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➤ Hitachi's Aims

The world's population, which was 7.3 billion in 2015, is projected to grow to 9.7 billion by 2050 and to 11.2 billion by 2100.*1 Global GDP is also continuing to expand—led by emerging economies—aggravating a host of environmental problems, including global warming caused by higher CO₂ emissions from fossil fuel consumption, the depletion of resources due to increased demand, and ecosystem destruction. Global-scale efforts are being made to develop approaches that lighten the burden on the environment so that a prosperous planet can be passed on to future generations.

Hitachi strives to achieve a more sustainable society by addressing environmental problems, which pose a major challenge for society, based on its corporate mission of contributing to society through the development of superior, original technology and products.

*1 According to *World Population Prospects: The 2015 Revision*, published by the United Nations.

Main Plans and Results

Policies	FY 2015 goals/plans	Results in FY 2015	Achievement level	FY 2016 goals/plans
<ul style="list-style-type: none"> Expansion of Hitachi Eco-Product lineup (through fiscal 2015) Improvement in environmental performance of products and services (from fiscal 2016) 	<ul style="list-style-type: none"> Achieve Eco-Product sales ratio of 90% 	<ul style="list-style-type: none"> Achieved Eco-Product sales ratio of 95% 	★★★	<ul style="list-style-type: none"> Reduce CO₂ emissions from use of products and services by 30% (compared to fiscal 2010)
<ul style="list-style-type: none"> Promotion of improved energy efficiency in factories and offices 	<ul style="list-style-type: none"> Reduce energy use per unit by 15% 	<ul style="list-style-type: none"> Reduced energy use per unit by 16% 	★★★	<ul style="list-style-type: none"> Reduce energy use per unit by 15% (compared to fiscal 2005)

★★★: Achieved ★★: Partially achieved ★: Not achieved

① Promoting Environmental Management	69	① Reducing the Environmental Burden of Our Business Operations (Fiscal 2015 Results)	82
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Promoting Environmental Management

Hitachi's Approach

Hitachi faces a broad range of challenges regarding its products and services, such as reducing carbon emissions and improving resource efficiency across the value chain. At the same time, given the expectations of society, innovations that help resolve environmental issues present major business opportunities.

Guided by our Environmental Vision, we have formulated a set of long-term environmental targets called Hitachi Environmental Innovation 2050 to guide our environmental initiatives from a broader and longer-term perspective. The Environmental Action Plan for 2018 lays out specific activity areas and improvement targets for achieving our Environmental Vision and long-term environmental targets. Aligning this with the 2018 Mid-term Management Plan, we will promote Group-wide efforts to achieve the targets set forth in the Environmental Action Plan, thereby practicing environmental management in a manner that meets the expectations of society.

Hitachi's Environmental Vision and Long-Term Environmental Targets

Hitachi's Environmental Vision

As global warming, resource depletion, ecosystem destruction, and other environmental issues grow more serious, companies face increasing demands and expectations to reduce the environmental burden of their business activities.

The Intergovernmental Panel on Climate Change (IPCC) concluded in the Synthesis Report of its *Fifth Assessment Report*, issued in November 2014, that limiting global warming "below 2°C relative to pre-industrial levels" would require "40 to 70% global anthropogenic GHG emissions reductions by 2050 compared to 2010." The Paris Agreement adopted in December 2015 at the 21st Conference of the Parties (COP21) to the United Nations Framework Convention on Climate Change set ambitious targets, including a global long-term target of keeping global warming to below 2°C and efforts to limit the increase to 1.5°C. Long-term environmental targets have also been set in the Sustainable Development Goals (SDGs)—the centerpiece of the 2030 Agenda for Sustainable Development, adopted by the United Nations in 2015.

In the light of these global trends and our own management policy, we created an Environmental Vision to better define the kind of society that Hitachi envisions from a long-term perspective.

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.

Setting Long-Term Environmental Targets: Hitachi Environmental Innovation 2050

Our Environmental Vision envisions a low-carbon society; a resource efficient society; a harmonized society with nature. To achieve such a sustainable society, we have reviewed the contents of our long-term Environmental Vision 2025, which we have been promoting until now, and newly established a set of long-term environmental targets called Hitachi Environmental Innovation 2050.

Hitachi Environmental Innovation 2050

Low-carbon society

Achieve 50% reductions in CO₂ emissions by fiscal 2030 and **80% reductions** by fiscal 2050 across the value chain (compared to fiscal 2010)

Resource efficient society

- **Build a society that uses water and other resources efficiently**
- **Achieve 50% improvement** in usage efficiency of water and other resources by fiscal 2050 (compared to fiscal 2010 in the Hitachi Group)

Harmonized society with nature

- **Minimize** the impact on natural capital



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Low-carbon society

The target aims for an 80% reduction in CO₂ emissions compared to fiscal 2010 levels by fiscal 2050, going over and beyond the targets set forth in the IPCC's *Fifth Assessment Report*. We will reduce CO₂ emissions arising from the use of Hitachi's products and solutions, which account for over 90% of emissions in our value chain. We will contribute to our customers and society by developing innovative technologies and solutions, as well as enhancing the efficiency of our products and supplying low-carbon energy. At the same time, we will also work to cut down on emissions at the *production* stage.

Resource efficient society

Together with our customers and society, we will do our utmost through our business operations to help build a society that uses water and other resources efficiently. We will expand circulative use of water by further advancing the entire range of water treatment technologies involved in water use from seawater desalination and other forms of fresh water generation to sewage treatment.

We will also improve our usage efficiency of water and other resources by 50% compared to fiscal 2010 levels by fiscal 2050. To that end, we will create products that last longer and use less resources, make thoroughgoing efforts to collect and recycle used products, reduce the volume of water used in the production process as well as purifying and reusing water, and engage in other efforts.

Harmonized society with nature

We will strive to minimize Hitachi's impact on natural capital, which bestows the benefits of nature on humankind. We will assess ecosystem impact and advance measures to minimize the burden at each stage of Hitachi's value chain. Moreover, we will preserve the ecosystem through our products and services, such as our air and water purification systems and environmental monitoring systems. We will also endeavor to minimize the environmental burden of our factories and offices.

The Hitachi Action Guidelines for Environmental Conservation

The Action Guidelines for Environmental Conservation were drawn up to show the direction of our business management initiatives for environmental protection as we set out to realize the Hitachi Environmental Vision.

The Hitachi Action Guidelines for Environmental Conservation

Environmental Action Plan for 2018

Hitachi is pressing forward with activities in accordance with its Action Guidelines for Environmental Conservation in order to achieve its Environmental Vision and its Hitachi Environmental Innovation 2050 long-term environmental targets. Toward this end, we are steadily promoting environmental activities through the implementation and sustained improvements of the detailed environmental initiatives and targets set forth in our Environmental Action Plan. To give our environmental strategy a more prominent role in our management strategy, we revise the Environmental Action Plan every three years to align it with the Mid-term Management Plan for the Hitachi Group.

In keeping with the 2018 Mid-term Management Plan, which begins in fiscal 2016, we have formulated the Environmental Action Plan for 2018 with a view to further reinforcing our environmental activities from a global perspective. We will advance our environmental activities over the next three years through fiscal 2018 under this plan.

Environmental Action Plan for 2018: Targets

Under the Environmental Action Plan for 2018, the following main targets have been established for fiscal 2016, which is the first year of the plan, and fiscal 2018, the final year.

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Items	Indicators	Fiscal 2016 targets	Final fiscal year (2018) targets
Strengthen global environmental management	Voluntary implementation of environmental monitoring by business units and Group companies at overseas business sites (implementing sites/total targeted)	20%	80% or higher (cumulative total)
Raise the level of environmental activities	Green points (GPs) under the GREEN21-2018 environmental activity index	240 GPs	480 GPs

Products and Services

Item	Indicator	Fiscal 2016 target	Final fiscal year (2018) target
Improve environmental performance	Rate of reduction in CO ₂ emissions from use of products and services (base: FY 2010)	30%	40%

Factories and Offices: Prevent Global Warming

Item	Indicator	Fiscal 2016 target	Final fiscal year (2018) target
Reduce energy use	Reduction in energy use per unit (base: FY 2005)	15%	17%

Factories and Offices: Use Resources Efficiently

Items	Indicators	Fiscal 2016 targets	Final fiscal year (2018) targets
Reduce waste generation	Reduction in waste and valuables generation per unit (base: FY 2005)	12%	14%
Enhance efficiency of water usage	Reduction in water use per unit (base: FY 2005)	23%	27%



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Factories and Offices: Manage Chemical Substances

Item	Indicator	Fiscal 2016 target	Final fiscal year (2018) target
Reduce emissions of chemical substances	Reduction in atmospheric emissions of chemical substances per unit (base: FY 2006)	34%	36%

Ecosystem Preservation

Item	Indicator	Fiscal 2016 target	Final fiscal year (2018) target
Contribute to ecosystem preservation	New ecosystem preservation activities implemented	30	600

Partnership with Stakeholders

Item	Indicator	Fiscal 2016 target	Final fiscal year (2018) target
Make social contributions through environmental activities	Activities implemented in such areas as environmental education, information exchange, ecosystem preservation through afforestation, etc., community contribution through cleanup projects, etc., campaigns to turn off lighting, and community energy-saving activities	800	2,400 (cumulative total)

Products and Services

Hitachi will launch new initiatives in fiscal 2016 to help address environmental issues through the development and popularization of products and services of high environmental value.

Until now, we have been promoting the development and expansion of environmentally conscious Eco-Products. To turn environmental value into the creation and expansion of business opportunities, however, it is important to indicate more clearly how this leads to added value for our customers. This is why the Environmental Action Plan now calls for improvements in the environmental performance of Hitachi products and services. The reduction rate of CO₂ emissions from the use of our products and services and the reduction rate of resource use over the life cycle of products and services are now used as indicators for achieving both functional improvements and reduced environmental burden in products and services. We now seek to achieve a target of a 40% reduction in CO₂ emissions compared to fiscal 2010 levels by fiscal 2018 for products that contribute highly to the resolution of environmental issues.

Thanks to the use of the Assessment for DfE (Design for Environment) to evaluate the conformity of our products and services with standards for environmentally conscious design, moreover, the percentage of Eco-Product sales in total product sales exceeded 95% in fiscal 2015. This is an indication that the initiative for environmentally conscious

Eco-Products has sufficiently taken root. To take our environmental considerations to an even higher level, we have formulated a new Environmentally Conscious Design Assessment based on the IEC 62430*1 international standard. Beginning in fiscal 2016, we will carry out Environmentally Conscious Design Assessment on products and services involving a design process in our design and development activities.

*1 The standard developed by the International Electrotechnical Commission concerning environmentally conscious design for electrical and electronic products.

Factories and Offices

Hitachi engages in efforts to reduce the environmental burden of its operations through the efficient use of energy and resources in the production process. We have created key performance indicators (KPIs) for energy usage, as well as to gauge our operational efficiency in terms of improved ratios of waste volume, water usage, and atmospheric emissions of chemical substances per unit, and are systematically working to achieve our targets while regularly monitoring our progress in each of these areas.

In addition to continued efforts encouraging factories and offices to have a high level of environmental consciousness, the Environmental Action Plan for fiscal 2016 to 2018 includes new targets reflecting emerging social concerns. By setting these targets, we aim to promote manufacturing activities with less environmental burden on a global basis.

