

Environment

Basic Policy	57
Strategy for Climate Change	59
The Structure of Our Environmental Management System	66
Environmental Considerations for Value Chain Management	71
Biodiversity Preservation Activities	83
Environmental Data	86

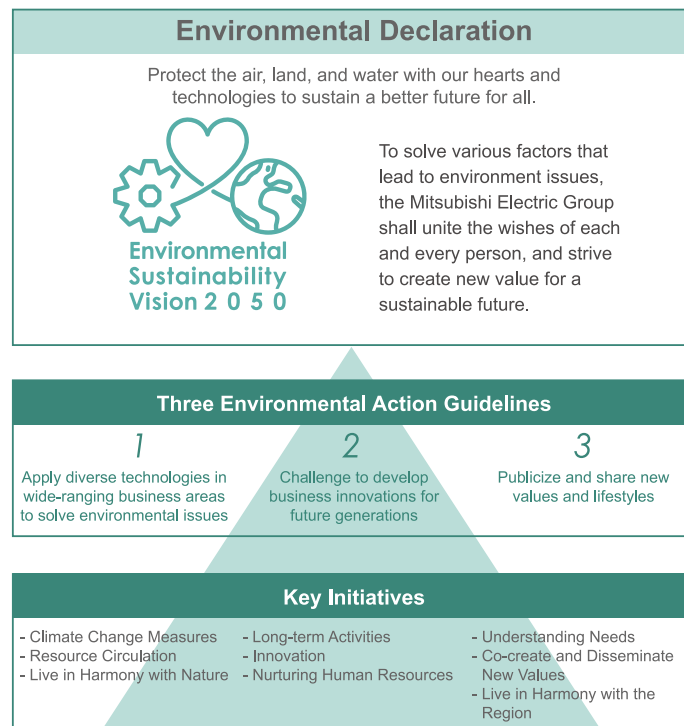
Basic Policy

The Mitsubishi Electric Group sets forth a clear course of action it shall take toward 2050 in Environmental Sustainability Vision 2050, and promotes initiatives to realize sustainability of the global environment based on an environmental policy that outlines how the Group shall contribute to the environment.

Environmental Sustainability Vision 2050

In recent years, corporations are expected to further continue their long-term efforts to solve global environmental issues. The Mitsubishi Electric Group's new Environmental Sustainability Vision 2050 defines environmental protection as an even greater corporate priority and stipulates increased initiatives toward this end. It establishes Mitsubishi Electric's future course toward 2050 in the form of the Environmental Declaration, Three Environmental Action Guidelines, and Key Initiatives.

Environmental Sustainability Vision 2050



1 Apply Diverse Technologies in Wide-Ranging Business Areas to Solve Environmental Issues

The Mitsubishi Electric Group shall utilize diverse technological assets throughout wide-ranging business areas, and across the entire value chain, to solve various environmental issues, including climate change, resource circulation and coexisting harmoniously with nature.

Key Activities

Climate Change Measures

- 1) Promoting and disseminating outstanding energy-saving products, systems, services and renewable energy businesses, together with our stakeholders, we will contribute to reducing greenhouse gases worldwide.
- 2) Respecting the global shift toward carbon neutrality, we will promote the reduction of greenhouse gases throughout the value chain, from development, design, procurement of raw materials and production through sales, distribution, use and disposal. Our present target is to reduce CO₂ emissions to net-zero by 2050.
- 3) Observing changes in the global environment, we will provide solutions that contribute to minimizing the risks of natural disasters.

Resource Circulation

- 1) Reducing the size and weight of products, we will consider the use of recycled materials and recyclability rate of the products and systems we produce.
- 2) Eliminating resource waste throughout the value chain, we will strive to maximize the effective use of resources.
- 3) We will work to expand the supply of safe, clean water globally, as well as to enforce water treatment that does not pollute oceans and rivers.
- 4) We will promote the effective use of water taking the water environment of each region into consideration.
- 5) We will promote resource recycling businesses globally, such as reuse, repair of products/systems and waste reduction.
- 6) We will aim to achieve 100% effective use of wastes, such as plastics, generated during manufacturing processes.

Live in Harmony with Nature

- 1) Throughout the Group, we will carry out activities to preserve biodiversity in the mountains, rivers, and oceans, and at all business sites, and promote the development of local environments and human resources to be passed to future generations.
- 2) We will work to control, suppress, substitute, and properly dispose of harmful substances that may affect the natural environment.

