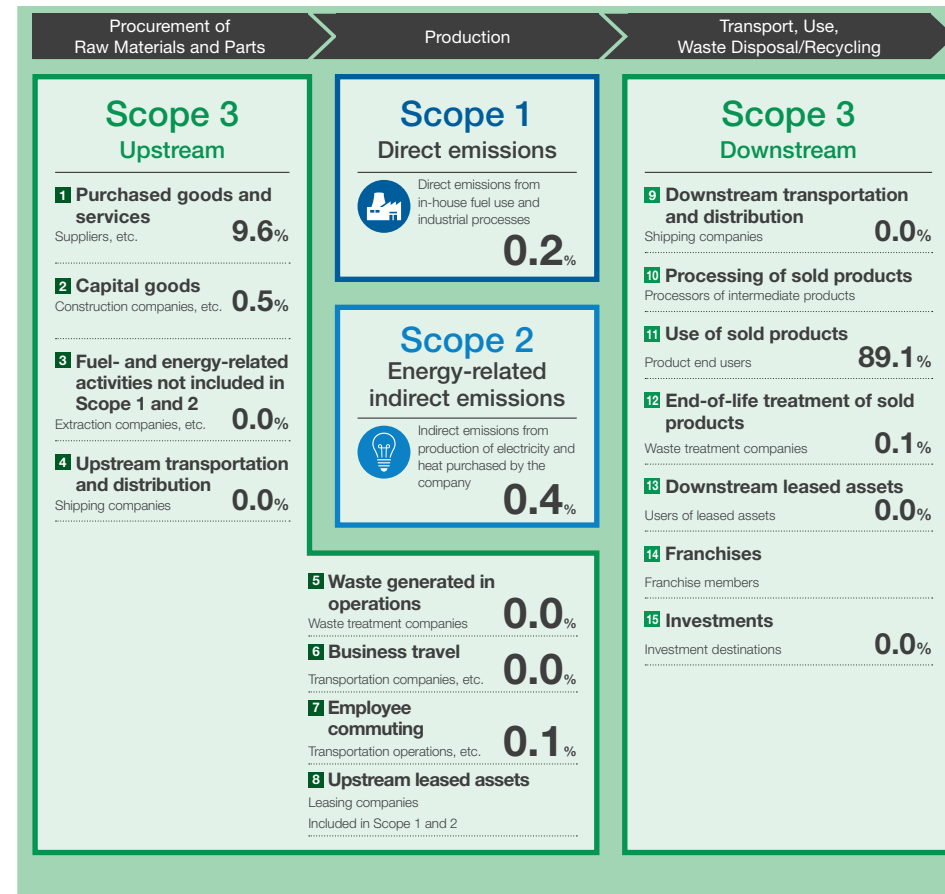
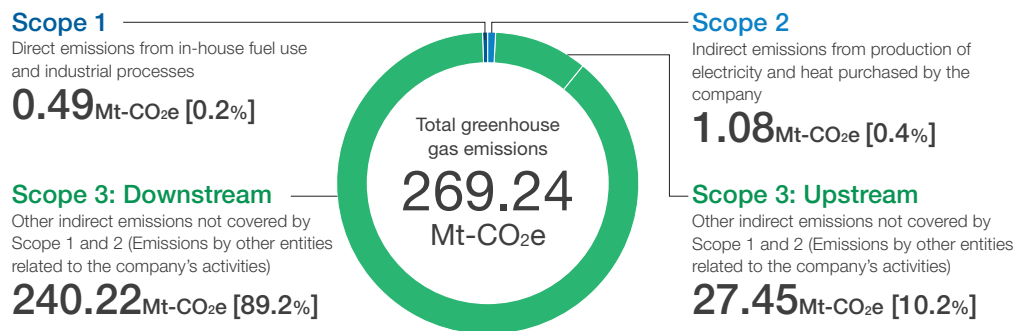
### GHG Emissions Throughout the Value Chain

GRI 302-2/305-1/305-2/305-3/305-4/305-5

#### Calculating GHG Emissions Throughout the Value Chain (Fiscal 2022)

Hitachi calculates greenhouse gas (GHG) emissions throughout the value chain in conformance with GHG Protocol standards. This gives us a good grasp of emission hotspots in our value chain with which we can establish effective targets and reduction measures. Energy-related CO<sub>2</sub> accounts for almost all of Hitachi's GHG emissions, with there being negligible releases of other gases, making it all the more important to focus on CO<sub>2</sub> reduction efforts.