With respect to the target of mitigating global warming, we will curb CO₂ generation by installing more energy-efficient equipment and increase renewable energy use. To meet the target of making more effective use of resources, and address environmental problems caused by natural resource depletion and waste materials, we will work to reduce the volume and promote the recycling of waste generated by our business activities, thereby contributing to the formation of a resource-efficient society. To deal with water-associated risks, meanwhile, we will increase the efficiency of water usage by gaining an accurate grasp of current conditions and enhancing water risk management. And for the target of appropriate management of chemical substances, we will minimize emissions of substances that affect humans and ecosystems by improving production processes and switching to alternative substances. At companies that have newly joined the Hitachi Group, we will reduce their environmental burden and promote environmentally conscious production by sharing these goals with them and applying the goals to their operations.



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Environment Enhancing Environmental Management on an Ongoing Basis

Enhancing Environmental Management on an Ongoing Basis

Hitachi's Approach

To lay the groundwork for strategic environmental management, the Hitachi Group needs to establish and continuously improve systems to reduce the environmental burden of its business operations. Based on a number of certifications and guidelines, including ISO 14001, we have developed Group-wide environmental management systems that allow us to gauge the environmental burden of our business activities and steadily implement a PDCA (plan, do, check, act) cycle to reduce that burden. We also have in place a global environmental management framework, under which we evaluate our environmental activities and keep close track of our environmental performance.

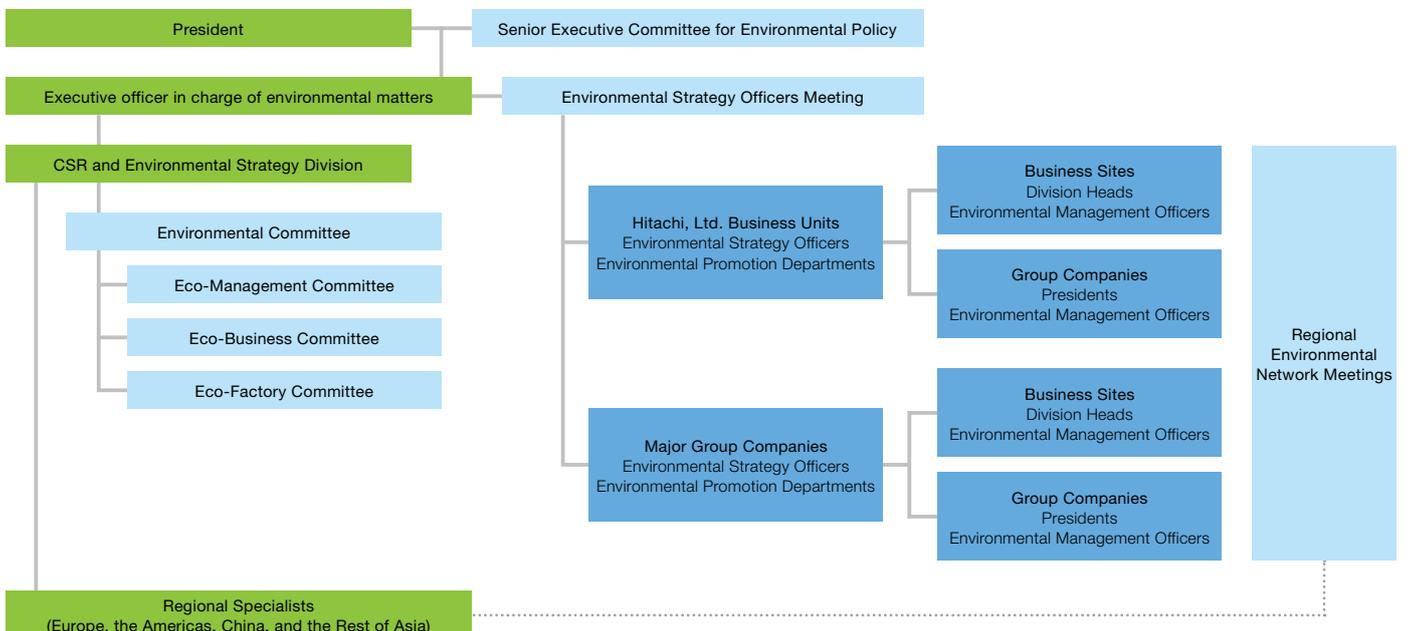
Environmental Management

Environmental Management Framework

Our global environmental management system supports environmental decision making and implementation at Hitachi, Ltd. and 1,056 consolidated subsidiaries (a total of 1,057 companies), as well as 249 equity-method affiliates.

The CSR and Environmental Strategy Division is responsible for developing Group-wide environmental policies. The Senior Executive Committee, which is chaired by the president of Hitachi, Ltd., considers important items related to environmental initiatives. The Environmental Strategy Officers Meeting, comprising representatives from business units and major Group companies, ensures that the Hitachi Group Environmental Action Plan approved by the executive officer in charge of environmental concerns is implemented throughout the Group. The Environmental Committee and committees of working-level experts for each policy area develop targets and ways to achieve them, as well as promote initiatives to be carried out by the Group as a whole. Outside Japan, we assign regional specialists to report on the progress of the Environmental Action Plan and share information on the latest environmental regulations while exchanging views on local environmental issues within each region.

Hitachi's Environmental Management Framework (FY 2016)



Hitachi, Ltd. and 1,056 consolidated subsidiaries (a total of 1,057 companies) and 249 equity-method affiliates.



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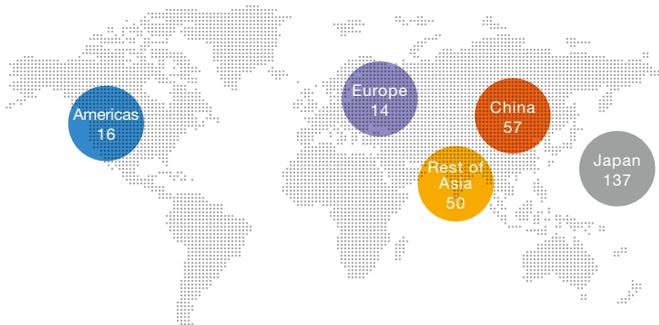
Building Environmental Management Systems

We have established environmental management criteria to ensure efficient management of each business site's environmental load. There are approximately 250 business sites that meet these criteria, and these, together with the CSR and Environmental Strategy Division, have developed and implemented the Hitachi Group Environmental Promotion Organization EMS (environmental management system) to promote the consistent implementation of environmental policies. At the same time, every business site meeting the criteria for environmental management continues to maintain ISO 14001 certification. Certification is also being pursued at business sites that do not yet meet the criteria.

Status of ISO 14001 Certifications (as of April 2016)

	Japan	Outside Japan	Total
Number of Certified Sites**	137	137	274

**1 Including companies with more than one certified business site.



List of ISO 14001-certified sites

Monitoring Environmental Performance Data

For effective environmental management, we collect data on the environmental performance of business operations using the Environmental Load Evaluation System.

This system collects environmental load data from some 250 Hitachi business sites worldwide on items such as energy use, CO₂ emissions, and waste generation, together with information on awards received and other items. By analyzing this information we identify environmental management issues, share instructive examples within the Group, and improve environmental practices. Specifically, we collect and analyze environmental performance data in the key areas of energy, waste materials, water, and volatile organic compounds (VOCs) monthly and quarterly so that performance levels can be further increased.

Environmental Activity Evaluation System

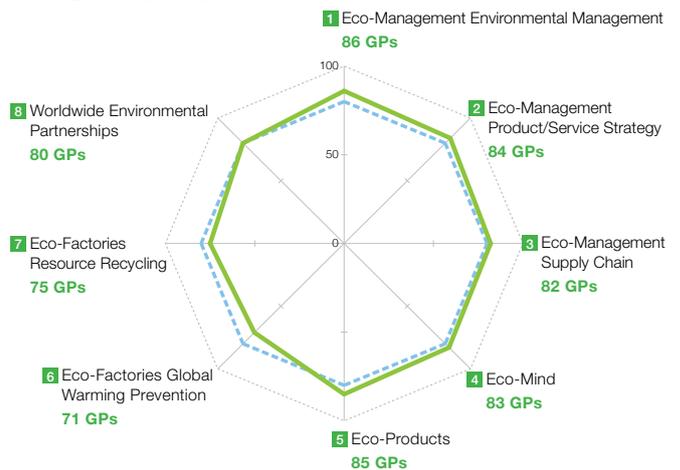
We use our own evaluation system, GREEN 21, to improve the level and quality of our environmental activities. It divides environmental activities into eight categories and evaluates achievements and progress toward Action Plan targets by rating 52 items on a scale from 1 to 5. A perfect score for any category is 100 green points (GPs). We surpassed our fiscal 2015 target of 640 GPs with a score of 646 GPs.

Starting in fiscal 2016, the system was revised to 47 items under six categories. Our aim is to improve our environmental activities based on the target of 240 GPs under the revised system.

Key Indicators

● Green Point (GP) Average: FY 2015 Targets and Results

- FY 2015 target: 640 GPs
- FY 2015 result: 646 GPs



Categories and Evaluation Items

- 1 Environmental management, environmental accounting, and compliance with laws and regulations
- 2 Progress toward goal of reducing CO₂ emissions; environment business strategies
- 3 Gathering and communicating environmental information across the supply chain
- 4 Environmental education and training of environmental experts
- 5 Assessment of products and services
- 6 CO₂ emission reductions, energy efficiency improvements, and energy savings in transportation
- 7 Resource recycling and chemical substances management
- 8 Information disclosure, communication activities, global citizenship activities, and ecosystem preservation



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Environmental Education Initiatives

Promoting Environmental Education

Promoting greater environmental awareness and understanding among our employees is essential to Hitachi's effort to energize its environmental activities. Toward that end, we are advancing our environmental education. Hitachi Group training is being implemented for all Group employees, starting from newly hired workers to working-level employees. The training covers a wide range of topics, from basic courses to such specific issues as environmental risks and compliance with environment-related laws and regulations.

Actions and Achievements

In fiscal 2015 we provided basic environmental management courses for employees working in air, water, and waste management, as well as training in recent amendments to laws and operational procedures.

In order to respond to the new environmental management standards (ISO 14001) revised in September, during the three-year transition to those standards, explanatory meetings for the internal auditors of the Hitachi Group were held to deepen understanding of the revisions. The meeting held in Japan was attended by 184 internal auditors from 68 Group companies, while 52 internal auditors from 36 Group companies attended the meeting in Chengdu, China. In addition to Hitachi Group training, individual companies and units provide education tailored to their own business area. For general education, we offer Internet-based e-learning courses in Japanese, English, and Chinese. To date 178,035 employees worldwide, equaling 96.4% of target employees, have taken this course.

Environmental Education and Training System

	Target	Introductory	Beginning	Intermediate	Advanced
General education	All employees	Introductory training for new employees	Online e-learning: Eco-Mind education (General topics: Global environmental issues, environmental law, etc.)	Online e-learning: Eco-Mind education (Hitachi Group topics: Environmental policy, Environmental Action Plan, etc.)	
Specialized education	Working-level employees	Basic environmental management course for working-level employees (management of waste; air/water quality; hazardous materials; development & operation of management systems; etc.)			
			Education for Eco-Factories		
			Eco-Product development training		
			Risk communicator training		
	Internal environmental auditors			Brush-up training for ISO 14001	
			ISO 14001 auditor certification training	ISO 14001 senior auditor certification training	

Next Steps

From fiscal 2016, we will continue with environmental education training across all our global operations to enhance the knowledge and skills of staff in charge of factory management. We will also be holding training programs so that we can fully respond to the new standards during the period of transition between the announcement of the revisions to the ISO 14001 Environmental Management Systems in fiscal 2015 and September 2018.