2 Challenge to Develop Business Innovations for Future Generations

The Mitsubishi Electric Group shall draw on internal and external strengths, combine them when required to resolve difficult issues, and take on the challenge of developing technologies and business innovations for future generations.

Key Activities

Long-term Activities

- 1) We will set specific indices and action items while considering future prospects in the midterm Environmental Plan formulated every three years.
- 2) We will verify the validity of long-term goals approximately every five years, doing so considering international agreements, foreign affairs and business conditions.

Innovation

- 1) We will cooperate with other companies and institutions, and use our technological assets, technologies and business synergies to create innovative technologies and solutions.
- 2) We will proactively adopt innovational technologies and solutions that enable us to lead manufacturing in future generations.

Nurturing Human Resources

- 1) We will foster a corporate culture in which employees, as ordinary citizens, take the initiative on creating new lifestyles in harmony with nature.
- 2) We will develop highly specialized human resources who accept diverse values, and proactively work on environmental issues.

3 Publicize and Share New Values and Lifestyles

The Mitsubishi Electric Group shall promote active dialogue, collaboration, and co-creation with all stakeholders, publicizing and sharing new values and lifestyles that will result in living comfortably, in harmony with nature.

Key Activities

Understanding Needs

- 1) We will work to understand our customers' needs and expectations for the environment through sales activities, exhibitions, events, and other initiatives.
- 2) We will hold discussions with stakeholders, and confirm the validity of our environmental targets and measures, to promote more effective environmental activities.

Co-create and Disseminate New Values

- 1) We will propose new lifestyles that provide the pleasure of contributing to the environment through the use of our products, systems, and services.

Live in Harmony with the Region

- 1) We will hold discussions with local residents and municipalities, and contribute to creating a better local environment, including Satoyama conservation and bio-diversity preservation activities at business sites.

Environmental Policy

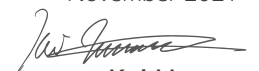
Based on its Purpose, "We, the Mitsubishi Electric Group, will contribute to the realization of a vibrant and sustainable society through continuous technological innovation and ceaseless creativity," the Mitsubishi Electric Group clearly states its contribution to the realization of sustainability as one of its key management policies. Our aim is to realize both a sustainable global environment and a safe, secure, and comfortable society. To find solutions to environmental problems such as climate change, resource depletion, and the loss of biodiversity, contributing to the protection of the environment is positioned as one of the most important issues that the Group must address.

Utilizing our accumulated and newly developed state-of-the-art technologies, and in accordance with "Environmental Vision 2050," we will provide products and services through a wide variety of businesses that contribute to resolving climate change issues and creating a recycling-based society. At the same time, we will draw on strengths, both within and outside of the Group, and with the passion of all employees, focus on creating innovative technologies, products and services while proposing new values that will support future generations. Particularly, in view of the global trend towards rapid decarbonization, we are addressing the reduction of greenhouse gas emissions throughout our value chain while also promoting the recycling of resources globally and making efforts to preserve biodiversity.

As a good corporate citizen, the Group will continue to work with its employees, their families, and local communities to foster environmental awareness and expand the sphere of its activities that are contributing to society. We will actively disseminate information on our environmental initiatives in an effort to promote a mutual understanding with society. In doing so, we will comply with laws and social norms, change the ways we think and act with a keen sensitivity to changes in society, and always conduct business activities while giving continuous consideration to protecting the environment.

Under the Environmental Declaration, "Protect the air, land, and water with our hearts and technologies to sustain a better future for all," all employees of the Mitsubishi Electric Group will contribute with pride and passion to enrichen people's lives and improve the global environment.

November 2021



Kei Uruma
President & CEO

Strategy for Climate Change

Financial Information Based on Recommendations of the Task Force on Climate-related Financial Disclosures (TCFD)

Task Force on Climate-related Financial Disclosures (TCFD) The Mitsubishi Electric Group has expressed its support for the recommendations of the TCFD (Task Force on Climate-related Financial Disclosures), and as such, the Group promotes efforts and discloses information in line with these recommendations.