An extremely high share of our value chain emissions comes from the use of the products and services we sell. We thus believe that we can make a major contribution to decarbonization through our businesses by giving priority to enhancing the efficiency and energy-saving features of our products and services.



In-house: Within the scope of the company's organizational boundaries. In principle, all business activities of the company itself and activities within or controlled by its consolidated subsidiaries.  
 Upstream: In principle, activities related to products and services that are purchased.  
 Downstream: In principle, activities related to products and services that are sold.

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#### Detailed Data on GHG Emissions Throughout the Hitachi Value Chain (Hitachi Group, Fiscal 2022)

Category	Description	Reporting Boundary	Emissions (Mt-CO <sub>2</sub> e)	Percentage (%)
Total Scope 1, 2, and 3		Hitachi Group	269.24	100.0
Total Scope 1 and 2		Hitachi Group	1.56 <sup>*1</sup>	0.6
<b>Scope 1<sup>*2</sup></b>				
Direct emissions	Direct emissions from in-house fuel use and industrial processes	Hitachi Group	0.49	0.2
<b>Scope 2<sup>*3</sup></b>				
Energy-related indirect emissions	Indirect emissions from production of electricity and heat purchased by the company	Hitachi Group	1.08	0.4
Scope 3 Total <sup>*4</sup>		Hitachi Group	267.67	99.4
<b>Scope 3 Upstream (other indirect emissions) upstream</b>				
<b>1</b> Purchased goods and services	Emissions from the resource extraction stage to the manufacturing stage, including raw materials, parts, supplied products, and sales		25.86	9.6
<b>2</b> Capital goods	Emissions generated in the construction, manufacture, and shipping of the company's own capital goods, such as equipment, devices, buildings, facilities, and vehicles		1.22	0.5
<b>3</b> Fuel- and energy-related activities not included in Scope 1 or Scope 2	Emissions from procuring the fuel necessary for electricity and other energy production, including resource extraction, production, and shipping		0.10	0.0
<b>4</b> Upstream transportation and distribution	Emissions from the distribution of raw materials, parts, products supplied, and sales prior to the delivery of materials to the company, as well as other distribution activities of products for which the company bears the expense	Hitachi Group	0.03	0.0
<b>5</b> Waste generated in operations	Emissions from the transportation, disposal, and treatment of waste generated from the company's operations		0.06	0.0
<b>6</b> Business travel	Emissions generated from the fuel and electricity used by employees for business travel		0.05	0.0
<b>7</b> Employee commuting	Emissions generated from the fuel and electricity used by employees commuting		0.13	0.0
<b>8</b> Upstream leased assets	Emissions from the operation of assets leased by the company, excluding those counted in Scope 1 and 2		Included in Scope 1 and 2	—
<b>Scope 3: Downstream (other indirect emissions)</b>				
<b>9</b> Downstream transportation and distribution	Emissions from the transportation, storage, loading and unloading, and retail sales of products		0.12	0.0
<b>10</b> Processing of sold products	Emissions by downstream companies during the processing of intermediate products		N/A <sup>*5</sup>	—
<b>11</b> Use of sold products <sup>*6</sup>	Emissions from the use of products by end users, such as consumers and businesses		239.85	89.1
<b>12</b> End-of-life treatment of sold products sold <sup>*6</sup>	Emissions from the transportation, waste disposal, and treatment of products by end users, such as consumers and businesses	Hitachi Group	0.18	0.1
<b>13</b> Downstream leased assets	Emissions from the operating of assets owned by the reporting company as the lessor, which are leased to other entities		0.02	0.0
<b>14</b> Franchises	Emissions by franchises under Scope 1 and 2		N/A	—
<b>15</b> Investments	Emissions related to the management of investments		0.05	0.0

<sup>\*1</sup> FY2022 CO<sub>2</sub> emissions of energy-related companies and automotive business companies included in the scope of consolidation since FY2020 are included in the figures above. Significant decrease due to deconsolidation of materials-related and construction machinery-related companies.

<sup>\*2</sup> Including SF<sub>6</sub>, PFC, HFC, N<sub>2</sub>O, NF<sub>3</sub>, and CH<sub>4</sub>. The gas and fuel oil conversion factors are based on the List of calculation methods and emission factors used in the Greenhouse Gas Emissions Calculation, Reporting and Publication System.