Environmental Compliance

Environmental Compliance Response

Hitachi considers the environmental burden of all business activities and sets voluntary management criteria that are more stringent than regulatory requirements. We regularly monitor water quality, noise levels, and other conditions at each business site and work to minimize environmental risks. In addition, we take every possible step to prevent problems or their recurrence and to strengthen controls by sharing information on environmental laws and regulations, as well as examples of infringements, throughout the Group.

Actions and Achievements

In fiscal 2015, we received a worldwide total of 12 notices concerning water quality, air quality, or waste matter and complaints about noise or odors, all of which were promptly addressed.

Hitachi continues to implement enhanced environmental management in order to prevent repeated or new contamination occurrences.

Global Notices and Complaints

	Water quality	Air quality	Waste matter	Complaints	Other (facilities, etc.)
Fiscal 2015 cases	3	1	1	4	3

To help prevent pollution of soil and groundwater, we are working to complete decontamination of soil and water at business sites where chemical substances have been used or to confirm that they are contamination free. At other business sites, we continue to carry out cleaning and observation activities as needed.



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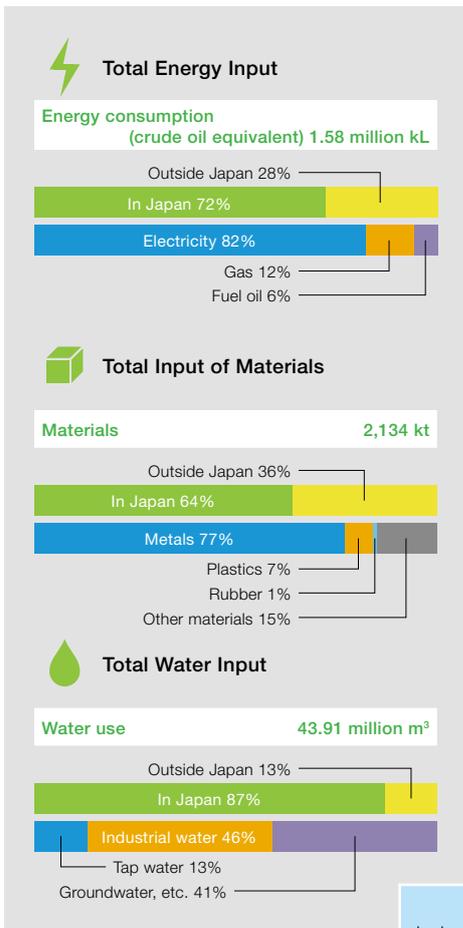
Environment Enhancing Environmental Management on an Ongoing Basis

Environmental Load

Data on Environmental Load from Operations (FY 2015)

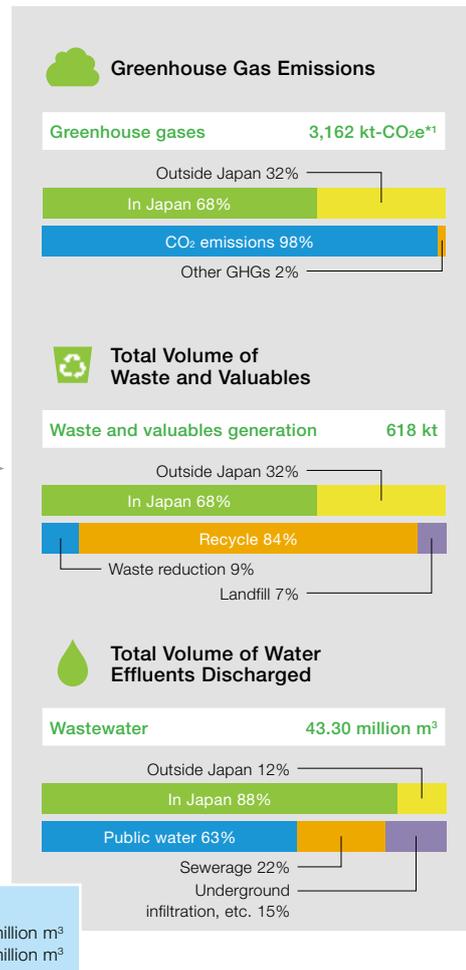
The data below shows the resource inputs and the environmental load for Hitachi Group operations in fiscal 2015.

• Total Input of Resources



• Total Output of Environmental Load

Products shipped: 3,064 kt (in Japan), 957 kt (outside Japan)



Operations



Water recycling

In Japan: 34.44 million m³

Outside Japan: 2.16 million m³

*1 CO₂e: CO₂ equivalent.

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Detailed Data on Resource Input and Environmental Load Output

Total Input of Resources

Total resources input from Hitachi Group operations.



Total Energy Input

Energy consumption: (crude oil equivalent) 1.58 million kL

		In Japan	Outside Japan
Electricity		3.7 billion kWh (36 PJ)	1.4 billion kWh (14 PJ)
Gas	Natural gas	0.06 billion m ³ (2.7 PJ)	0.05 billion m ³ (2.2 PJ)
	LPG, LNG, etc.	45 kt (2.3 PJ)	11 kt (0.6 PJ)
Fuel oil (heavy oil, kerosene, etc.)		81 thousand kL (3 PJ)	4 thousand kL (0.1 PJ)



Total Input of Materials

Materials: 2,134 kt

		In Japan	Outside Japan
Metals		1,005 kt	633 kt
Plastics		107 kt	42 kt
Rubber		5 kt	15 kt
Other materials		249 kt	78 kt
Chemicals	PRTR substances* ¹ handled	155 kt	22 kt
	Ozone-depleting substances handled	11 t	0 t
	Greenhouse gas substances handled	3,655 t	136 t

*1 PRTR substances: The 462 chemicals designated in Japan's Pollutant Release and Transfer Register (PRTR) Law.



Total Water Input

Water use: 43.91 million m³

		In Japan	Outside Japan
Tap water		4.17 million m ³	1.48 million m ³
Industrial water		17.65 million m ³	2.48 million m ³
Groundwater, etc.		16.41 million m ³	1.72 million m ³

Total Output of Environmental Load

Environmental load output from Hitachi Group operations.



Greenhouse Gas Emissions

Greenhouse gases: 3,162 kt-CO₂e

		In Japan	Outside Japan
CO ₂ emissions 		2,090 kt-CO ₂ e	995 kt-CO ₂ e
Other GHGs	SF ₆ (sulfur hexafluoride)	33 kt-CO ₂ e	23 kt-CO ₂ e
	PFCs (perfluorocarbons)	1 kt-CO ₂ e	3 kt-CO ₂ e
	HFCs (hydrofluorocarbons)	14 kt-CO ₂ e	2 kt-CO ₂ e
	N ₂ O, NF ₃ , CH ₄	1 kt-CO ₂ e	0 kt-CO ₂ e



Total Volume of Waste and Valuables

Waste and valuables generation: 618 kt

		In Japan	Outside Japan
Waste reduction		49 kt	4 kt
Recycling		363 kt	159 kt
	Reuse	2 kt	1 kt
	Materials recycled	351 kt	155 kt
	Thermal recovery	10 kt	3 kt
Landfill		8 kt	35 kt
Chemicals	PRTR substances discharged or transferred	4 kt	0.4 kt
	SOx (sulfur oxides)	41 thousand Nm ³	9 thousand Nm ³
	NOx (nitrogen oxides)	262 thousand Nm ³	88 thousand Nm ³
	Ozone-depleting substances emitted	1 t (0t-ODP* ¹)	0 t (0t-ODP)

*1 ODP (ozone depletion potential): A coefficient derived by conversion into equivalent in metric tons of CFC-11 (trichlorofluoromethane).



Total Volume of Water Effluents Discharged

Water effluents discharged: 43.30 million m³

		In Japan	Outside Japan
Public water		26.74 million m ³	0.62 million m ³
Sewerage		5.30 million m ³	4.07 million m ³
Underground infiltration, etc.		5.99 million m ³	0.59 million m ³
Water quality	BOD (biochemical oxygen demand)	210 t	223 t
	COD (chemical oxygen demand)	125 t	607 t



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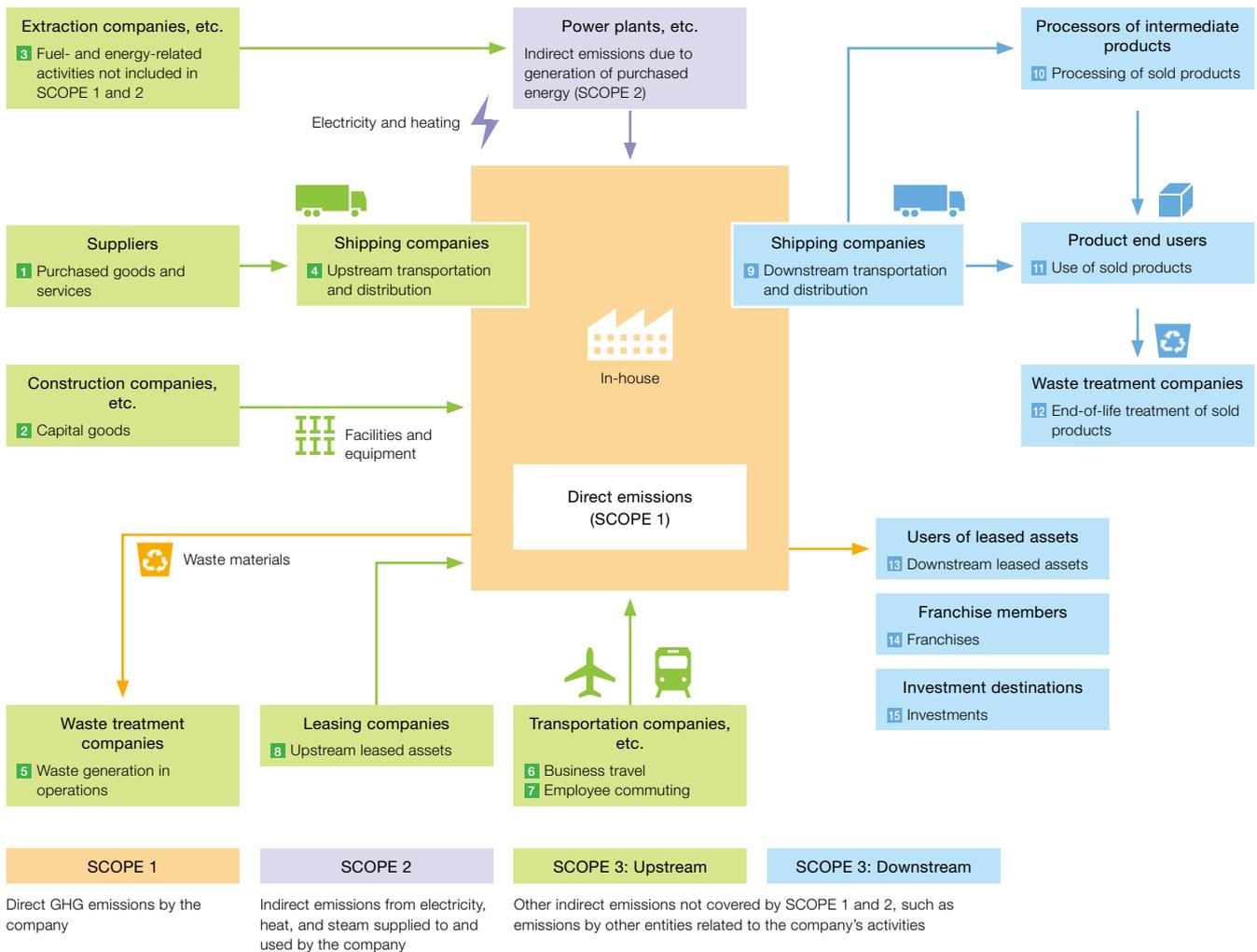
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Environmental Load Through the Value Chain

Calculation of GHG Emissions Throughout the Value Chain

We calculate greenhouse gas (GHG) emissions throughout the entire value chain to more effectively reduce these emissions. As over 90% of emissions come from use of the products we have sold, we worked to reduce emissions by developing Eco-Products that meet environmentally conscious criteria throughout their life cycle.

