

## Hitachi Global Life Solutions Environmental Report 2022



# Integrating Products and Digital Technology to Achieve a Sustainable Society for a Life with Smiles Around for All



President and Director



We at Hitachi Global Life Solutions aim to improve everyone's QoL (Quality of Life) and contribute to a sustainable society.

To achieve these, we aim for "Living with a Smile on Every Face. A kinder tomorrow for people and society. And delivering happiness to the world via innovations that open up the future." We are promoting diverse environmental initiatives based on these purposes.

**More smiles to life for one and all.  
A more comfortable tomorrow for people and society.  
With innovations that deliver happiness to the world,  
we open new doors to the future.**

In our 2024 Medium-Term Management Plan, we at the Hitachi Group set forth our vision of "supporting people's happiness by realizing a sustainable society via data and technology." With the aim of achieving our long-term environmental goals, we have formulated a green growth strategy with two pillars: "GX for Growth (carbon neutral for customers and society)" and "GX for Core (carbon neutral within the Hitachi Group)."

Our company is a member of the Connective Industries Sector within the Hitachi Group. A major pillar of our 2024 Medium-Term Management Plan is to create sustainable value while transforming ourselves into a recycling-oriented manufacturing company by integrating the business foundations we have nurtured to date, namely products and technologies, with digital technologies. We will also more proactively pursue open collaboration with partners in Japan and overseas in environmental fields.

In concrete terms, we are promoting initiatives aimed at contributing to achieving a sustainable society by enhancing our manufacturing to be consistent with a resource-

recycling society. In addition to focusing on environment-friendly product design, we are developing ways to enable our products to be used longer, even as we strengthen developments of new recycling technologies that promote recycling of resources.

As part of our efforts toward decarbonization, we aim to achieve carbon neutrality, which means net-zero greenhouse gas emissions at our factories by fiscal 2030 and throughout our entire value chain by fiscal 2050. In addition to reducing our own consumption of energy, such as by introducing super-efficient equipment, increasing in-house generation of power and by installing solar power systems and purchasing renewable energy, we are ramping up initiatives that help our customers reduce their CO<sub>2</sub> emissions while using our products. We are also working to solve a variety of environmental issues that face society, such as by promptly providing solutions for air conditioning that comply with the revised CFC emissions control law that went into effect in August this year.

In addition to our initiatives in environmental manufacturing, such as expanding the number of environment friendly products, improving our recycling rates and launching recurring business, we are playing a role in creating a society that does not exceed the planetary boundary, by promoting the reduction of CO<sub>2</sub> emissions, both our own and those of our customers.

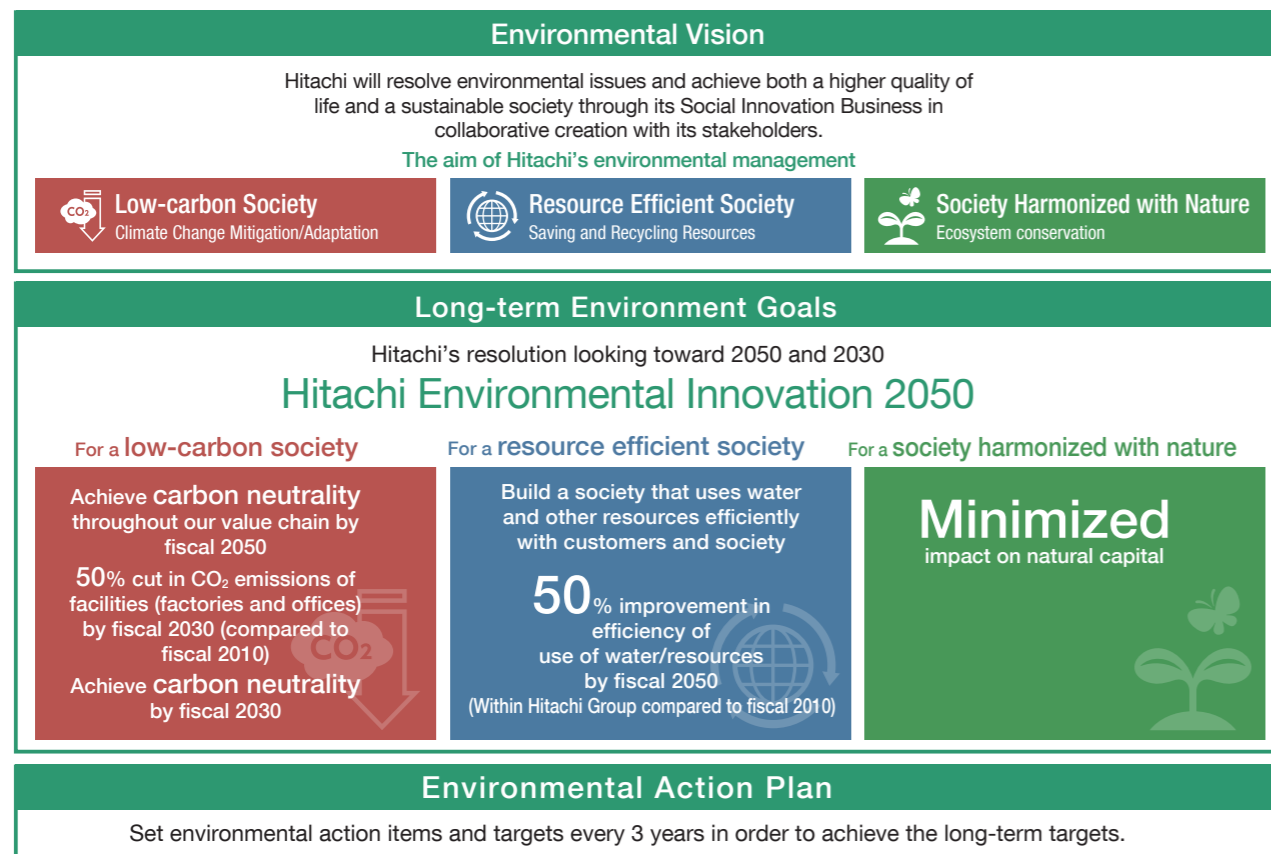
## Contents

Message from the President .....	1
Environmental Activities .....	3
Creating a Sustainable Society via Digital and Green Innovations	
<b>Hitachi Global Life Solutions Group's Environmental Activity Report</b>	
• Environmental Management .....	5
• Efforts to Realize a Low-carbon Society .....	7
Improving the environmental performance of products, services and solutions	
[Example] Reduction of CO <sub>2</sub> due to using renewable energy	
Reducing CO <sub>2</sub> emissions in the production process	
[Example] Using the Hitachi Internal Carbon Pricing System	
• Efforts to Realize a Resource Efficient Society .....	9
Reducing water consumption in the production process	
Reducing waste in the production process	
Promoting product recycling	
[Example] Expanded Use of Recycled Plastics	
• Efforts to Realize a Society Harmonized with Nature .....	11
Relations between ecosystem conservation and corporations	
[Example] Environmental Friendly Initiative—	
Aiming to Develop Products with Low Environmental Impact	
Controlling chemicals contained in products	
Reducing chemicals in the production process	
• Overall Environmental Impact of Business Activities (Fiscal 2021) .....	13
• Environmental Communication .....	14
• Company Overview .....	15

