

Environment

In order to achieve its Environmental Vision, the Hitachi Group is actively working to reduce its overall environmental burden. To reduce its CO₂ emissions across its entire value chain, Hitachi aims to lower emissions not just at the production stage but also during use of sold products and services, which accounts for the vast majority of total emissions, by promoting low-carbon businesses.

The Environmental Vision and Hitachi Environmental Innovation 2050

As climate change, 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 Paris Agreement, which came into force in 2016, sets 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. These targets are based on the *Fifth Assessment Report* of the Intergovernmental Panel on Climate Change (IPCC). 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—whose Goal 13 reads: “Take urgent action to combat climate change and its impacts.”

In the light of these global demands and our own management policy, we created an Environmental Vision clearly stating our aim to both improve the quality of life and achieve a sustainable society from a long-term perspective, as well as to achieve a low-carbon society, a resource efficient society, and a harmonized society with nature by promoting environmental management. Looking toward 2030 and 2050, we also established long-term environmental targets called Hitachi Environmental Innovation 2050 that demonstrates our resolve to achieve the kinds of societies outlined in our Environmental Vision.

Our environmental strategy, centered on the Environmental Vision and our long-term environmental targets, is deliberated by the Executive Sustainability Committee, chaired by the President & CEO, and advanced by the Hitachi Group as a whole.

Achieving a Low-Carbon Society

Hitachi has established a goal of reducing CO₂ emissions throughout its value chain by 50% by fiscal 2030 and 80% by fiscal 2050 (compared to fiscal 2010 levels).

A significant share of the CO₂ emissions from our value chain arises from the use of our products and services by our customers. To reduce these emissions and combat climate change, we are expanding our low-carbon businesses as outlined below.

We are also improving the environmental performance of products and services across the entire Hitachi Group to help address environmental challenges through the development and popularization of products and services with high environmental value. To track our progress, we use the reduction rate per product and service function of CO₂ emissions during usage as our index. At the same time, we continue to promote

Environmental Vision

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

The aim of Hitachi's environmental management



Low-Carbon Society
Climate Change Mitigation/Adaptation



Resource Efficient Society
Saving and Recycling Resources



Harmonized Society with Nature
Preservation of Ecosystems

Long-term Environmental Targets

Hitachi's resolution looking toward 2050 and 2030

Hitachi Environmental Innovation 2050

For a low-carbon society

Through the value chain CO₂ emissions

FY 2050
80% reduction

FY 2030
50% reduction
(compared to FY 2010)

For a resource efficient society

Build a society that uses water and other resources efficiently with customers and society

Efficiency in use of water/resources
FY 2050
50% improvement
(compared to FY 2010 in the Hitachi Group)

For a harmonized society with nature

Impact on natural capital

Minimized

Environmental Action Plan

Set environmental action items and targets every 3 years in order to achieve the long-term targets

environmentally conscious design of products and services at the design and development stage.

In addition, we remain focused on cutting direct emissions by the Hitachi Group during production by enhancing the efficiency of our factories and offices, advancing energy-saving measures, and introducing the use of renewable energy.

⌚ Please refer to the *Hitachi Sustainability Report 2018* for further details.

Ratio of CO₂ Emissions at Each Stage of Hitachi Value Chain



Responding to Climate Change Through Growth in “Low-Carbon Businesses”

As part of its efforts to address challenges posed by climate change, Hitachi is combining the strengths of its business units and Group companies through digital solutions built on the Lumada platform, and expanding its low-carbon businesses through co-creation with customers and partners.

To help achieve low-carbon energy supplies, we offer wind and other non-fossil energy systems. We also promote improvements in power distribution efficiency via the use of smart grids and related technology. To realize low-carbon spaces, we are striving to make buildings more efficient

through total solutions and reduce the energy requirements of factories via smart manufacturing. Through the development of more efficient railway systems and the promotion of increased adoption of automotive electric powertrains, we are providing highly efficient transportation methods in order to achieve low-carbon mobility. Our amorphous transformers and other low-carbon products contribute to increasing efficiency and reducing emissions throughout society. In these and many other ways, we are helping to realize a low-carbon society and promoting measures to address climate change.

Low-Carbon Businesses: A Hitachi Focus

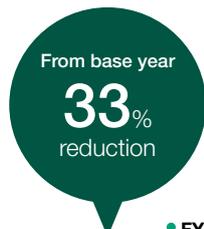
Achieving Low-Carbon Energy Supplies	Achieving Low-Carbon Spaces	Achieving Low-Carbon Mobility	Low-Carbon Products
<ul style="list-style-type: none"> ■ Non-fossil energy systems <ul style="list-style-type: none"> • Wind energy systems ■ Smart grids <ul style="list-style-type: none"> • Distributed power supply solutions • Energy management  <p>Wind energy systems</p>	<ul style="list-style-type: none"> ■ Offices <ul style="list-style-type: none"> • Total solutions for buildings • Elevators • Escalators ■ Factories <ul style="list-style-type: none"> • Smart manufacturing ■ Smart life & ecofriendly systems <ul style="list-style-type: none"> • Smart life business • Home appliances  <p>Elevators Escalators</p>	<ul style="list-style-type: none"> ■ Railways <ul style="list-style-type: none"> • Operation management/railway information systems • Rolling stock ■ Automobiles <ul style="list-style-type: none"> • Electric powertrain systems (Storage batteries, motors, inverters, etc.) • Automobile components  <p>Rolling stock</p>	<ul style="list-style-type: none"> ■ Industrial equipment <ul style="list-style-type: none"> • Amorphous transformers • Air compressors • Motors ■ High functional materials & components <ul style="list-style-type: none"> • Amorphous metal materials for transformers • Rare earth magnets  <p>Amorphous transformers</p>
Digital Solutions Built on Lumada Platform			

SDG Focus



Hitachi promotes initiatives to minimize environment-related risks, principally climate change, and contribute to resolving environmental issues.

• Rate of Reduction in CO₂ Emissions from Use of Products and Services (Hitachi Group)



• **FY2010 (base year)** $\frac{\text{CO}_2 \text{ emissions}}{\text{Function size}^*} = 100\%$
→
 • **FY2017** $\frac{\text{CO}_2 \text{ emissions}}{\text{Function size}} = 67\%$

* Major functions of products correlated to CO₂ emissions.

• Reduction in Per-Unit Energy Use by Factories and Offices (Hitachi Group)



• **FY2005 (base year)** $\frac{\text{Energy used } 2.06 \text{ GL}^{*1}}{\text{Activity amount}^{*2}} = 100\%$
→
 • **FY2017** $\frac{\text{Energy used } 2.00 \text{ GL}}{\text{Activity amount}} = 86\%$

*1 Energy volume used both in and outside the organization (Scope 1 and 2).
*2 A value closely related to energy use at each business site (for example, production quantity, output, building floor space, and number of employees).