Categories of GHG Emissions in the Value Chain



In-house: Within the scope of the company's organizational boundaries. In principle, the scope of all business activities of the company itself and activities within or controlled by its consolidated subsidiaries.

Upstream: In principle, activities related to purchased products and services.

Downstream: In principle, activities related to sold products and services.



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GHG Emissions Throughout the Hitachi Value Chain

Category	Description	Calculation Results (Mt-CO ₂ e)
SCOPE 1^{*1}		
Direct emissions	Direct emissions from in-house fuel use and industrial processes	0.77 (0.3%)
SCOPE 2^{*2}		
Energy-related indirect emissions	Indirect emissions from production of electricity and heat purchased by the company	2.92 (1.1%)
SCOPE 3: Upstream (other indirect emissions)		
1 Purchased goods and services	Emissions from the resource extraction stage to the manufacturing stage, including raw materials, parts, supplied products, and sales	8.61 (3.2%)
2 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	1.38 (0.5%)
3 Fuel- and energy-related activities not included in SCOPE 1 and 2	Emissions from procuring fuel necessary for electricity and other energy production, including resource extraction, production, and shipping	0.24 (0.1%)
4 Upstream transportation and distribution	Emissions from distribution of raw materials, parts, supplied products, and sales prior to delivery of materials to the company, as well as other distribution activities of products for which the company bears the expense	0.18 (0.1%)
5 Waste generated in operations	Emissions from transportation, disposal, and treatment of waste generated in the company's operations	0.08 (0.0%)
6 Business travel	Emissions generated from fuel and electric power used by employees for business travel	0.07 (0.0%)
7 Employee commuting	Emissions generated from fuel and electric power used in employee commuting	0.07 (0.0%)
8 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
SCOPE 3: Downstream (other indirect emissions)		
9 Downstream transportation and distribution	Emissions from transportation, storage, loading and unloading, and retail sales of products	0.01 (0.0%)
10 Processing of sold products	Emissions by downstream companies during processing of intermediate products	N/A ^{*3}
11 Use of sold products	Emissions from use of products by end users, such as consumers and businesses	258.23 (94.6%)
12 End-of-life treatment of sold products	Emissions from transportation, waste disposal, and treatment of products by end users, such as consumers and businesses	0.17 (0.1%)
13 Downstream leased assets	Emissions from operating assets owned by the reporting company as lessor and leased to other entities	0.03 (0.0%)
14 Franchises	Emissions by franchises under SCOPE 1 and 2	N/A
15 Investments	Emissions related to management of investments	0.09 (0.0%)
Total		272.85 (100%)

Note: Figures in parentheses are percentages of GHGs emitted throughout the value chain.

*1 Includes SF₆, PFC, HFC, N₂O, NF₃, and CH₄.

*2 The CO₂ electrical power conversion factor used to calculate emissions uses the 2005 emission coefficients for individual countries published by the International Energy Agency (IEA) in the 2010 edition of CO₂ Emissions from Fuel Combustion.

*3 Cannot be determined due to insufficient information on processing.



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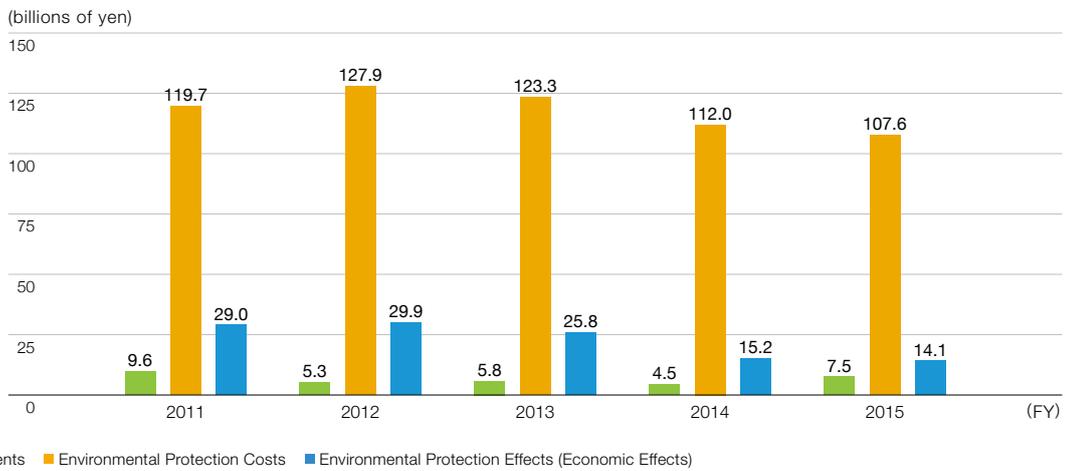
Environmental Accounting

Environmental Accounting

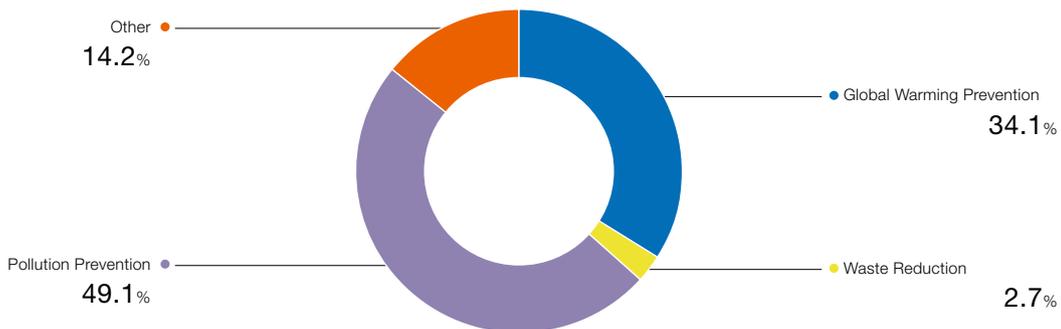
Hitachi has adopted and made public a set of environmental accounting procedures conforming to the Japanese Ministry of the Environment's Environmental Accounting Guidelines 2005. We have used the results of these procedures to raise the efficiency of our environmental investments and activities, more effectively allocating management resources to our ongoing environmental efforts.

Achievements

Environmental Investments, Environmental Protection Costs, and Economic Effects



Fiscal 2015 Environmental Investment by Countermeasure





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Environment Enhancing Environmental Management on an Ongoing Basis

Environmental Investments

		Costs (billions of yen)				
	Description	FY 2011	FY 2012	FY 2013	FY 2014	FY 2015
Total investment	Investment in energy-saving equipment and equipment that directly reduces environmental load	9.61	5.28	5.81	4.46	7.50

Environmental Protection Costs

		Costs (billions of yen)				
Item	Description	FY 2011	FY 2012	FY 2013	FY 2014	FY 2015
Expenses						
Business area	Maintenance costs for equipment with low environmental load, depreciation, etc.*1	27.78	31.84	38.63	26.90	24.22
Upstream/downstream	Green procurement expenses, recovery and recycling of products and packaging, recycling expenses	1.43	1.38	1.27	1.09	0.97
Administration	Labor costs for environmental management, implementation and maintenance of environmental management system	8.25	7.67	6.77	6.47	5.97
Research and development	R&D to reduce environmental burden caused by products and production processes, product design expenses	79.81	84.71	75.62	76.12	75.71
Social activities	Planting, beautification, and other environmental improvement expenses	0.45	0.41	0.51	0.36	0.45
Environmental remediation	Environmental mitigation costs, contributions, and charges	1.94	1.90	0.53	1.03	0.27
Total		119.66	127.91	123.33	111.97	107.59

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

Environmental Protection Effects

• Economic Effects*1

		Costs (billions of yen)				
Item	Major FY 2015 Activities	FY 2011	FY 2012	FY 2013	FY 2014	FY 2015
Net income effects	Recovering value from waste by sorting and recycling	13.72	17.85	15.98	7.54	7.27
Reduced expenses effects	Installing high-efficiency equipment (lighting, power supply)	15.27	12.07	9.82	7.65	6.78
Total		28.99	29.92	25.80	15.19	14.05

*1 Economic effects include:

- Net income effects: Benefits with real incomes, including incomes from the sale of resalable materials and incomes from environmental technology patents.
- Reduced expenses effects: Reduction in electricity, waste treatment, and other expenses through environmental load reduction activities.

• Physical Effects*1

		Amount Reduced				
Item	Major FY 2015 Activities	FY 2011	FY 2012	FY 2013	FY 2014	FY 2015
Reduction in energy used during production	Installing LED lighting, upgrading air-conditioning equipment, etc.	93 million kWh	107 million kWh	70 million kWh	68 million kWh	59 million kWh
Reduction in landfilled waste incurred during production	Promoting sale of waste material, reducing volume of liquid waste, recycling, etc.	4,754 t	3,788 t	2,420 t	3,979 t	5,498 t

*1 As with depreciation costs, benefits from equipment investments are calculated using the straight-line method over five years.

• Efficiency of Environmental Load Reduction*1

Item	FY 2011	FY 2012	FY 2013	FY 2014	FY 2015
Efficiency of energy reduction efforts (million kWh/100 million yen)	2.0	1.7	1.3	1.2	1.2
Efficiency of landfilled waste reduction efforts (t/100 million yen)	183	146	95	166.7	194.6

*1 Environmental load reduction divided by reduction costs.



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Environment Responding to Environmental Risks and Opportunities

Responding to Environmental Risks and Opportunities

Hitachi's Approach

From abnormal weather conditions around the world associated with global warming to resource depletion and loss of biodiversity, environmental risks that could seriously affect the future of humanity and our planet are on the rise. International calls are being made for measures to mitigate these risks, as exemplified by the Paris Agreement adopted in 2015 at the 21st Conference of the Parties (COP21) to the United Nations Framework Convention on Climate Change and the Sustainable Development Goals (SDGs)—the centerpiece of the 2030 Agenda for Sustainable Development, adopted by the United Nations. Businesses, too, must accurately ascertain the risks they face and the opportunities that arise for the utilization of management resources.

Hitachi focuses on two particular environmental risks and opportunities—climate change and water resources—and promotes initiatives to address them in a steadfast manner.

Climate Change: Risks and Opportunities

Engaging with the Risks and Opportunities of Climate Change

According to the Intergovernmental Panel on Climate Change (IPCC), there is no room for doubt that our climate is warming. The report states that the temperatures of the atmosphere and oceans are on the rise and that the volume of snow and ice has declined. It also notes a heightened tendency toward extreme climatic phenomena and indicates the strong possibility that such consequences of global warming stem from the impact of human activities.

Hitachi recognizes the risks of climate change as a vital management issue. Seeing opportunities in the mitigation of and adaptation to these risks—the former by reducing greenhouse gases and the latter by changing how society interacts with nature—we are working closely with our customers and partners to promote our Social Innovation Business, which fuses social infrastructure with information technology to tackle the many challenges facing society.