## What We're Aiming For

### Creating a Sustainable Society via Digital and Green Innovations

#### Hitachi Group's long-term environmental goals — "Hitachi Environmental Innovation 2050"



The Hitachi Group has identified 6 important issues ("materialities") in sustainability management. One of them is the environment and as a climate change innovator we provide value to our customers in all business segments with our superior green technologies. We also contribute to achieving a carbon neutral society as we promote recycling and transitioning to a resource circulating economy.

Our "Environmental Vision" elucidates Hitachi's vision for the society it aims for from a long-term perspective, in light of global environmental challenges, including the climate change crisis. We formulated long-term environmental goals with our "Hitachi Environmental Innovation 2050" to achieve this vision, and it calls for creating a "low-carbon society," "a resource efficient society" and "a society harmonized with nature."

Hitachi Global Life Solutions is promoting purpose-based environmental management. We formulate an Environmental Action Plan every three years, based on "Hitachi Environmental Innovation 2050" and we promote activities that integrate products and digital technologies. In order to strengthen these efforts, we established an Environmental Committee, which is chaired by our president and director, in 2022 to study various measures for 2030 and 2050.

To achieve a low-carbon society, we provide products that offer excellent energy-savings and functionality, as well as products, services and solutions that take environmental conservation into account. We are being proactive in increasing in-house power generation by installing solar power systems and purchasing renewable energy, which started with the head office. Expansion to multiple sites in the future is under consideration. Further, we are accelerating the reduction of CO<sub>2</sub> emissions in our production processes by pushing the introduction of highly efficient equipment via our Hitachi Internal Carbon Pricing System.

In addition, in line with the revision of the Act on Rational

Use and Appropriate Management of Fluorocarbons, which came into effect last August, we promptly started working to solve various environmental issues via efforts such as quickly offering our periodic inspection service for the Act on Rational Use and Appropriate Management of Fluorocarbons, as an optional menu item of the Lumada solution, "exiida Remote Monitoring and Predictive Diagnosis."

As part of our efforts to achieve a resource efficient society, we are promoting measures to reduce water consumption and waste in production processes, to increase recycling, and extend life in product life cycles and reduce food loss.

Among which, we are working to promote the construction of foundations for lifestyles in which goods are recycled as resources. To promote the efficient use of resources, we launched sales of refurbished items in the home appliance section of our own EC (electronic commerce) site. We have a plant for recycling home appliances (Kanto Eco Recycle Co., Ltd.) on the premises of our Tochigi Plant, which is a production base, and we have established a system that allows us to engage in the entire process, from manufacturing to recycling. Further, everyone in the Hitachi Global Life Solutions Group is working to build plastic recycling systems for recycling their own home appliance products. As an example of our initiatives to increase the use of recycled plastic in our products, this summer we made a stick vacuum cleaner that uses over 40% recycled plastic. In addition, we have launched products that contribute to reducing food loss, such as smart stockers and camera-equipped refrigerators, which connect to smartphones and help manage food stocks.

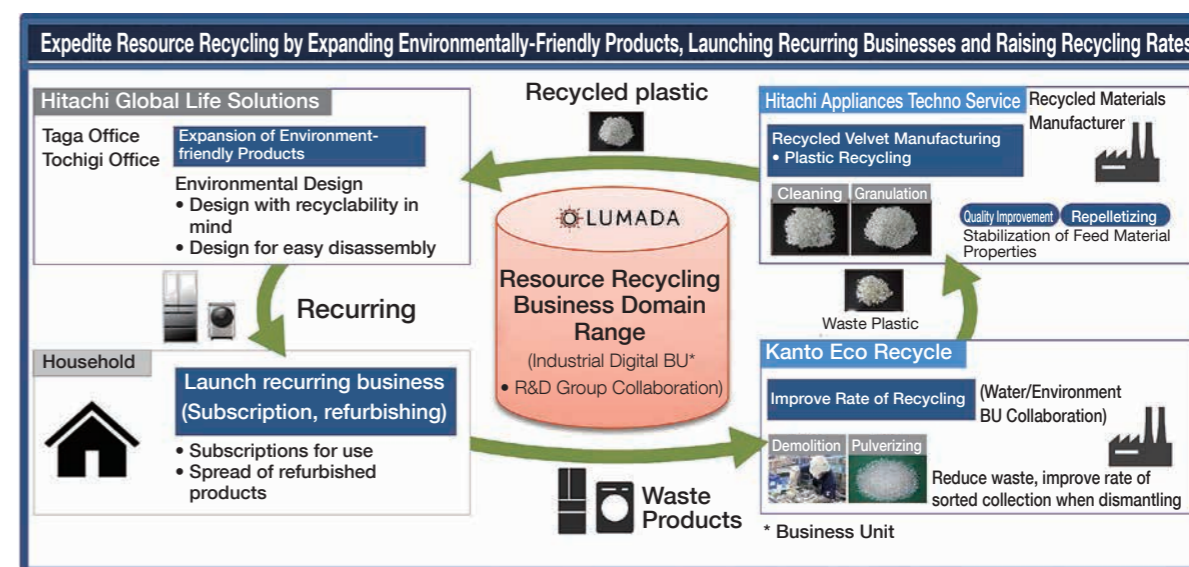
We aim to coexist in harmony with nature by making things in an environmentally friendly way, as we continue to create life solutions that contribute to consumers' quality of life via digital and green innovations, all in our efforts to create a sustainable society that puts a smile on everyone's face.

#### Overview and Goals of "exiida" Air-Conditioning IoT Solution, a Lumada Solution



"exiida" is a coined word that combines "ex" (expansion) + (Internet) + (Individuality) + (Data), and it represents the concept of connecting Hitachi's AC and refrigeration systems to the Internet for taking on the challenge of creating new value.

#### Using Lumada to Build a Resource Recycling Foundation for Home Appliance Business



Reducing the environmental burden of the entire value chain is the key to achieving the SDGs and the goals of “Hitachi Environmental Innovation 2050.” This is a report on the efforts of the group toward becoming a Low-carbon Society, Resource Efficient Society and Society Harmonized with Nature.