We view response to the TCFD as an activity to fulfill our “responsibility to a sustainable society” and “contribute to a sustainable society through our business” by addressing the global environmental challenge posed by climate change. Moreover, we view it as “risk management in response to long-term social and environmental changes” towards the realization of sustainability, and “communication with stakeholders” to promote the resolution of social issues.

| Governance

Basic policy of Sustainability

The Mitsubishi Electric Group implements sustainability-oriented initiatives in all corporate activities in accordance with its “Purpose,” “Our Values,” and “Commitment.” Our Management policy states, “we will return to our fundamental principle of ‘addressing social challenges through our businesses’ and position the realization of sustainability as the cornerstone of our management. From this approach, we will pursue a sustained enhancement of our corporate value and fulfill our responsibility to society, to our customers, shareholders and employees, and to all other stakeholders.” We will pursue initiatives for achieving a sustainable society to incorporate the expectations, requests, and opinions from society into activities, and to minimize the negative impact on society and the environment.

Actions to promote the realization of sustainability

To realize sustainability, we have set the following four points as actions to advance:

1. Contribution to a sustainable society through our businesses

To contribute to the realization of a “vibrant and sustainable society” by solving social and environmental issues through our business activities

2. Responsibility for a sustainable society

To conduct business responsibly in a manner that does not cause or exacerbate social challenges or environmental issues

3. Risk management for long-term social and environmental changes

To adapt to changes in society and the environment not only in the short and medium terms but also in the long term. To create business opportunities and sustainable development. To predict risks and to control or minimize their impacts on business management

4. Communication with stakeholders

To communicate with society, customers, shareholders, employees, and other stakeholders through highly transparent disclosure of information in a way that reflects society's expectations, requests, and opinions in our corporate management

Promotional System for Sustainability

The policies and planning for the sustainability activities of the Mitsubishi Electric Group are decided by the Sustainability Committee, which is chaired by the Chief Strategy Officer (CSO), the Executive Officer in charge of corporate planning and sustainability, and appointed by Mitsubishi Electric's Executive Officers meeting. The Sustainability Committee comprises of the heads of Mitsubishi Electric's corporate divisions and corporate strategic planning divisions (as of April 1, 2023, there are 34 members in charge of environmental, social and governance aspects from divisions such as Corporate Strategic Planning and Corporate Human Resources). Based on the materiality, the Committee discusses monitoring the results of activities, decisions on future activity plans, and responses to law amendments, and promoting initiatives from a perspective that spans the entire Mitsubishi Electric Group. In addition, the corporate divisions are responsible for the promotion of specific initiatives such as ethics and legal compliance, quality assurance and improvement, environmental protection activities, social contribution activities, and stakeholder communication.

The Sustainability Planning Division provides the secretariat for the Sustainability Committee. We have established the Sustainability Planning Division under the direct control of the President as the core organization responsible for this task from fiscal 2024 in order to realize sustainability.

The Sustainability Committee generally holds meetings at least three times a year, and the details on the discussion are reported to the senior executives at the Executive Officers' Meeting. From fiscal 2022, the details on the discussion are also reported to the Board of Directors. The Board of Directors regards the statuses of sustainability initiatives as one of the “key agenda items” for the Mitsubishi Electric Group (medium- and long-term management plan, organizational culture reform, sustainability initiatives, and human capital strategy from July 2022 to June 2023), and it holds full discussions from the perspective of risk management and profit-generating opportunities, receiving diverse opinions from independent outside directors, as well as supervising the status of initiatives by Executive Officers.

The promotion of sustainability initiatives is one of the compensation indicators for Executive Officers, and the achievement of performance indicators in non-financial areas such as sustainability and ESG-related areas is reflected in incentive compensation.

In order to deal with sustainability challenges that involve multiple divisions in a cross-sectional manner, we also have established ‘Subcommittees’ as permanent meetings and ‘Projects’ as temporary meetings under the Sustainability Committee. The two subcommittees, the “Carbon Neutrality Subcommittee” and the “Human Rights Subcommittee,” promote initiatives in response to legal and social requirements. In addition, we have established the “Integrated Report/Legal Disclosure Working Group” and “TCFD Working Group” to consider the clarification of individual categories of activities and the roles of participating divisions, information disclosure in accordance with norms, and other matters. Subcommittees and projects are led by the relevant corporate division, and the progress of these subcommittees' initiatives is confirmed at each Sustainability Committee meeting.