Regulatory Risks and Opportunities

The environmental regulations and policies of countries and regions around the world include measures that affect business activities at manufacturing sites, such as emissions trading, carbon taxes, and energy efficiency standards, and those that affect product and service conditions, such as energy efficiency standards for products, carbon footprint labeling, and the introduction of a feed-in tariff system for renewable energy. We view these regulations and policies as potential risks for the sustainability and growth of our

business. At the same time, efforts in individual countries and regions to reduce CO₂ emissions are helping to expand our business in the areas of energy-saving equipment and high-efficiency equipment and devices. Energy conservation initiatives are growing to encompass entire cities, as exemplified by smart cities. We will work to further expand our business by providing environmentally conscious solutions suited to the needs of each country or region.

Risks and Opportunities Presented by Physical Factors

Global warming is leading to extreme weather conditions, such as more powerful typhoons and heavier rainfall, causing natural disasters worldwide. Hitachi has had its share of damage, including flooding of Southeast Asian business sites and submersion of areas surrounding business sites in Japan due to river embankments giving way. We view the unavoidable damage that arises from such disasters as risks that threaten the continuity of our business operations.

Meanwhile, in response to growing worldwide demand for measures against natural disasters, business is expanding for disaster-prevention information systems and other disaster-related products and services. Hitachi is using the latest IT to analyze and evaluate the information necessary for people's daily lives, nature-related information concerning weather and other factors, and information on the operation of the social infrastructure in order to provide solutions that contribute to appropriately responding to climate change and help to create new business opportunities.

Other Risks and Opportunities

Risks that could threaten the continuity of our business operations might arise if our initiatives to tackle the global issue of climate change are insufficient, such as the loss of reputation and trust among stakeholders or the market rejection of products and services that are not environmentally conscious. We believe that developing and marketing Hitachi products and services with high environmental value is the way for us to help mitigate climate change and also to increase the competitiveness of those products and services, thereby contributing to increased sales as well.



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Environment Responding to Environmental Risks and Opportunities,
Reducing the Environmental Burden of Our Business Operations (Fiscal 2015 Results)

Water-Related Risks and Opportunities

Activities for Water-Related Risks and Opportunities

The serious crisis confronting water—the source of all life—is said to stem from increasing demand, rather than a decrease in supply. The growth in the human population has pushed up water consumption, and people have adopted lifestyles that lead to more water being wasted. Other factors behind the crisis include the supplies of products whose manufacture requires a large amount of water consumption. For all of these reasons, people today are using far greater quantities of water than their predecessors.

Along with water shortages due to rising populations and other human causes, water-related risks also include shortages stemming from natural disasters or flooding. But whatever the causes, once such water-related problems

emerge and worsen, they can seriously hinder the continuity of business activities. Hitachi surveys the locations of our various business sites to make sure that our businesses operate in areas with few water-related risks. We have ascertained the water consumption levels of around 700 of our business sites and have continued to implement measures to reduce water consumption in order to minimize these risks.

Hitachi has positioned its Water Solutions business as a key area within our Social Innovation Business. This business is contributing to preserving and improving the global water environment and creating business opportunities through activities including seawater desalination, the development of drinking water and sewage treatment systems, and the building of pumping stations to foster vegetation in desert areas.

Reducing the Environmental Burden of Our Business Operations (Fiscal 2015 Results)

Hitachi's Approach

We systematically promote efforts to reduce the environmental burden of our business activities while adhering to a PDCA cycle in line with our Group-wide environmental management system. The targets and achievements of these efforts are consolidated into our Environmental Action Plan, based on which we strive for continuous improvements in priority areas.

The Environmental Action Plan for 2013 to 2015 encompassed many themes, such as promoting Eco-Products, reducing CO₂ emissions, and using resources efficiently. Three years of improvement activities were concluded in fiscal 2015 with many positive results. In fiscal 2016 we are moving on to the Environmental Action Plan for 2018. We will further engage in environmental activities under the plan, not only taking into account the achievements made over the previous three years but also incorporating a more global perspective.

Environmental Action Plan for 2018

Environmental Action Plan for 2013 to 2015

Environmental Action Plan for 2013 to 2015: Achievements

In fiscal 2015, the final year of the Environmental Action Plan for 2013 to 2015, we were able to achieve our targets for all items.

Shown in the tables below are the main indicators for Hitachi's environmental activities. Initiatives corresponding to each indicator are introduced in the following pages.

Establish Environmental Management Systems

Items	Indicators	Fiscal 2015 targets	Fiscal 2015 results	Achievement level
Raise the level of environmental activities	GPs (green points) in GREEN 21 Environmental Activity Evaluation System	640 GPs	646 GPs	◆◆◆
Ecosystem (biodiversity) preservation	Implementation of ecosystem preservation assessment	Completion of ecosystem preservation assessment	Completed ecosystem preservation assessment	◆◆◆

Promote Eco-Products

Items	Indicators	Fiscal 2015 targets	Fiscal 2015 results	Achievement level
Expand Hitachi Eco-Product lineup	Percentage of Hitachi Eco-Product sales	90%	95%	◆◆◆
	Number of models in Eco-Products Select program	340 models	409 models	◆◆◆
Contribute to the reduction of CO ₂ emissions through products and services	Volume of contribution to CO ₂ emission reductions through products and services	35.0 million metric tons (100 million metric tons by 2025)	36.49 million metric tons	◆◆◆

Build Industry's Most Advanced Factories and Offices

Item	Indicator	Fiscal 2015 target	Fiscal 2015 results	Achievement level
Promote Eco-Factories & Offices Select certification	Eco-Factories & Offices Select certification	Average of at least 1 certification per in-house or Group company	New certifications: 15 Renewed certifications: 58 Total: 73	◆◆◆



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Environment Reducing the Environmental Burden of Our Business Operations (Fiscal 2015 Results)

Prevent Global Warming

Item	Indicator	Fiscal 2015 target	Fiscal 2015 results	Achievement level
Reduce energy use per unit	Reduction in energy use per unit (base: FY 2005, global)	15%	16%	◆◆◆

Use Resources Efficiently

Items	Indicators	Fiscal 2015 targets	Fiscal 2015 results	Achievement level
Reduce waste and valuables generation per unit	Reduction in waste and valuables generation per unit (base: FY 2005, global)	23%	28%	◆◆◆
Reduce water use per unit	Reduction in water use per unit (base: FY 2005, outside Japan)	30%	41%	◆◆◆

Manage Chemical Substances

Item	Indicator	Fiscal 2015 target	Fiscal 2015 results	Achievement level
Reduce volatile organic compound (VOC) atmospheric emissions per unit	Reduction in VOC atmospheric emissions per unit (base: FY 2006, global)	40%	50%	◆◆◆

Global Citizenship Program

Item	Indicator	Fiscal 2015 target	Fiscal 2015 results	Achievement level
Make social contributions through environmental activities	Promotion of flagship environmental communication activity at each in-house and Group company	Implementation of at least 1 flagship environmental communication activity per company	Implemented at least 1 activity per company	◆◆◆

◆◆◆ : Achieved ◆◆ : Partially achieved

Environmentally Conscious Products and Services

Increasing the Ratio of Eco-Products

We promote the development of environmentally conscious products called Eco-Products as part of our initiative to reduce the environmental burden of our products and services as much as possible.

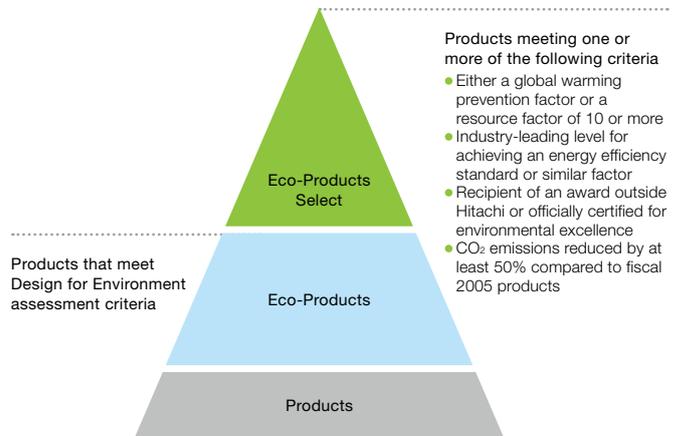
Eco-Products must meet criteria used in the design and development stages, when we evaluate the extent to which their environmental burden can be reduced. In addition, Eco-Products that meet even more demanding requirements are designated as Eco-Products Select. Until fiscal 2015, we promoted the development of Eco-Products by setting targets for raising the Eco-Product sales ratio, a figure measuring Eco-Product sales against total product sales. In fiscal 2016, we will launch new initiatives with the aim of

helping to resolve environmental issues by developing and expanding the use of products and services with high environmental value.



Environmental Action Plan for 2018, Products and Services

Hitachi's Framework for Environmentally Conscious Products



Designation of Eco-Products

Designation of Eco-Products Select

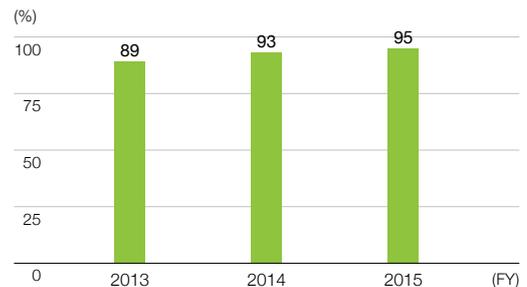
Actions and Achievements

In fiscal 2015, our Eco-Product sales ratio reached 95%, and we increased the number of Eco-Products Select models by 66, bringing the total to 409 products.

At business sites outside Japan—now with new design and development functions—we went ahead with a planned approach to expanding the lineup of Eco-Products. This included improving the eco-design skills of our designers.

Key Indicators

● Eco-Product Sales Ratio*1



*1 The ratio of Eco-Product sales to sales of all products, excluding elements whose environmental impact Hitachi cannot control or influence, such as patent income.



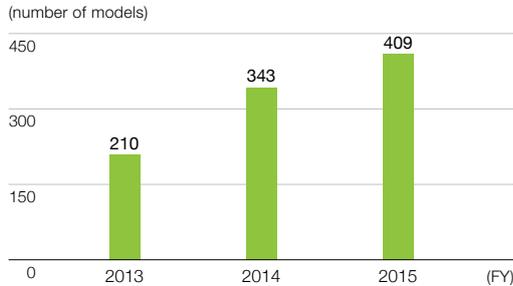
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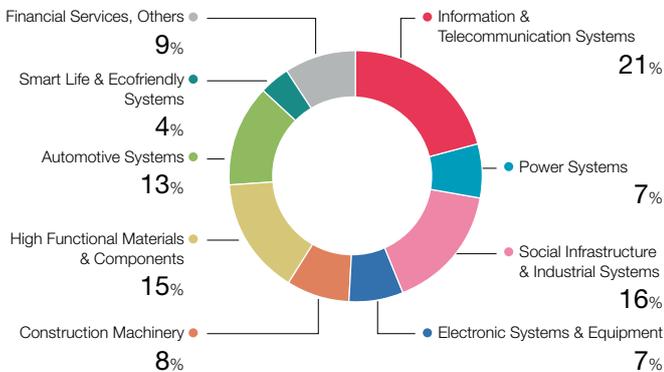
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Environment Reducing the Environmental Burden of Our Business Operations (Fiscal 2015 Results)

● Eco-Products Select



● Eco-Products by Business Segment (FY 2015 Sales Ratio)



Hitachi Products Helping to Reduce CO₂ Emissions

In fiscal 2015, we expect to achieve a reduction in CO₂ emissions through products of 36.49 million metric tons, better than our target of 35 million metric tons. Major contributions to this achievement came from the products and services of our Power Systems Company, Infrastructure Systems Company, Information & Telecommunication Systems Company, Hitachi Appliances, and Hitachi Construction Machinery. We plan to continue working harder to develop and popularize other products that contribute to CO₂ emission reductions.