### Environmental Management

In order to achieve our Environmental Vision by promoting purpose-based environmental management, we are continuously obtaining ISO14001 certification at individual manufacturing sites. We are also establishing meticulous evaluations of our activities.

#### Environmental Conservation Guidelines

The Group has set its Environmental Conservation Guidelines, to present our policies for environmental conservation efforts concerning industrial activities. The Environmental Conservation Guidelines are based on the Conduct Guidelines of the Hitachi Group as their basic philosophy, and consist of 10 items. The Group considers that one of its top priorities in management is to realize a sustainable society harmonized with the environment under these guidelines, and accordingly has been tackling various environmental actions.

#### Environmental Conservation Guidelines (excerpt)

##### Purpose

In order to realize an environmentally harmonious and sustainable society through products and services, we are promoting global “MONOZUKURI,” which is aimed at reducing environmental burdens of our products throughout their entire lifecycles, and striving for global environmental conservation, to make our contribution to society.

##### Action Guidelines

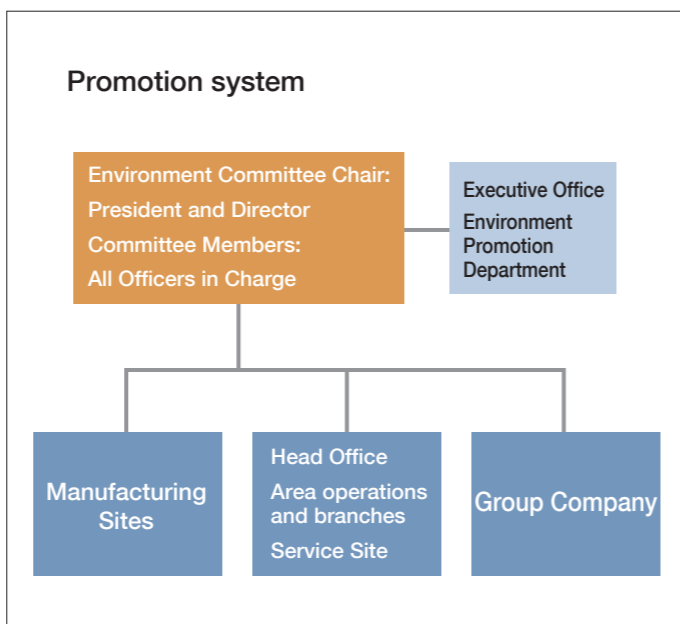
1. Global environmental conservation is a critical challenge shared by all humans. We have set management to realize an environmentally harmonious and sustainable society as one of our management priorities, for fulfilling our social contribution.

#### Promotion system for environmental management

We established an Environmental Committee in April 2022 to bolster our efforts in promoting environmental value enhancement. The president and director is responsible for chairing this committee, while the director of each business vice-chairs it.

The committee deliberates and decides on environmental strategies, policies and action plans, with the goal of steadily benefitting from these strategies and firmly establishing environmental management by promoting company-wide environmental activities. In addition, the committee also discusses measures to prevent environment-related problems, as well as improving operations and environmental activities. Based on the decisions made at these meetings, the Environmental Promotion Dept., manufacturing bases, head offices, branches, service centers and group companies collaborate to promote each measure.

#### Promotion system



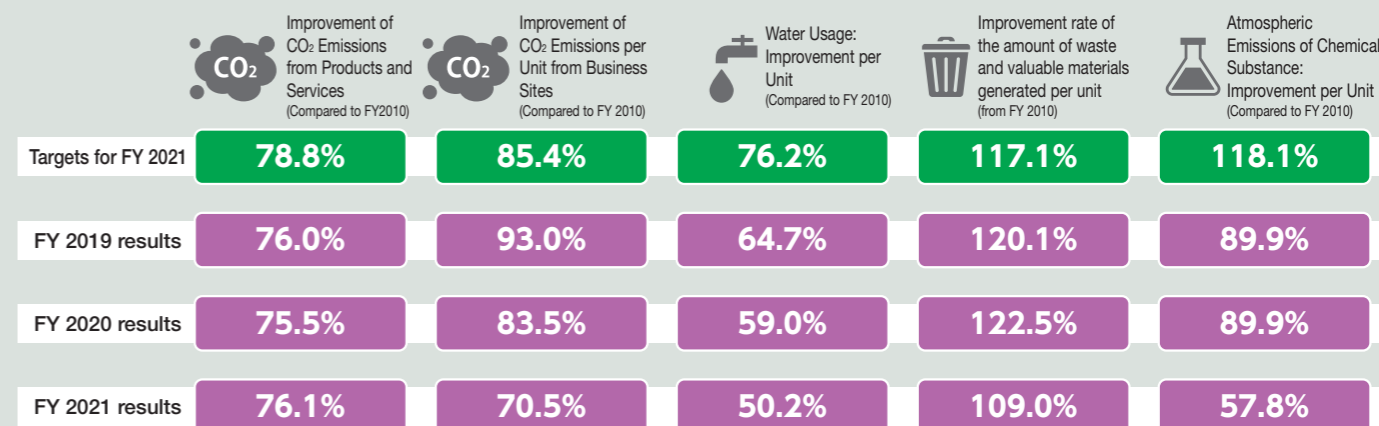
#### Achievements from the 2021 Environmental Action Plan

The Group establishes a concrete Action Plan every three years to achieve its Environmental Vision.

The Hitachi Global Life Solutions Group 2021 Environmental Action Plan (hereafter, 2021 Environmental Action Plan) was a 3-year plan formulated in fiscal 2018, which we worked on from fiscal 2019 to fiscal 2021 in pursuit of our long-term

environmental targets in “Environmental Innovation 2050.” We spearheaded environmental activities under this plan for the 3 years leading up to fiscal 2021, and were able to achieve all of its targets.

#### Main Activities and Achievements from the 2021 Environmental Action Plan



#### 2024 Environmental Action Plan

Hitachi Global Life Solutions has established its targets for the 2024 Environmental Action Plan, which will be implemented over the next three years. Its main initiatives are listed below.

	Action Items and Targets	Target Values		
		2022	2023	2024
Low-carbon Society	Improvement of CO <sub>2</sub> Emissions from Factories and Offices (Compared to FY2010)	18%	17.5%	16.8%
	Improvement of CO <sub>2</sub> Emissions from Products and Services (Compared to FY2010)	68.2%	61.1%	56.7%
Resource Efficient Society	Water Usage Improvement per Unit (Compared to FY2010)	62.4%	62.0%	61.6%
	Valuable Waste Generated Improvement per Unit (Compared to FY2010)	115.7%	114.3%	113.0%
	Landfilling rate of waste	0.3% or Less	0.3% or Less	0.3% or Less
Society Harmonized with Nature	Improvement of Chemical Atmospheric Emissions per Unit (Compared to FY2010)	76.2%	76.1%	76.1%

## Efforts to Realize a Low-carbon Society

Reduction in energy consumption is vitally important for cutting the greenhouse gases which cause global warming, as well as providing services that help reduce customer CO<sub>2</sub> emissions and to reduce CO<sub>2</sub> emissions from services and solutions.