<sup>\*3</sup> CO<sub>2</sub> emissions from electricity consumption is calculated using a market-based calculation method. CO<sub>2</sub> electrical power conversion factors: We used adjusted conversion factors for individual power businesses based on the Act on Promotion of Global Warming Countermeasures in Japan. In China, we used the average emissions factor published by the government for the national power grid. For other countries, we used the latest values for each fiscal year supplied by the International Energy Agency (IEA) for individual countries and by power supply companies.

<sup>\*4</sup> FY2022 CO<sub>2</sub> emissions of energy-related companies included in the scope of consolidation since FY2020 are included in the figures above. The FY2022 volume for automotive business companies are not included in the figures above, as these are intermediate products.

<sup>\*5</sup> Cannot be determined due to insufficient information about the processing.

<sup>\*6</sup> CO<sub>2</sub> emissions per unit is based on the Inventory Database for Environmental Analysis (IDEA), developed by the National Institute of Advanced Industrial Science and Technology (AIST) and the Japan Environmental Management Association for Industry (JEMAI).

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GRI 301-1/301-2/302-1/302-4/303-1/303-2/303-3/303-4/303-5/305-4/305-5/305-7/306-1/306-2/306-3/306-4/306-5

### Detailed Data on Resource Input and Environmental Load Output

#### Energy Inputs and GHG Emissions During Business Operations

The following is an outline of the energy consumed during Hitachi's business operations and the part of our environmental load consisting of greenhouse gas (GHG) emissions.

#### Energy Inputs

			Reporting Boundary	Unit	FY2018	FY2019	FY2020	FY2021	FY2022*1	
Energy Inputs			Hitachi Group	GWh	14,605	12,427	9,674	9,957	5,387	
Renewable energy	Electricity	Total	Hitachi Group	GWh	7	18	138	193	706	
		(Self-generated amount)	Hitachi Group	GWh	7	18	22	34	25	
		(Purchases: Includes non-fossil certificates)	Hitachi Group	GWh	—	—	116	159	681	
Non-renewable energy	Electricity	Electricity	Hitachi Group	GWh	6,020	5,992	4,498	4,584	2,218	
		Fuel and heat*2	City gas	Hitachi Group	GWh (billion m <sup>3</sup> )	2,236 (0.18)	1,933 (0.15)	1,339 (0.11)	1,373 (0.11)	767 (0.06)
			LPG, LNG	Hitachi Group	GWh (kt)	3,741 (251)	2,015 (150)	1,646 (111)	1,705 (118)	1,217 (82)
			Other natural gas	Hitachi Group	GWh (billion m <sup>3</sup> )	58 (0.005)	258 (0.02)	276 (0.02)	319 (0.03)	261 (0.02)
			Fuel oil (heavy oil, kerosene, etc.)	Hitachi Group	GWh (ML)	930 (87)	792 (75)	653 (61)	495 (47)	197 (19)
			Solid fuel (coke)	Hitachi Group	GWh (kt)	1,528 (188)	1,333 (162)	1,111 (137)	1,278 (156)	—
			Steam, hot water and cold water	Hitachi Group	GWh (PJ)	85 (0.31)	86 (0.31)	13 (0.05)	10 (0.04)	21 (0.08)

\*1 Significant decrease due to deconsolidation of materials-related and construction machinery-related companies.

\*2 Used 3.6MJ/kWh in the conversion from calorific value.

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### Greenhouse Gases Emitted