Calculation Methods for Environmental Load Data/Contribution of Hitachi products and services to the reduction of CO₂ emissions

Addressing Our Carbon Footprint

The carbon footprint of products (CFP) is the CO₂ equivalent of the total amount of greenhouse gases (GHGs) emitted over the entire life cycle of a product or service—from procurement of materials through to disposal and recycling. Making the GHG emission amount visible in this way encourages efforts to reduce the amount of carbon emitted by products over their whole life cycle. A number of countries around the world use the CFP approach.

Hitachi launched CFP assessment in 2009. We participate in the Carbon Footprint Communication Program of the Japan Environmental Management Association for Industry (JEMAI) and are working to expand the number of approved CFP Products.*1 In fiscal 2015, our midrange storage systems, IP-PBX communication systems, and OCR (optical character reader) scanners were verified and approved by the JEMAI CFP Program. In addition to visualizing CO₂ emission amounts, we quantified the rate of CO₂ emission reductions per function*2 from previous models, publishing the quantitative effect of their energy efficiency in our catalogs and on our website and offering explanations at product shows. We will make efforts to capitalize on CFP as an added value for our products in the future.

*1 Approved CFP Product: A product subjected to testing according to the CFP quantification rules of the Carbon Footprint Communication Program, which also passes the CFP quantification verification and undergoes the application process for registration and public announcement.

*2 Specifically, the "life cycle GHG emissions per unit function amount," calculated by dividing "life cycle GHG emissions per sales unit" by "function amount of applicable product" as specified by performance (or performance characteristic) and/or use period.

Products authorized to display the CFP label in fiscal 2015

Product	Midrange storage	IP-PBX communication systems	OCR scanners
Model	Hitachi Virtual Storage Platform G200	MX-01 CCUB	HT-4165-48
Product appearance	 Single unit (above) and multiple units in rack. (Not intended to show standard system configuration.)		
[Previous model]	Hitachi Unified Storage 130	MX900IP CCUB	HT-4139-48U
Rate of reduction in CO ₂ emissions (compared to previous model)	-48%	-13%	-27%

Working with European Environmental Footprint Initiatives

The Product Environmental Footprint (PEF) and Organisation Environmental Footprint (OEF) initiatives develop methodologies for measuring the life cycle environmental burden of products and organizations in up to 15 areas. Three-year pilot studies were started in November 2013 to establish assessment methods in multiple product and organization fields.



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Environment Reducing the Environmental Burden of Our Business Operations (Fiscal 2015 Results)

Hitachi, drawing on experience with Japan's Carbon Footprint Communication Program and the knowledge gained from calculating and visualizing CO₂ emissions in the IT product life cycle, is participating in a European Environmental Footprint pilot study in the IT equipment field, for which it serves as the technical secretariat.

In fiscal 2015, we established methods for evaluating the environmental burden of IT products, which were approved by the European Commission. We also reviewed possible means of disclosing and communicating the evaluation results to our stakeholders. At an October 2015 mid-term conference organized by the European Commission for members of industry, government, nongovernmental organizations, and the general public, we reported on developments and challenges in the pilot study and took part in discussions toward their application to European environmental policy.

Next Steps

Having achieved an Eco-Product sales ratio of 95%, our next step in fiscal 2016 and beyond will be to develop and popularize products with high environmental value through our eco-design activities. We will enhance the environmental performance of our products and services by promoting reductions in CO₂ emissions and resource use. Our aim in fiscal 2016 will be to achieve 30% reductions in CO₂ emissions from the use of products and services compared to fiscal 2010 levels. Moreover, we will maintain the environmental consciousness of our products by conducting an Environmentally Conscious Design Assessment, created in compliance with IEC 62430, on products and services that involve a design process. Through these activities, we will strive to ensure that the environmental value of our products and services leads to added value in ways that will help our business to grow, as well as work to contribute to the global environment by offering products and services with low environmental burden.

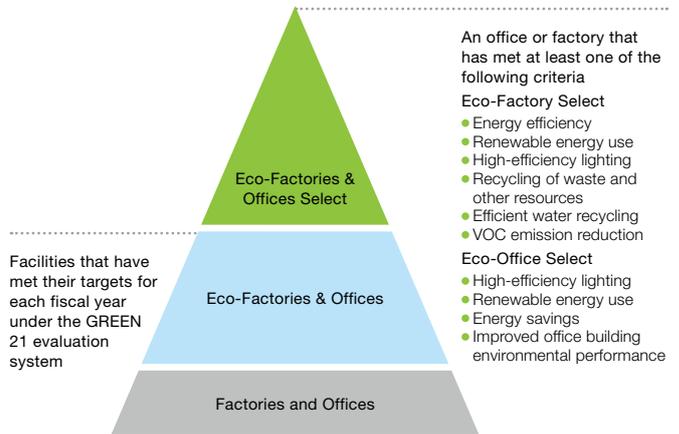
Environmental Considerations at Business Sites

Creating Eco-Factories & Offices Select

To reduce the environmental burden of our business activities, since fiscal 2011 we have implemented an Eco-Factories & Offices Select certification program for locations that promote activities demonstrating a high level of environmental consciousness and produce notable results in that area. This helps raise the environmental awareness of employees and promote environmentally conscious business activities.

Based on certification criteria that were developed for our manufacturing (factory) and nonmanufacturing (office) divisions globally, we certify existing factories that actively engage in improvements to achieve efficient production and new offices that have been environmentally designed from the start. To maintain and raise the level of environmental awareness through Eco-Factories & Offices Select, certified factories and offices are re-evaluated every fiscal year to confirm that their performance continues to meet requirements. In fiscal 2015, at least one factory or office was certified at each in-house and Group company, with 15 facilities obtaining new certifications and 58 facilities having their certifications renewed.

Eco-Factories & Offices Select Certification Criteria



Facilities that have met their targets for each fiscal year under the GREEN 21 evaluation system

- An office or factory that has met at least one of the following criteria
- Eco-Factory Select**
 - Energy efficiency
 - Renewable energy use
 - High-efficiency lighting
 - Recycling of waste and other resources
 - Efficient water recycling
 - VOC emission reduction
 - Eco-Office Select**
 - High-efficiency lighting
 - Renewable energy use
 - Energy savings
 - Improved office building environmental performance

Eco-Factories & Offices



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Environment Reducing the Environmental Burden of Our Business Operations (Fiscal 2015 Results)

Next Steps

In fiscal 2016 and beyond, we will continue our efforts to expand the Eco-Factories & Offices Select program by promoting more efficient energy use, waste recycling, and other measures in Group factories and offices, thereby reducing the environmental burden of our business activities.

Environmental Action Plan for 2018, Factories and Offices

Global Warming Countermeasures

Promoting Global Warming Countermeasures

We are promoting ways to use energy more efficiently and reduce GHG emissions during production and transportation, in both manufacturing and nonmanufacturing divisions, to help prevent global warming.

Actions and Achievements

We are working to reduce the energy use per unit as one way to use energy more efficiently. In fiscal 2015, we achieved a reduction of 16% (from fiscal 2005, the base year), surpassing the target of 15%. We are systematically working to improve the energy efficiency of individual lighting equipment and facilities by installing high-efficiency equipment and devices, from LED lighting to inverter air conditioners. In pursuit of more efficient energy use, moreover, we are actively harnessing the control technologies and IT systems that are our forte to conserve energy at our factories and offices.

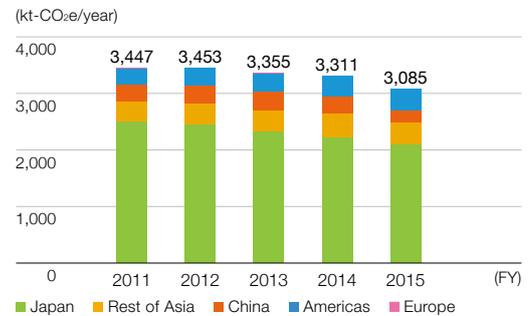
Key Indicators

- Reduction in Energy Use per Unit



*1 A value closely related to the emission factor numerators (environmental burden) of energy use from business activities (for example, production quantity, output, building floor space, and number of employees).

CO₂ Emissions



Breakdown by Region (kt-CO₂e/year)

	2011	2012	2013	2014	2015
Europe	7	4	4	8	7
Americas	295	316	321	358	375
China	287	315	332	305	211
Rest of Asia	357	381	375	423	402
Japan	2,501	2,437	2,323	2,217	2,090
Total	3,447	3,453	3,355	3,311	3,085

Notes:

- Emissions are calculated based on the 2005 CO₂ emission coefficients for electric power by country published by the International Energy Agency in *CO₂ Emissions from Fuel Combustion* (2010 edition).
- Energy-related CO₂ emissions were 660 kt-CO₂e (Scope 1) and 2,425 kt-CO₂e (Scope 2).

Introducing Renewable Energy

We are promoting the use of solar, wind power, and other forms of renewable energy. During the 2015 fiscal year, Hitachi produced 3,914 MWh of renewable energy for its own use. Hitachi Computer Products (America), Inc. proactively uses renewable energy to power its factory, purchasing 7,242 MWh during fiscal 2015. In Japan, we also contracted for Green Power Certifications for 1,000 MWh/year through Japan Natural Energy Company Limited, using these to cover power generated for offices, showrooms, and exhibitions.



Green Power logo for Green Power Certification.

Reducing Transportation Energy Consumption

Reductions in transportation energy consumption per unit are reflected in the individual targets of each business unit and Group company. This allows additional actions to be taken to further reduce energy consumption. Business sites are promoting a modal shift to highly efficient transportation methods, improving truck loading ratios and taking other measures to reduce transportation energy consumption, and switching to the use of eco-cars. Hitachi is actively utilizing rail transport for surface freight shipments of 500 km or more, for which we have earned the Ministry of Land, Infrastructure, Transport, and Tourism's Eco Rail Mark.*¹ CO₂ emissions from transportation inside Japan for the Hitachi Group in fiscal 2015 were 114 kt-CO₂e.



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Environment ◊ Reducing the Environmental Burden of Our Business Operations (Fiscal 2015 Results)

The Mito Works, a building systems business unit, is taking a range of measures to cut transportation energy usage. These include improving the efficiency of its shipping and delivery network and reducing the distances and frequency of transportation. In fiscal 2015, CO₂ emissions per unit were reduced by 69% compared with fiscal 2006.

*1 A mark conferred on products and businesses when a designated share of freight shipments are made by rail transport, which has low CO₂ emissions.



About the Eco Rail Mark

Next Steps

As suppliers of products and services, Hitachi business sites will continue to promote efficient energy usage and consistently maintain a high level of improvement activities. We will also contribute to the reduction of energy-related emissions of CO₂ and other GHGs by making maximum use of renewable energy. In pursuit of these targets, Hitachi continually implements a PDCA (plan, do, check, act) cycle and works to reduce GHG emissions.

Efficient Use of Resources

Reducing Waste Generation and Promoting Product Recycling

Resource-related problems arising from economic development and population growth are universal challenges, and measures are needed to cope with the mass consumption of resources and mass generation of waste. To address these issues, Hitachi is working to reduce the volume and improve the recycling rates of waste generated during production. We also promote the efficient use of resources by collecting end-of-life products and reusing or recycling them.