### Improving the environmental performance of products, services and solutions

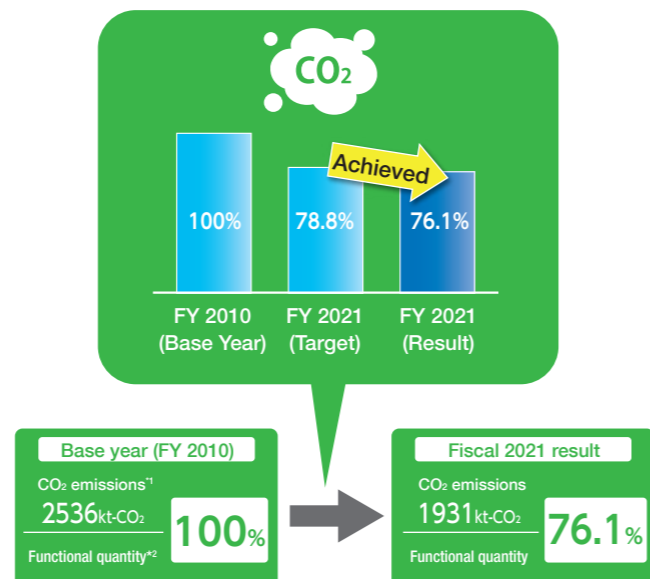
The Group aims to contribute to solving environmental issues by developing and spreading environment-conscious products, as well as solutions and services. One of our actions to that end is to raise the environmental performance of products and promote the widespread application of IoT solutions, such as by enhancing their energy-saving performance.

The assessment subjects are air conditioning IoT solutions as well as refrigerators, washing machines, and LED lighting, which provide high levels of contribution to the suppression of CO<sub>2</sub> emissions (power consumption) during use.

In developing products, we work to achieve functional improvement and environmental burden reduction in tandem, using the functions of equivalent models such as the volume of refrigerators and the wash load of washing machines, etc. as indicators. We are also working to cut CO<sub>2</sub> emissions by expanding sales of products with high energy-saving performance and promoting the widespread application of air conditioning IoT solutions.

The target set for fiscal 2021 was 78.8% compared to the level in fiscal 2010, and we actually surpassed the target at 76.1%.

#### CO<sub>2</sub> Emissions from Products, Services and Solutions with Significant Reduction in CO<sub>2</sub> Emissions (Refrigerators, Washing Machines, LED Lighting and "exiida" Remote Monitoring and Predictive Diagnostics) (Compared to Fiscal 2010)



\*1: Sum of the amount of CO<sub>2</sub> emissions before adopting solutions and services and the amount of CO<sub>2</sub> emissions based on the assumption that a required number of units which corresponds to that of products from the assessment fiscal year were used for the whole lifetime  
\*2: Of main product functions, those relevant to CO<sub>2</sub> emissions

### Reduction of CO<sub>2</sub> due to using renewable energy

#### Initiatives for Achieving Carbon Neutrality

We are working on utilizing renewable energy in the aim of achieving carbon neutrality at our factories by fiscal 2030. As one part of this, we are promoting the installation of solar power systems. In addition to installations at some of our sales offices, we are expanding installations to our manufacturing facilities. We are aiming for a power generating capacity of about 3,000 Kw at two manufacturing sites (Tochigi and Taga Works) for fiscal 2030.



Solar Panel Installation on Roof of R&D Bldg. at Tochigi Plant\*3



Building that contains Hitachi Global Life Solutions HQ (exterior)

All the electricity for the lighting and AC of our Hitachi Global Life Solutions headquarters has been switched to power from renewable energy sources.\*4

This is expected to reduce CO<sub>2</sub> emissions by about 660 tons\*5/year.

\*3 Started operating July 2022

\*4 Started operating October 2022

\*5 Calculated from annual electric consumption of 2021

The Group reduces energy during product use by providing customers with products that offer greater energy saving performance, as well as providing services that help reduce customer CO<sub>2</sub> emissions. At the same time, we are working to reduce the energy consumed in our production processes

### Reducing CO<sub>2</sub> emissions in the production process

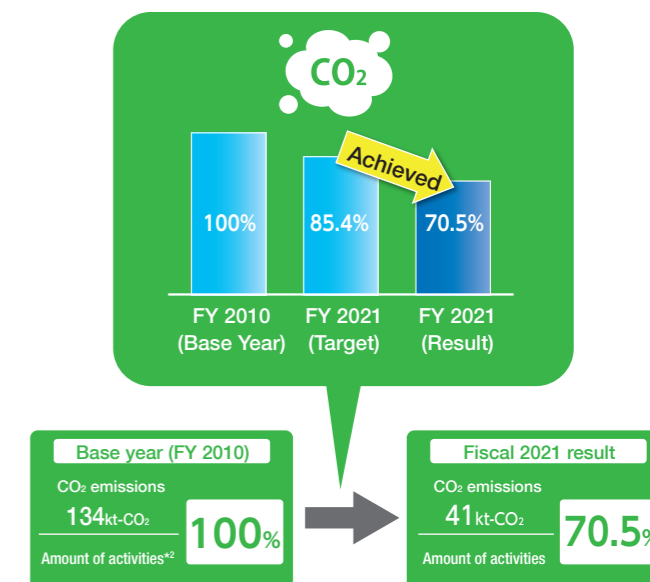
Energy consumption in corporate activities is one emission source of carbon dioxide (CO<sub>2</sub>) and other greenhouse gases that cause global warming.

The Group also uses energy when producing products. It therefore promotes the efficient use of energy consumed in its production activities by means such as the introduction of high-efficiency devices, and the amelioration of the production process.

We have been working since 2019 on meeting action plan targets, such as the level of CO<sub>2</sub> emissions/unit of production\*1; the target set for fiscal 2021 was 85.4% of the level in fiscal 2010, and we actually surpassed the target at 70.5%.

[Subject: Hitachi Global Life Solutions Manufacturing Sites]

#### Improvement of CO<sub>2</sub> Emissions/Unit of Production (compared to fiscal 2010)



\*1: Quotient of CO<sub>2</sub> emissions divided by the amount of activities

\*2: Value with close correlation to CO<sub>2</sub> emissions (such as production and quantity produced)

### Using the Hitachi Internal Carbon Pricing System

#### Reducing CO<sub>2</sub> Emissions by Installing High Efficiency Equipment Utilizing the Hitachi Internal Carbon Pricing (HICP) System

We have been introducing our Hitachi Internal Carbon Pricing (HICP) system since fiscal 2019 to promote CO<sub>2</sub> reductions from our factories and offices.