	Reporting Boundary	Unit	FY2018	FY2019	FY2020	FY2021	FY2022**1*3
<b>Total greenhouse gases*2</b>	Hitachi Group	kt-CO <sub>2</sub> e	5,026	4,415	3,313	3,412	<b>1,565</b> ✓
Energy-related CO <sub>2</sub> emissions	<b>Total</b>	Hitachi Group	4,973	4,374	3,296	3,384	<b>1,538</b> ✓
	(Direct emissions)	Hitachi Group	1,869	1,489	1,202	1,245	<b>459</b> ✓
	(Indirect emissions)	Hitachi Group	3,104	2,885	2,094	2,139	<b>1,079</b> ✓
GHG emissions other than energy-related CO <sub>2</sub>	<b>Total</b>	Hitachi Group	53	41	17	28	<b>26.7</b> ✓
	Sulfur hexafluoride (SF <sub>6</sub> )	Hitachi Group	35	24	11	20	<b>22.0</b>
	Perfluorocarbons (PFC)	Hitachi Group	5	4	0	2	<b>1.3</b>
	Hydrofluorocarbons (HFC)	Hitachi Group	3	3	1	3	<b>2.4</b>
	Dinitrogen monoxide, nitrogen trifluoride, methane (N <sub>2</sub> O, NF <sub>3</sub> , CH <sub>4</sub> )	Hitachi Group	3	2	2	3	<b>0.9</b>
	CO <sub>2</sub> from non-energy sources	Hitachi Group	7	8	3	0	<b>0.2</b>

Note: CO<sub>2</sub> emissions from electricity consumption is calculated using a market-based calculation method. CO<sub>2</sub> emission coefficients for Japan (including power plants) are the latest adjusted emission coefficients for each electric utility based on the Act on Promotion of Global Warming Countermeasures. For China, we use the average emissions factor for the national power grid published by the government. For countries other than Japan and China, we use the latest IEA emission factors by country for each fiscal year and the latest factors provided by power supply companies.

Note: The gas and fuel oil conversion factors are based on the List of calculation methods and emission factors used in the Greenhouse Gas Emissions Calculation, Reporting and Publication System.

\*1 Significant decrease due to deconsolidation of materials-related and construction machinery-related companies.

\*2 Total GHGs: Scope 1 and 2 total

\*3 FY2022 CO<sub>2</sub> emissions of an energy-related company and auto parts-related companies included in the scope of consolidation since FY2020 are included in the figures.



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## Raw Material Inputs and Waste and Valuables Generation During Business Operations

The following is an outline of the raw materials used during Hitachi's business operations and the part of our environmental load consisting of the generation of waste and valuables.

### Raw Material Inputs

			Reporting Boundary	Unit	FY2018	FY2019	FY2020	FY2021	FY2022*1
Total amount of raw materials			Hitachi Group	kt	4,403	3,776	3,066	3,235	788
Raw materials	Metals	Total metals	Hitachi Group	kt	4,031	3,454	2,861	3,083	685
		New materials	Hitachi Group	kt	1,624	1,372	1,075	909	614
		Recycled materials, etc.	Hitachi Group	kt	2,407	2,082	1,786	2,175	71
	Plastics	Total plastics	Hitachi Group	kt	165	147	115	74	43
		New materials	Hitachi Group	kt	163	143	113	72	40
		Recycled materials, etc.	Hitachi Group	kt	2	4	2	2	3
	Other materials	Total other materials	Hitachi Group	kt	207	175	90	77	61
		New materials	Hitachi Group	kt	201	173	89	76	54
		Recycled materials, etc.	Hitachi Group	kt	6	2	1	1	7

### Waste and Valuables Generated

			Reporting Boundary	Unit	FY2018	FY2019	FY2020	FY2021	FY2022*1*2
Total waste and valuables generated			Hitachi Group	kt	1,384	1,302	1,061	1,111	356
Waste reduction			Hitachi Group	kt	94 (5.6)	101 (17.5)	75 (9.8)	74 (10.5)	47 (23.1)
Recycle	Reuse	Hitachi Group	kt	1 (0.0)	5 (2.2)	35 (11.4)	36 (18.7)	18 (6.2)	
	Materials recycled	Hitachi Group	kt	1,044 (25.6)	919 (25.3)	740 (17.6)	784 (19.3)	256 (16.7)	
	Thermal recovery	Hitachi Group	kt	13 (1.4)	21 (4.9)	11 (5.4)	13 (6.5)	16 (4.6)	
Landfill			Hitachi Group	kt	232 (3.7)	256 (6.1)	200 (4.9)	204 (5.7)	20 (6.5)
Nonhazardous (hazardous)			Hitachi Group	kt	1,348 (36)	1,246 (56)	1,012 (49)	1,050 (61)	299 (57)

Note: Figures in parentheses are the generation of waste defined as hazardous under the Basel Convention.

\*1 Significant decrease due to deconsolidation of materials-related and construction machinery-related companies.