Actions and Achievements

For fiscal 2015, we set a target of a 23% reduction (from the fiscal 2005 base year) for waste and valuables generated per unit, bettering this by achieving a 28% reduction. Every business site is reducing waste through onsite recycling of byproducts and scrap from the production process and efforts to curb use of packing materials during transport. Under the Zero Emission initiative, which seeks to minimize landfill disposal, 111 business sites achieved their zero emission goal*1 as of fiscal 2015.

*1 Defined as a final disposal rate (landfill disposal/waste and valuables) of less than 0.5% in any given fiscal year.

Zero Emission Sites

Key Indicators

• Reduction in Waste and Valuables Generated per Unit

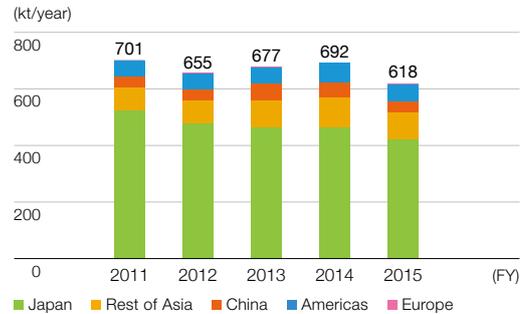


• FY 2005 (base year)

• FY 2015

$$\frac{\text{Amount generated 782 kt}}{\text{Activity amount}} = 100\% \rightarrow \frac{\text{Amount generated 618 kt}}{\text{Activity amount}} = 72\%$$

• Waste and Valuables Generated



Breakdown by Region (kt/year)

	2011	2012	2013	2014	2015
Europe	3	1	1	2	1
Americas	55	58	56	67	63
China	40	38	62	54	36
Rest of Asia	80	80	93	106	98
Japan	523	478	465	463	420
Total	701	655	677	692	618

Using IT for Managing Waste

Hitachi has developed a waste management system aimed at more efficient processes and reduced compliance risk. In Japan, we visualize the generation and disposal of waste produced at our factories, offices, and contract operations and manage data on waste contractors so that we can keep accurate track of our progress in waste recycling. In fiscal 2015, entries were made to the system regarding waste generated at approximately 2,600 locations in Japan. This information is being put to use in measures to reduce waste volume and improve recycling rates.

As of fiscal 2015, the e-manifest system*1 registration rate for Hitachi Group business sites was 95%, surpassing our target of boosting the registration rate to at least 90% by fiscal 2015.

*1 The e-manifest is a document that waste generators must issue when commissioning a disposal company to handle waste disposal.



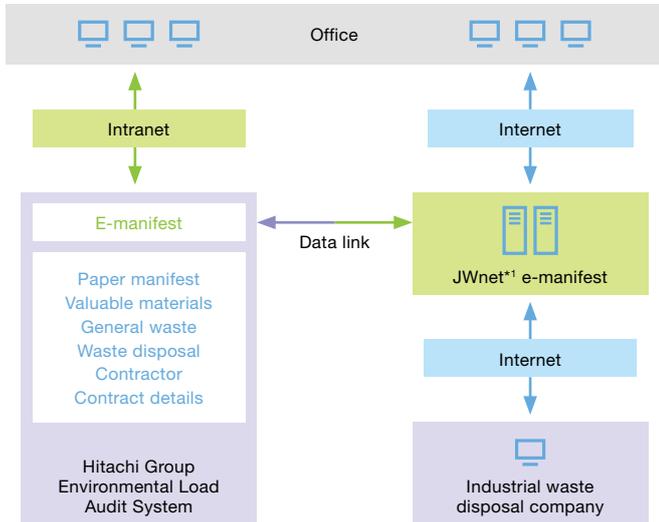
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Environment Reducing the Environmental Burden of Our Business Operations (Fiscal 2015 Results)

Waste Management System



*1 JWnet: The Japan Waste Network is an electronic manifest system operated by the Japan Industrial Waste Information Center under the auspices of Japan's Ministry of the Environment.

Product Collection and Recycling

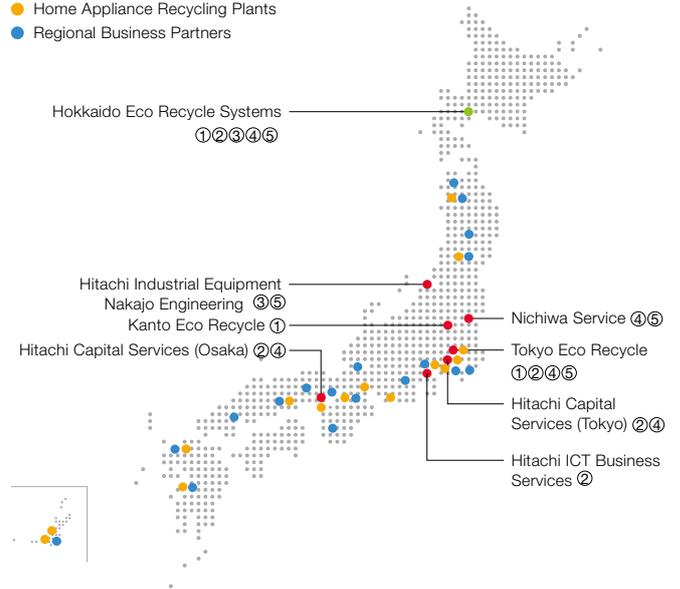
In order to comply with the 2001 Home Appliance Recycling Law, Hitachi has taken part in cooperative efforts by five companies*1 in the same industry while recycling air conditioners, televisions, refrigerators, and washing machines at 18 recycling plants nationwide. In fiscal 2015, we recycled around 56,000 metric tons of the roughly 63,000 tons of end-of-life products we collected.

Today we are building on our know-how in recycling home appliances by creating a recycling network and expanding collection and recycling programs to include IT products like personal computers, servers, and communication equipment; industrial equipment including pumps, motors, distribution boards, transformers, refrigeration equipment, and machine tools; and industrial air conditioners and medical equipment. In fiscal 2015, we recycled more than 9,000 tons of the roughly 10,000 tons of the end-of-life IT products, industrial equipment, and other items we collected.

*1 Hitachi Appliances, Inc., Sharp Corporation, Sony Corporation, Fujitsu General Limited, and Mitsubishi Electric Corporation.

Product Recycling Network

- Hitachi Group Companies
- Hitachi Group (Equity-Method Affiliates)
- ① Home Appliance Recycling
- ② IT Product Recycling
- ③ Financial Equipment Recycling
- ④ Industrial Equipment Recycling
- ⑤ Medical Equipment Recycling
- Home Appliance Recycling Plants
- Regional Business Partners



Next Steps

With a focus on reducing the volume of waste generated, Hitachi will take a range of measures to address waste-related issues, such as conserving resources and reducing product volume from the design stage, recycling waste, and promoting use of recycled resources. To counteract the cross-border movement of hazardous waste materials, moreover, we will enhance our management of waste contractors.

We will also promote the effective use of resources at both the production and disposal stages of the product life cycle by expanding our recycling network for end-of-life products as well as the range of products that we collect.



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Environment Reducing the Environmental Burden of Our Business Operations (Fiscal 2015 Results)

Reducing Water Use

Water Conservation

Issues related to water resources are diverse. They include shortages of domestic- and agricultural-use water due to population growth, land subsidence from overuse of groundwater, and ecological destruction from wastewater.

Hitachi uses water in such production processes as cleaning, cooling, and painting. To reduce water use through greater efficiency, we are enhancing our level of water management by installing flow meters at more locations, introducing wastewater treatment devices to increase the use of recycled water, and upgrading water supply facilities at our business sites.

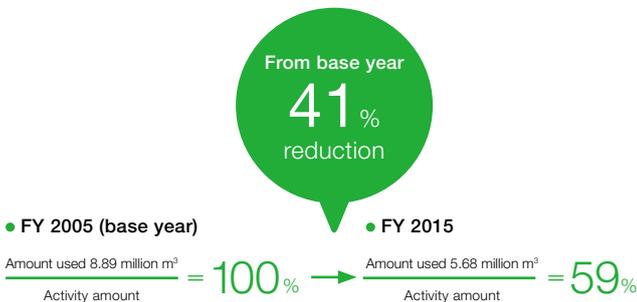
Different countries and regions are affected by water-related issues in different ways. Recognizing the importance of devising measures suited to each region, we will tackle these issues by establishing region-specific targets.

Actions and Achievements

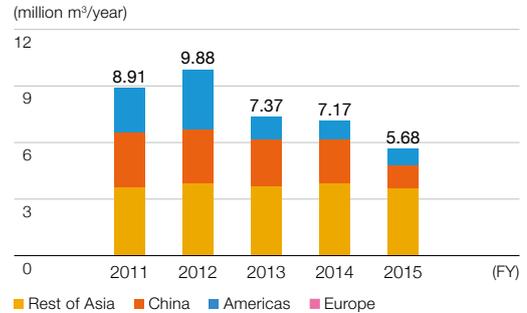
In fiscal 2015, we set a target for our business sites outside Japan of a 30% reduction (over the fiscal 2005 base year) for water use per unit and achieved a 41% reduction. A growing portion of our production takes place outside Japan, and we are promoting efficient use of water through conservation worldwide. To accurately grasp water-related risks in each region, we conducted surveys at 283 business sites around the world on levels of water stress (an index of scarcity of water relative to demand), water intake volume per source, and wastewater volume per discharge destination.

Key Indicators

- Reduction in Water Use per Unit (Outside Japan)



Water Use Outside Japan



Breakdown by Region (million m³/year)

	2011	2012	2013	2014	2015
Europe	0.03	0.03	0.02	0.02	0.01
Americas	2.35	3.15	1.20	0.98	0.89
China	2.92	2.85	2.50	2.32	1.22
Rest of Asia	3.61	3.85	3.65	3.85	3.56
Total	8.91	9.88	7.37	7.17	5.68

Next Steps

Hitachi will continue appropriately managing its water usage related to business activities, promoting effective use of this resource. We will also ascertain water-related risks on an ongoing basis in each region and take measures that are appropriate for that region's water environment.

Chemical Substances

Managing Chemical Substances

In fiscal 2005, Hitachi formulated the Regulations for Environmental CSR-Compliant Monozukuri to manage the chemical substances contained in its products at all stages—from development and design, procurement, and production to quality assurance and sales. With regard to chemical substances used in our business operations, we manage risk by assigning three ranks to the use of such substances: prohibition, reduction, and control. We also reduce risk by educating chemical substance handlers and managers on laws and regulations and on proper risk assessment.

Managing Chemical Substances in Our Products

To ensure compliance with European REACH*1 and other regulations, we continuously revise the list of chemical substances in our products that are to be managed. In October 2015, we modified the list of Voluntarily Controlled Chemical Substances so that now 18 prohibited substances (Level 1) and 27 controlled substances (Level 2) are listed. In compliance with Europe's REACH regulation, we submitted reports on the use of particular substances in parts and final products by the June and December 2015 deadlines.

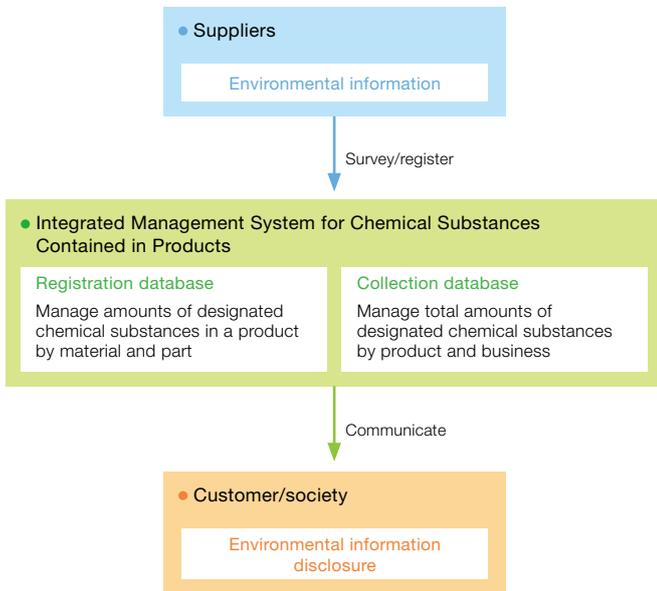
*1 REACH regulation: The European Union regulation on Registration, Evaluation, Authorization, and Restriction of Chemicals.