The HICP system aims to expand capital investments for CO<sub>2</sub> reduction even further by providing incentives, such as setting internal carbon pricing referenced to global emissions trading and carbon taxes, converting the effect of CO<sub>2</sub> reductions due to decarbonization investments into monetary values, and evaluating the efficacy of investments by adding it to the effect of energy reductions.

The Taga factory made use of this HICP system to install an automatic control system for air compressors, which power a variety of equipment in its manufacturing processes. The system has eliminated wasteful operation and led to a major reduction in electrical consumption. Translating this into reduced CO<sub>2</sub> emissions means a drop of about 9%\*3.

\*3 As of October 2021 (compared to fiscal 2020)



High Efficiency, Auto Controlled Air Compressor System Installed at Taga Factory

## Efforts to Realize a Resource Efficient Society

To address environmental issues, such as depletion of resources, the problem of waste, water shortages, etc., the resource-efficient manufacturing, and reduced water use and waste from production processes, as we improve

Group promotes measures like encouraging product recycling, increased use of recycled plastics, the efficiency of water and resource use and work toward full-cycle oriented manufacturing.

### Reducing water consumption in the production process

Water resources are faced with a shortage of household and agricultural water due to population growth, ground subsidence stemming from the pumping-up of groundwater, and other issues involving various aspects.

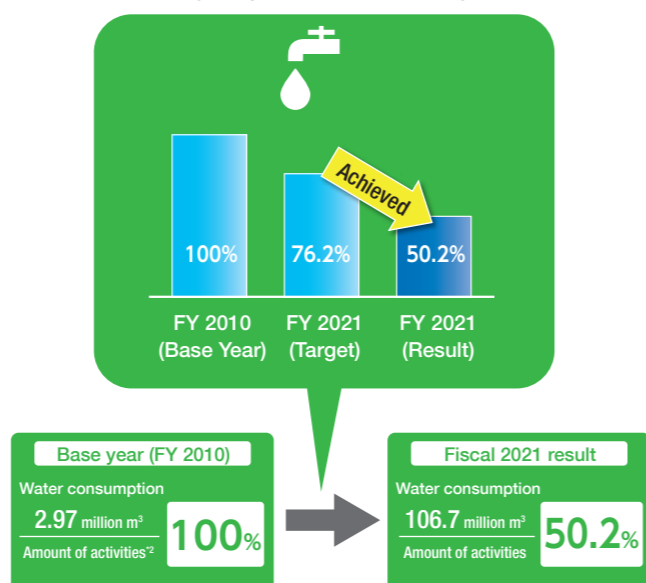
Our group uses water in our production processes, such as for product testing, facility cooling and painting processes. To help solve problems related to water resources, the Group as a whole promotes the reduction of water consumption in our production processes.

We have been working on meeting action plan targets, such as the amount of water used per unit<sup>\*1</sup>; the target set for fiscal 2021 was 76.2% of the level in fiscal 2010, and we actually surpassed the target at 50.2%.

Major measures include the checking of leaks by patrols, promptly dealing with any leaks found, and ongoing efforts to augment the control of water consumption via visualization of how it is used, as well as reusing wastewater. We will continue to further our reduction efforts.

[Subject: Hitachi Global Life Solutions Manufacturing Sites]

Water Usage Improvement per Unit  
(Compared to Fiscal 2010)



<sup>\*1</sup>: Quotient of water consumption divided by amount of activities  
<sup>\*2</sup>: A value linked closely to water consumption (such as production and quantity produced)

### Reducing waste in the production process

Resource issues due to economic development and population growth are common worldwide, and actions are being demanded to control the mass consumption of resources and the large quantities of waste.

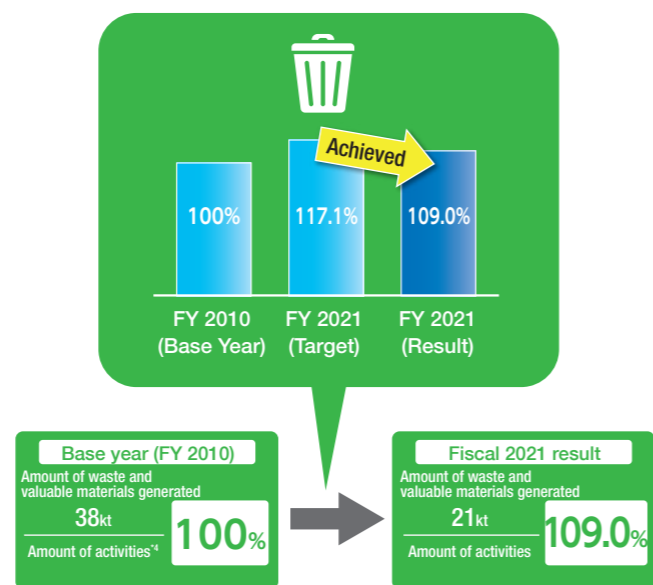
Even within the Group, the manufacturing of products generates waste materials, as well as unwanted but salable materials (valuables), so we are working to suppress the production of such materials. From fiscal 2019, based on our long-term environmental goals, we are working to achieve new goals that assumed the standard to be 2010.

We have been working on meeting action plan targets, such as the amount of valuable waste generated per unit<sup>\*3</sup>; the target set for fiscal 2021 was 117.1% of the level in fiscal 2010, and we actually surpassed the target at 109.0%.

For fiscal 2022, we will continue efforts to reduce the amount of valuable waste generated, based on the new environmental action plan.

[Subject: Hitachi Global Life Solutions Manufacturing Sites]

Valuable Waste Generated Improvement per Unit  
(Compared to FY2010)



<sup>\*3</sup>: Quotient of the amount of waste and valuable materials divided by the amount of activities  
<sup>\*4</sup>: A value linked closely to the amount of waste and valuable materials (such as production and quantity produced)

### Promoting product recycling

The Home Appliance Recycling Law mandates that manufacturers recycle end-of-life home appliances which they manufactured in four product categories (room air conditioners, TVs, refrigerators and freezers, and washing machines and clothes dryers). The Law also sets recycling rate<sup>\*1</sup> standards for each product and mandates manufacturers to attain recycling rates above the standards.

The Group established Kantou Eco Recycle Co. Ltd. in 1999 to comply with the Law. In conjunction with 4 other companies (Group B)<sup>\*2</sup> in the same industry, our company is also working to develop recycling technologies and to build and operate efficient recycling systems on a national scale.