\*2 Fiscal 2022 generation of waste and valuables of an energy-related company and auto parts-related companies that became consolidated subsidiaries in fiscal 2020 are included in the figures above.

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## Water Inputs and Effluent Discharges During Business Operations GRI 2-27

The following is an outline of the total amount of water resources used during Hitachi's business operations and the part of our environmental load consisting of effluent discharges.

### Water Input

	Reporting Boundary	Unit	FY2018	FY2019	FY2020	FY2021	FY2022 <sup>*2*</sup>
<b>Total water usage<sup>*1</sup></b>	Hitachi Group	Million m <sup>3</sup>	37.02	36.41	26.35	26.03	<b>14.23</b>
Surface water	Tap water (water for drinking and other household uses)	Million m <sup>3</sup>	7.61	7.95	5.10	5.23	<b>5.53</b>
	Industrial water, river water	Million m <sup>3</sup>	16.63	15.58	12.62	12.47	<b>5.17</b>
Groundwater	Hitachi Group	Million m <sup>3</sup>	12.74	12.84	8.60	8.32	<b>3.52</b>
Rain water	Hitachi Group	Million m <sup>3</sup>	0.01	0.02	0.01	0.01	<b>0.01</b>
Recycled water (recycled from the wastewater of other organizations)	Hitachi Group	Million m <sup>3</sup>	0.03	0.02	0.01	0.01	<b>0.00</b>

### Water Effluents Discharged

	Reporting Boundary	Unit	FY2018	FY2019	FY2020	FY2021	FY2022 <sup>*2*</sup>
<b>Total water effluents discharged</b>	Hitachi Group	Million m <sup>3</sup>	34.10	33.41	23.25	26.03	<b>14.23</b>
Public water	Hitachi Group	Million m <sup>3</sup>	22.44	22.46	15.29	15.40	<b>8.26</b>
Sewerage	Hitachi Group	Million m <sup>3</sup>	8.18	7.74	5.44	5.31	<b>3.76</b>
Underground infiltration, evaporation, etc.	Hitachi Group	Million m <sup>3</sup>	3.48	3.21	2.52	5.32	<b>2.21</b>
Water quality	BOD (biochemical oxygen demand)	t	392	232	204	156	<b>77</b>
	COD (chemical oxygen demand)	t	1,657	400	406	301	<b>137</b>

<sup>\*1</sup> Figures through FY2021 represent water usage in manufacturing processes and general daily usage at manufacturing sites, as well as general daily usage in locations other than manufacturing sites. Figures for FY2022 represent water usage in manufacturing processes and daily general usage at manufacturing sites.

<sup>\*2</sup> FY2022 water usage of an energy-related company included in the scope of consolidation since FY2020 is included in the reported figures above. FY2022 water usage of auto parts companies included in the scope of consolidation since FY2020 is not included in the reported figures above, but amounted to 412 million m<sup>3</sup>.

<sup>\*3</sup> Significant decrease due to deconsolidation of materials-related and construction machinery-related companies.

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## Inputs and Discharges of Chemical Substances During Business Operations GRI 2-27

The following is an outline of the chemical substances handled during Hitachi's business operations and the part of our environmental load consisting of chemical substance discharges.

### Chemical Substances Handled

	Reporting Boundary	Unit	FY2018	FY2019	FY2020	FY2021	FY2022 <sup>*3</sup>
<b>Total chemical substances handled<sup>*1</sup></b>	Hitachi Group	kt	88.29	83.68	47.49 <sup>*2</sup>	26.20	<b>1.70</b>

### Chemical Substances Discharged

	Reporting Boundary	Unit	FY2018	FY2019	FY2020	FY2021	FY2022 <sup>*3</sup>
<b>Total chemical substances discharged</b>	Hitachi Group	kt	5.55	4.98	3.27	3.50	<b>1.39</b>
Chemical substances discharged	Hitachi Group	kt	4.35	3.88	2.37	2.50	<b>1.09<sup>*4</sup></b>
SOx (sulfur oxides)	Hitachi Group	kt	0.3	0.3	0.2	0.2	<b>0.01</b>
NOx (nitrogen oxides)	Hitachi Group	kt	0.9	0.8	0.7	0.8	<b>0.29</b>

<sup>\*1</sup> We selected 50 substances from the perspective of hazards and atmospheric emissions.

<sup>\*2</sup> Significant decrease due to deconsolidation of a materials-related company.