Working with the Supply Chain to Manage Chemical Substances

Working closely with suppliers and customers, we gather and make available information on chemical substances across the supply chain via the Integrated Management System for Chemical Substances Contained in Products, which has been in operation since fiscal 2005. As of March 31, 2016, chemical substance information for more than 1.27 million parts and products was registered under this integrated management system.

Integrated Management System for Chemical Substances Contained in Products



Managing Chemical Substances in Our Business Operations

As for the management of chemical substances emitted from our factories and other sites, we are cutting emissions of 41 volatile organic compounds (VOCs) that we have designated with an eye to preventing air pollution. Initiatives in fiscal 2015 to reduce VOC emissions included switching from paints containing VOCs to water-soluble and powder paints, expanding the use of stainless steel requiring no coating and plated sheet steel chassis, and altering washing processes. We successfully achieved our targets through these initiatives. Information on successful efforts is translated into English and Chinese and shared globally with Hitachi Group members. We also monitor and manage emissions of sulfur oxides (SOx) and nitrogen oxides (NOx),*1 which are required to be measured under the laws and regulations applicable at our business locations.

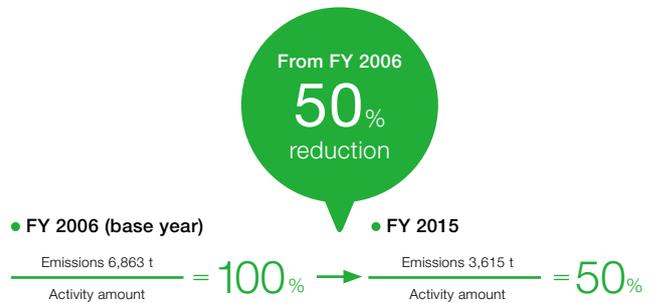
We comply with Japan's Pollutant Release and Transfer Register (PRTR) Law through Group-wide monitoring of chemical substances released into the atmosphere or into public waters, removed outside our plants as waste, or discharged into sewage systems, reporting the results to

local governments for each office or plant. Although some substances are exempt from reporting due to their small quantities, our policy is to keep data on the handling, emission, and transfer of all PRTR substances of 10 kilograms or more per year, recognizing the need to control these substances as well.

*1 Emissions of SOx and NOx: Calculated as the product of concentration and exhaust air-flow rate.

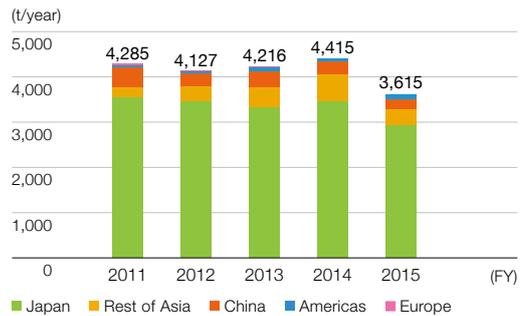
Key Indicators for Chemical Substance Management

- Reduction in VOC Atmospheric Emissions per Unit



	Japan	Outside Japan	Overall
FY 2015 (from base year)	29%	21%	50%

Reducing VOC Atmospheric Emissions



Breakdown by Region (t/year)

	2011	2012	2013	2014	2015
Europe	28	6	8	12	9
Americas	62	53	76	66	113
China	427	273	372	281	199
Rest of Asia	232	346	447	604	373
Japan	3,536	3,449	3,313	3,452	2,921
Total	4,285	4,127	4,216	4,415	3,615



Management Approach

Activities

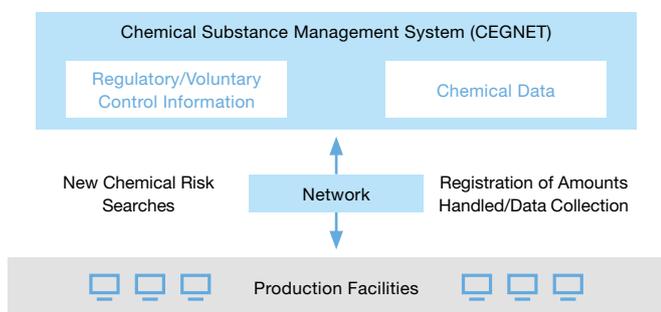
Performance Data

Environment Reducing the Environmental Burden of Our Business Operations (Fiscal 2015 Results), Preserving Ecosystems

The CEGNET Chemical Substance Management System

To ensure the proper management of chemical substances used in its business operations, since 1998 Hitachi has operated a database for chemical substance management called CEGNET to keep track of the latest laws and regulations and the company's own voluntary regulations.

CEGNET also collects and aggregates data on the amount of chemical substances handled, emitted, and transferred in our operations, helping to reduce the volume of chemicals that we handle.



Managing Storage of Equipment Containing PCBs

In Japan, we gather and manage information on storing and handling equipment that uses polychlorinated biphenyls (PCBs) every year and promote the efficient and thorough treatment of these units. Waste materials with high PCB concentrations are subject to a treatment program based on requirements set by the national government of Japan, and waste materials with low PCB concentrations are also processed by treatment companies that have been certified and have the capacity to handle them. Thanks to these efforts, we are successfully reducing the stored amount of

PCB-containing waste. Waste materials containing PCBs stored at 39 business sites were treated in fiscal 2015; we are aiming to complete the treatment process ahead of the 2027 deadline set by Japan's Act on Special Measures Concerning Promotion of Proper Treatment of PCB Wastes.



Disposing of waste materials (large transformers) containing PCBs.

Next Steps

In fiscal 2016, with our shift to a new Environmental Action Plan, we will review our list of targeted substances and continue with our emission-reduction initiatives.

In connection with Europe's REACH regulation, we will continue our checks and preparations in the lead-up to the next round of notification deadlines.

Preserving Ecosystems

Hitachi's Approach

Various forms of development accompanying economic growth and urbanization around the world have led to environmental degradation and pollution, the overuse of natural resources, and threats to biodiversity. Hitachi believes that preserving ecosystems for diverse living organisms is vital to ensuring that biodiversity—a precious asset—will remain intact for future generations. We are reducing the burden on the ecosystem from the perspective of the entire life cycle of products and striving to produce things in a way that does not damage the ecosystem. We are also promoting Group-wide activities that contribute to preserving ecosystems.

Preserving Ecosystems

Initiatives to Preserve Ecosystems

An important aim of our Environmental Action Plan for 2013 to 2015 was to carry out the Business Assessment on the Preservation of Ecosystems. We were also active outside the company, such as participating in the biodiversity working group of four Japanese electrical and electronic industry associations*1 and the Japan Business Initiative for Biodiversity (JBIB). We continue to raise awareness and knowledge within Hitachi and to promote ecosystem



Management Approach

Activities

Performance Data

Environment Preserving Ecosystems

preservation throughout the entire Group while laying the groundwork for environmental programs through activities outside the company.

*1 The Japan Electrical Manufacturers' Association (JEMA), Japan Electronics and Information Technology Industries Association (JEITA), Communications and Information Network Association of Japan (CIAJ), and Japan Business Machine and Information System Industries Association (JBMI).

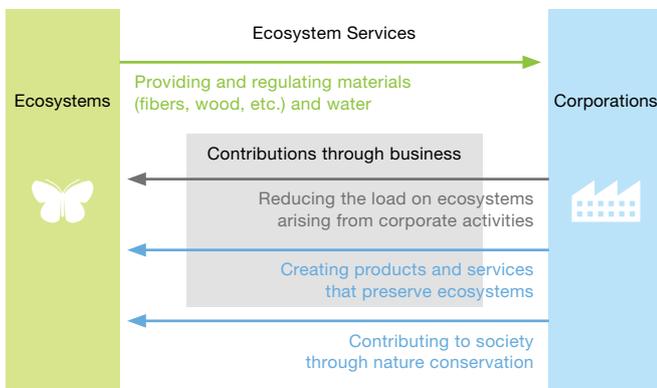
The biodiversity working group

Japan Business Initiative for Biodiversity

Corporate Relationship with Ecosystems

Corporations depend on “ecosystem services,” including the natural supply of materials like fibers and wood, and the ability of ecosystems to maintain the quality and quantity of air, water, and soil. Contributing to ecosystem preservation through both business and social activities enables companies to continue receiving these benefits and to restore ecosystems. Through its business activities, Hitachi is promoting designs and production methods that reduce the impact on ecosystems throughout the product life cycle. We are also increasing the number of products and services for direct preservation of ecosystems, such as water purification measures. We view chemical substance management as part of ecosystem preservation and continually ensure that it is carried out correctly. To contribute to society, we encourage employee volunteer programs, such as tree planting and ecological surveys of rare plants and animals, as well as other programs that preserve ecosystems.

Corporations and Ecosystems



- Production dependent on ecosystems
- Minimizing negative impacts (reducing burden on ecosystems)
- Expanding positive impacts (contributing to ecosystem preservation)

Encouraging Action to Preserve Ecosystems

The *Hitachi Group Guide to Preservation of Ecosystems* is a guidebook issued to employees that outlines the relationship between corporate activities and ecosystems, introduces trends and examples of initiatives being taken around the world, and makes recommendations. Since fiscal 2013, we have also been implementing the Business Assessment on the Preservation of Ecosystems every year in order to deepen employee understanding. The aim is to promote initiatives that help to preserve ecosystems from a variety of perspectives by conducting an assessment based on a total of 53 criteria in eight different categories (such as “communication/education” and “design/development”), as specified in the table. In fiscal 2015, the assessment was conducted at around 211 Hitachi business sites (excluding the headquarters of each company) both within and outside Japan, with the participants conducting a self-assessment regarding the results of activities over a three-year period.

Main Criteria and Overview of Assessment

No	Category	Assessment Overview	Share of Business Sites that Enhanced Initiatives Over 3-Year Period
1	Communication/ Education	Understanding the gist and goals of preserving ecosystems through business activities	40%
2	Design/ Development	Products that take ecosystems into consideration	17%
3	Procurement	Encouraging and educating suppliers regarding initiatives to preserve ecosystems	20%
4	Production	Reducing the environmental burden of the manufacturing process	42%
5	Site management	Surveying ecosystems at business sites and taking environmental issues into consideration when building or renovating structures at those sites	13%
6	Transportation/ Sales	Conserving energy use for transportation and reducing use of printed materials	20%
7	Collecting/ Recycling	Encouraging and educating waste-treatment firms regarding initiatives to preserve ecosystems	16%
8	Engagement	Contributing to society through partnerships with stakeholders	20%

Next Steps

In fiscal 2016, we created the “Ecosystem Preservation Activities Menu” including the pioneering efforts being carried out at companies and organizations outside the Hitachi Group. We will continue with existing preservation efforts and systematically add activities in accordance with the new menu. As demonstrated by the addition of the number of new ecosystem preservation initiatives as a major indicator in the Environmental Action Plan for 2018, the Hitachi Group as a whole will make further efforts to promote ecosystem preservation.