As a result of these efforts, the recycling rates of our used home appliances in fiscal 2021 were 80% for refrigerators/freezers, 94% for washing machines/clothes dryers, 74% for CRT TVs, and 86% for LCD and plasma TVs, achieving recycling rates that exceed the legal standards.

In addition, we are contributing to improving the rate of recycling via full-scale operation of refrigerator glass door separators, which we developed in-house. We are also actively promoting initiatives for home appliances, such as the rental business and the sale of refurbished items.

<sup>\*1</sup>: Evaluated by the percentage of used home appliances collected by the manufacturer, etc., that are transferred as parts and raw materials for a fee or for free, by weight. Legal standards for recycling rates: 70% for refrigerators and freezers, 82% for washing machines and clothes dryers, 55% for CRT TVs, and 74% for LCD and plasma TVs.  
<sup>\*2</sup>: Sharp Corporation, Sony Corporation, Fujitsu General Limited, Mitsubishi Electric Corporation, Hitachi Global Life Solutions, Inc. (five companies in total)

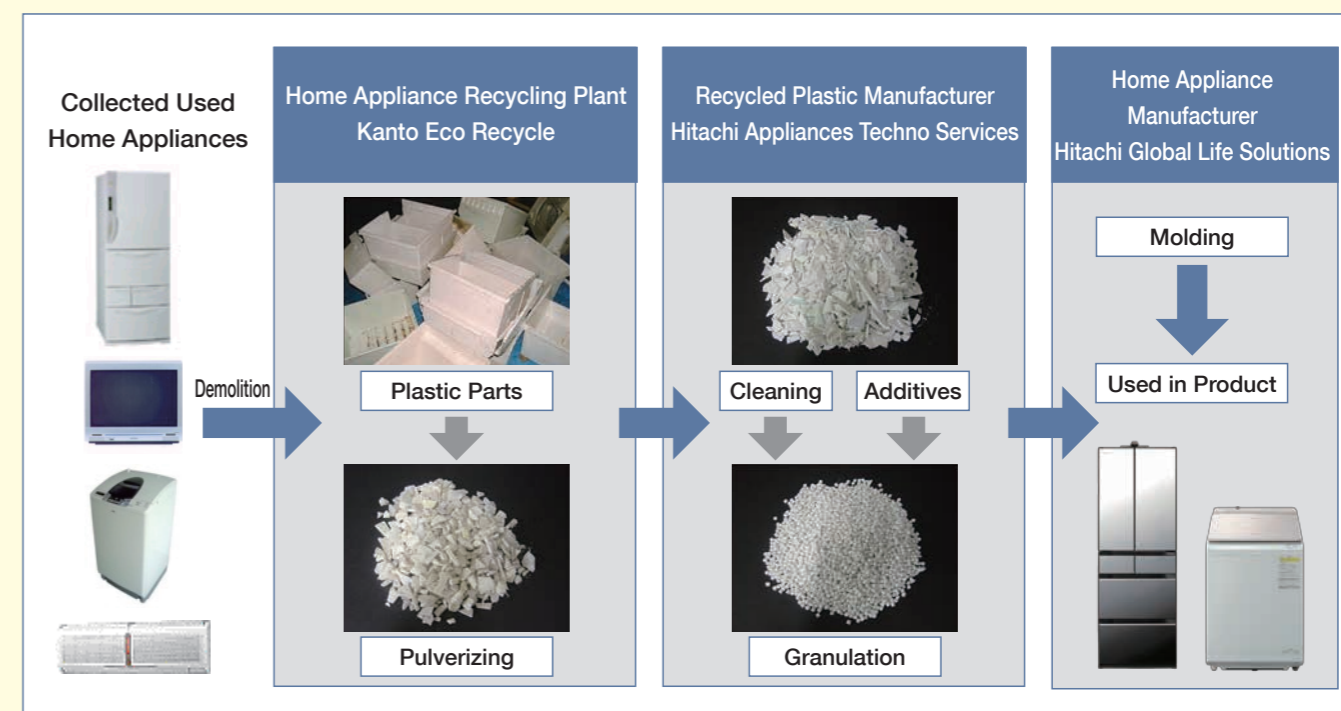
### Expanded Use of Recycled Plastics

As one route for procuring recycled plastics, we have established a plastics processing facility at a Group company on one of our business sites and it processes high-functionality and recycled plastic materials.

The recycled plastics are recycled as raw materials, which come mainly from used home appliances and are used as-is, or blended with additives to compensate for loss of strength, for thermal degradation prevention and/or other required functions.

For example, large parts from washing machines (such as the base of the frame) used to be made from a mixture of recycled and new materials, but since fiscal 2020, we have been using recycled materials almost exclusively, with the exception of additives.

In the future, we will expand the use of recycled materials further to promote resource recycling in our products.



\*Recycled plastics are also purchased from sources other than the Hitachi Global Life Solutions Group.

## Efforts to Realize a Society Harmonized with Nature

Promoting our business activities has a considerable effect on the ecosystem. As part of its ecosystem conservation work, the Group practices proper management of chemical substances which could potentially impact ecosystems. It is also committed to reducing chemical emissions in its production processes.

### Relations between ecosystem conservation and corporations

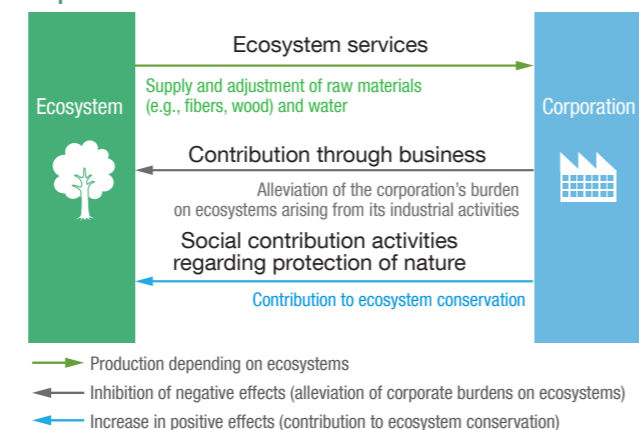
Our life is based on the various benefits of nature ("ecosystem services") provided by air, water, soil, animals, plants, and other natural capital. To achieve a society that can coexist with nature, so we can enjoy its blessings into the future, Hitachi has set a goal of minimizing its impact on natural capital in its "Long-term Environmental Goals."

We categorize our business activities as either having a "negative impact" in terms of emissions of greenhouse gases or chemical substances into the atmosphere, and generation of waste, or a "positive impact," in terms of providing goods and services that contribute to ecosystem conservation or social contribution activities related to protecting nature, including biodiversity and ecosystems. We are working to minimize the difference between the two by 2050.