<sup>\*3</sup> Significant decrease due to deconsolidation of materials-related and construction machinery-related companies.

<sup>\*4</sup> Approximately 100% of emissions classified as VOCs in FY2022.

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### Number of ISO 14001 Certified Companies (Hitachi Group, as of March 2023)

	Reporting Boundary	Unit	FY2020	FY2021	FY2022*1
<b>Total</b>	Hitachi Group	Companies	202	185	<b>281</b>
Japan			85	66	<b>66</b>
China			43	43	<b>61</b>
ASEAN, India, and other Asian regions			42	43	<b>50</b>
North America	Hitachi Group	Companies	10	9	<b>13</b>
Europe			17	15	<b>52</b>
Other regions			5	9	<b>39</b>

Note: Companies with at least one certified business site.

\*1 Significant changes in the figure, resulting from both the increase caused by the consolidation of an energy-related company and the decrease caused by the deconsolidation of materials-related and construction machinery-related companies.

### Number of Regulatory Violations and Complaints

		Reporting Boundary	Unit	FY2018	FY2019	FY2020	FY2021	FY2022
Regulatory violations	Water quality			4	4	5	2	<b>0</b>
	Air quality			2	0	0	0	<b>2</b>
	Waste materials	Hitachi Group	Cases	3	0	4	3	<b>0</b>
	Other (equipment registration, etc.)			4	1	1	3	<b>0</b>
Complaints		Hitachi Group	Cases	3	5	3	3	<b>0</b>

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## Environmental Accounting GRI 201-1

### Environmental Protection Costs

			Reporting Boundary	Unit	FY2018	FY2019	FY2020	FY2021	FY2022 <sup>*2</sup>
<b>Total</b>			Hitachi Group	Billions of yen	94.16	105.71	86.62	79.97	<b>57.21</b>
Expenses	Business area	Maintenance costs for equipment with low environmental loads, depreciation, etc.*1			23.57	22.62	19.14	19.56	<b>6.30</b>
	Upstream/Downstream	Green procurement expenses, recovery and recycling of products and packaging, recycling expenses			0.68	0.68	0.62	0.64	<b>0.08</b>
	Administration	Labor costs for environmental management and the implementation and maintenance of environmental management systems	Hitachi Group	Billions of yen	6.72	4.98	5.88	5.40	<b>3.06</b>
	Research and development	Costs of research and development and product designs to reduce the environmental burden caused by products and production processes			61.86	77.01	60.64	53.79	<b>47.55</b>
	Social activities	Planting, beautification, and other environmental improvement costs			0.93	0.25	0.22	0.26	<b>0.11</b>
	Environmental remediation	Environmental mitigation costs, contributions, and charges			0.40	0.17	0.12	0.32	<b>0.11</b>

\*1 Equipment depreciation costs are calculated using the straight-line method over five years.

\*2 An energy-related company included in the scope of consolidation since FY2020 is not included in the reported cost figures for FY2022. Significant decrease due to deconsolidation of materials-related and construction machinery-related companies.

### Environmental Protection Effects

#### Economic Effects<sup>\*3</sup>

		Major FY2021 Activities	Reporting Boundary	Unit	FY2018	FY2019	FY2020	FY2021	FY2022 <sup>*4</sup>
<b>Total</b>			Hitachi Group	Billions of yen	16.05	18.62	14.28	19.20	<b>11.95</b>
Net income effects	Recovering value from waste by sorting and recycling				8.35	12.42	9.66	15.15	<b>7.89</b>
Cost reduction effects	Installing high-efficiency equipment (lighting, power supply, etc.)		Hitachi Group	Billions of yen	7.70	6.20	4.62	4.05	<b>4.06</b>

\*3 Economic effects include the following:

Net income effects: Real income from the sale of valuable materials and environmental technology patents.

Cost reduction effects: Reductions in electricity, waste treatment, and other expenses through activities that reduce environmental loads.

\*4 An energy-related company included in the scope of consolidation since FY2020 is not included in the reported cost figures for FY2022. Significant decrease due to deconsolidation of materials-related and construction machinery-related companies.

### Environmental Liability

As the amounts that we can reasonably project as future environmental liabilities as of end of March 2023, we recorded 4.2 billion yen in costs for the disposal of waste containing PCBs and 1.1 billion yen to clean up contaminated soil.