The Group also affects ecosystems to a certain extent in all value chains, including the procurement of raw materials, product manufacturing, and use of energy for transporting materials and products.

Therefore, we at the Group work to maintain and recover ecosystem services by means of contribution through business, and by social contribution activities regarding protection of nature.

#### Relations between ecosystem conservation and corporations



Of these activities, "contributing via business" includes promoting design and production activities that reduce the burden on ecosystems, as well as providing solutions that contribute to reductions in CFC emissions and products with a low environmental impact. We also control chemical substances properly by positioning such control as part of ecosystem conservation activities.

### Controlling chemicals contained in products

As part of its ecosystem conservation activities, the Group manages the chemicals contained in materials and parts, etc. This activity starts from the product development and design stage and extends through the procurement of materials and parts, to all stages of product manufacturing. The management of chemicals is particularly important in procurement, and our management is particularly stringent, in line with the Hitachi Group Green Procurement Guidelines, which is published by the Hitachi Group. We work in cooperation with our suppliers to investigate the content of chemicals in the parts and materials

built into products, and also the oils used in manufacturing processes, and all other purchased materials used in production. And based on J-Moss<sup>\*1</sup>, the Group discloses information about the inclusion of chemicals in products to outside parties through its website. <sup>\*2</sup>

<sup>\*1</sup>: A common designation for JIS C 0950 (Marking for the presence of specific chemical substances for electrical and electronic equipment)  
<sup>\*2</sup>: For refrigerators, washing machines and clothes dryers, microwave ovens, and air conditioners

#### Overview of the management of chemicals contained in products



### Environmental Friendly Initiative—Aiming to Develop Products with Low Environmental Impact

Our company promotes manufacturing that contributes to a resource-recycling society. Specifically, we work to design and develop products themselves to be lower in weight and volume, that save energy and resources during use, and that promote long-term use, while facilitating manual disassembly, sorting and disposal.



Cordless Stick Vacuum Cleaner PV-BH900J

We responded to a market trend toward lighter weight via steps like reducing the size of the new fan motor, even while maintaining a wide variety of tools and convenient functions, and enhancing suction power.



Vertical Washer/Dryer BW-DX100G

We provide information on use and maintenance via smartphone. We also added a function that allows users to download new washing courses not built into the main unit, so it can be used long-term.

And we have put on the market<sup>\*1</sup> a cordless stick vacuum cleaner<sup>\*2</sup> whose plastic is more than 40% recycled. We have also taken recyclability into account, such as by eliminating secondary processes as much as possible, like painting and printing, which result in foreign substances. Such products have received the Good Design Gold Award<sup>\*3</sup>.

<sup>\*1</sup> Product launched in August 2022  
<sup>\*2</sup> For plastic materials used in parts such as the handle cover of the product body and the included charging stand, the ratio by mass of recycled plastic is 40% or higher  
<sup>\*3</sup> Award received in October 2022; conducted by Japan Institute of Design Promotion



Cordless Stick Vacuum Cleaner PV-BH900SK

A challenge in designing this product was replacing many of its parts, including exterior components, with recycled plastic, while maintaining the quality of its exterior. We adopted a dark color scheme that doesn't show dirt, and used different resins and surface treatments to achieve a high-quality feel, while using over 40% recycled plastic.

### Reducing chemicals in the production process

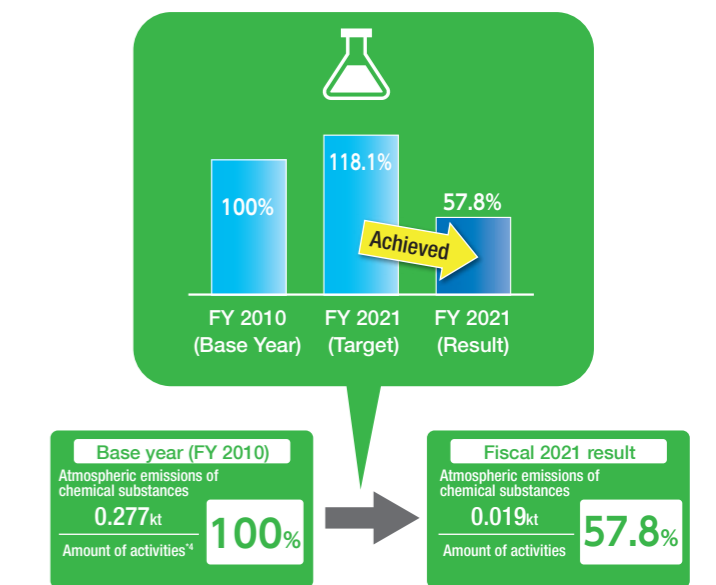
To prevent atmospheric pollution, the Group practices proper management of chemicals, and is working to reduce emissions of Volatile Organic Compounds (VOCs), etc. from its factories.

We have been working on the action plan target of improving the amount of chemical atmospheric emissions per unit<sup>\*3</sup>. The target set for fiscal 2021 was 118.1% compared to the level in fiscal 2010, and we greatly surpassed the target at 57.8%.

For fiscal 2022, we will continue efforts to reduce the amount of chemical atmospheric emissions, based on the new environmental action plan.

[Subject: Hitachi Global Life Solutions Manufacturing Sites]

#### Improvement in Chemical Atmospheric Emissions per Unit (compared to fiscal 2010)



<sup>\*3</sup>: Quotient of chemical substance emissions into the atmosphere divided by the amount of activities  
<sup>\*4</sup>: A value linked closely with the atmospheric emissions of chemical substances (such as the amount of chemical substances handled and their production)

## Overall Environmental Impact of Business Activities (Fiscal 2021)\*1

An overall picture of the amount of resource (energy, resources, etc.) inputs for business activities in fiscal 2021 and their resulting environmental impacts (greenhouse gases, waste, etc.) are shown below.

INPUTS (Amount of Input Resources)		OUTPUTS (Environmental Impact Emitted)	
Energy Input (Crude Oil Equivalents)	25.0ML (947TJ)	Greenhouse Gas Emissions <sup>5</sup>	43.7kt-CO <sub>2</sub> e <sup>6</sup>
<b>Renewable Energy</b>		CO <sub>2</sub> emissions <sup>*7*8*9</sup>	43.6kt-CO <sub>2</sub>
Electricity (Generated In-house)	0.4GWh (5TJ)	Hydrofluorocarbons (HFC)	0.023kt-CO <sub>2</sub> e
<b>Non-renewable Energy</b>			
Electric Power	88.8GWh (868TJ)		
Gas (Natural)	0.5 million m <sup>3</sup> (22TJ)		
Gas (LPG, LNG, etc.)	0.9kt (42TJ)		
Fuel oil (heavy, light, etc.)	0.4ML (11TJ)		
<b>Raw Material Inputs<sup>*2</sup></b>		<b>Valuable Waste Generated<sup>*4</sup></b>	<b>27.3kt</b>
Metal	48.0kt	Amount reduced	4.4kt
Plastic <sup>*3</sup>	39.4kt	Amount recycled	19.5kt
Other materials <sup>*3</sup>	17.4kt	Amount to landfill	3.4kt
<b>Chemical Inputs</b>		<b>Chemical Substances Emitted/Transferred</b>	<b>0.1kt</b>
PRTR chemical substances handled	0.7kt	Amount of chemical substances subject to PRTR emitted/transferred	0.1kt
<b>Water Resource Inputs<sup>*4</sup></b>		<b>Total wastewater<sup>*10</sup></b>	<b>1.294 million m<sup>3</sup></b>
<b>Surface water</b>		Public water	1.002 million m <sup>3</sup>
Tap water (potable and other domestic water)	96,000 m <sup>3</sup>	Sewerage	117,000 m <sup>3</sup>
Industrial and/or river water	104,000 m <sup>3</sup>	Underground seepage, evaporation, etc.	115,000 m <sup>3</sup>
Groundwater	1.095 million m <sup>3</sup>	<b>Water Quality</b>	
		Biochemical Oxygen Demand (BOD)	0.0042kt
		Chemical Oxygen Demand (COD)	0.0039kt

Business Activities



Scope: Hitachi Global Life Solutions Group sites. However, for inputs of raw materials and chemical, and emissions/transfers of chemicals, the scope is manufacturing sites of Hitachi Global Life Solutions.

\*1 The total may vary from sums of items due to rounding.

\*2 Amounts of raw material inputs are the amounts of raw materials and materials purchased from external suppliers. Parts, semi-finished products and finished products are not included.

\*3 "Plastics" includes recycled plastics and packaging materials. "Other materials" includes containers and packaging materials.

\*4 For sites unable to determine amounts of water resource inputs and valuable waste generated, estimates are based on data from sites able to determine them.

\*5 Total of Scope 1 and Scope 2. No emissions of CO<sub>2</sub>, CH<sub>4</sub>, N<sub>2</sub>O, PFC, SF<sub>6</sub>, or NF<sub>3</sub> of a non-energy origin, based on the Law Concerning the Promotion of the Measures to Cope with Global Warming.

\*6 CO<sub>2</sub> emission equivalent

\*7 Gas and fuel conversion factors are based on the "Table of Calculation Methods and Emissions Factors in the Calculation, Reporting and Publication System," compiled by the Ministry of the Environment.

\*8 CO<sub>2</sub> emissions are the sum of Scope 1 and Scope 2 resulting from the use of energy. Emissions from renewable energies are assumed to be zero.

\*9 CO<sub>2</sub> emissions from electricity use are calculated based on market standards. Electricity CO<sub>2</sub> emissions coefficients are based on the adjusted emission coefficient for each electric power utility, as per the Law Concerning the Promotion of the Measures to Cope with Global Warming.

\*10 For sites where wastewater discharge cannot be determined, the amount of water input is used as the wastewater discharge.

## Environmental Communication

The Group recognizes that it is important to interact with its actual and potential consumers, distributors, suppliers, members of the community near its works, employees, their families, and many other stakeholders. In the future we will communicate more proactively as we promote our environmental activities.

### Disseminating information to stakeholders

Disseminating information to stakeholders is vitally important in working towards a sustainable society. The Group discloses environmental information appropriately through environmental reporting. We also disseminate information to suppliers and customers through briefings to trading partners, websites, and other channels.

### Disseminating information to suppliers

The Group investigates chemical contents of materials and parts, in line with the Hitachi Group Green Procurement Guidelines, which is published by the Hitachi Group, in order to manage those chemical contents. Such investigation requires the understanding and cooperation of its suppliers, so that the Group holds a briefing session for its suppliers when necessary,

thereby seeking their understanding and collaboration. During briefings, we explain our Green Procurement Guidelines, the latest trends in laws and regulations governing chemical substances in each country and the methods for analyzing chemical substances contained in products.

### Disseminating information to customers

In our catalogs, etc., we strive to clearly convey information on the energy-saving performance of products, so that customers can make suitable choices of energy-saving products. Specifically, we clearly state the energy saving standard attainment rates and annual power consumption for products which have high power consumption, such as refrigerators. We also explain where energy-saving technologies are used.

The Group also strives to help its customers save electric energy by presenting the points of effective energy saving that they can follow at home through its websites, where such information is summarized for each product.

### Scope of Environmental Report

- Applicable period  
Fiscal 2021 (April 1, 2021 to March 31, 2022)
- Applicable organization  
Hitachi Global Life Solutions, Inc. and its consolidated subsidiaries
- Method of setting data for the reference year  
See JIS Q 14064-1: 2010 (Greenhouse Gases – Part 1: Specifications and Guidelines for Quantifying and Reporting the Emission and Absorption Levels of Greenhouse Gases in Organizations).
- Guidelines referred to  
GRI Standards (GRI Sustainability Reporting Standards)



## Company Overview

Company name	Hitachi Global Life Solutions, Inc.
Main business	Providing sales, engineering, and maintenance services for home electric appliances, air conditioning equipment, and other equipment, and providing products and solutions which apply digital technologies.
President and Director	Hideki Osumi
Capital stock	20 billion yen (Hitachi, Ltd. 100%)
Established	April 1, 2019 (Registered establishment date: November 26, 1998)
Annual Sales [Consolidated Basis]	396.6 billion yen (for the fiscal year ended March 31, 2021)
Consolidated number of employees	Approx. 5,500 people (as of March 2022)
Manufacturing sites	Tochigi Works and Taga Works
Website	<a href="https://corp.hitachi-gls.co.jp/">https://corp.hitachi-gls.co.jp/</a>

## Group Companies

- Hitachi Appliances Techno Service, Ltd.
- Hitachi Air Conditioning Solutions Co., Ltd.
- Niigata Hitachi Co., Ltd.
- Kanto Eco Recycle Co., Ltd.

## Companies under the equity method

- Johnson Controls-Hitachi Air Conditioning Holding (UK) Ltd.
- Arçelik Hitachi Home Appliances B.V.

## Contact Address

### Hitachi Global Life Solutions, Inc.

#### Brand Communication Unit, Environment Promotion Department

Hitachi Atago Bldg., 15-12, Nishi Shimbashi 2-chome, Minato-ku, Tokyo 105-8410 Japan  
TEL: +81-3-3502-2111



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