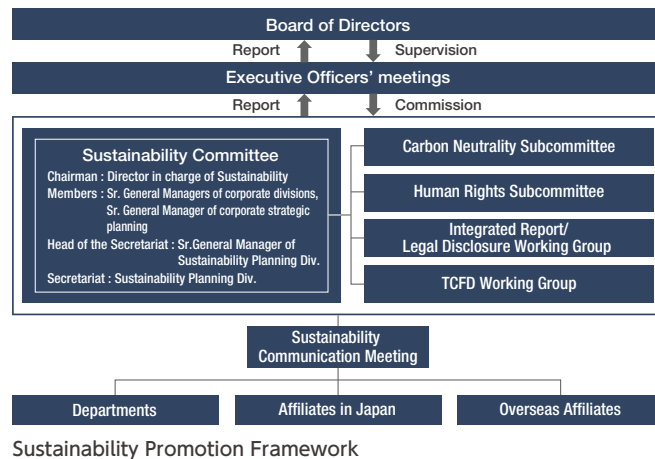
Further, to share and execute the policies and plans established by the Sustainability Committee, we have established the “Sustainability Communication Meeting” aimed at collaboration between internal divisions and affiliates in Japan and overseas.

Key Feedback from the Board of Directors

Regarding the agenda items related to the impact of climate change, “Initiatives to carbon neutrality” and “Response to the TCFD” were discussed at the Sustainability Committee meetings in April and October 2022 and January and April 2023.

In response, the Board of Directors has provided feedback to the Executive Officer Responsible for Sustainability, including the following points:

- Society expects the Mitsubishi Electric Group to “realize a sustainable global environment” as well as “a safe, secure, and comfortable society.” We must also demonstrate our strength in these areas, and it is necessary to promote initiatives with carbon neutrality at their core.
- More and more companies are being criticized for “greenwashing” (pretending to contribute to the environment). There is a need for accurate communication of the facts.



TCFD Working Group

During fiscal 2023, the TCFD Working Group was established under the auspices of the Sustainability Committee with the aim of stepping up efforts to address risks and opportunities associated with climate change, both in terms of “risk management in response to long-term social and environmental changes” and “communication with stakeholders.”



TCFD Working Group

As a point of reinforcement, the project considered the financial impact assessment based on scenario analysis and the global environmental risks management in the risk management of the Mitsubishi Electric Group.

Considering the financial impact assessment based on scenario analysis

We have identified and extracted the corporate divisions that are considered to be relatively highly sensitive to the impacts of climate change by examining the following documents and records as well as assessing them from a bird's-eye view: external assessments (ESG investment guidelines, various climate-related initiatives, etc.) of the magnitude and sensitivity of the effects that climate change has on industries; greenhouse gas emission amounts by division; and the business portfolio of each corporate division. We next estimated the financial impacts on our current business plans over the long-term in an uncertain future year based on the assumption of scenarios in which climate change is below 2°C and in which climate change is 4°C. We then verified the resilience of these businesses and examined the degree of impacts on the Mitsubishi Electric Group's overall business as well as the accuracy and validity of the information disclosed. In fiscal 2024, with the aim of conducting a financial impact assessment of the Mitsubishi Electric Group as a whole and disclosing the results in fiscal 2025, we will continue this study and expand it into a consistent analysis of all corporate divisions.

Examination of global environmental risk management in the risk management of the Mitsubishi Electric Group

With regard to risk management, we have established a risk management framework for the Mitsubishi Electric Group, positioned global environmental risks including climate change within this framework, and improved management processes for risks related to the global environment. In fiscal 2024, we aim to further contribute to the global environment by deepening and clarifying the identification, assessment, and management of risks and opportunities related to climate change.

Strategy

Climate Change Risks and Opportunities in the Short, Mid-to-Long Term

The Mitsubishi Electric Group has identified climate-related risks and opportunities.

Table 1 Examples of Climate-related Risks and Initiatives by the Mitsubishi Electric Group

Risks	Examples of the Group's Initiatives
■ Transition Risks	
Policy and Legal Risks (Short-to-Long Term) <ul style="list-style-type: none"> • Increase in carbon pricing • Strengthened obligation of emission reports • Orders and regulations for existing products and services by relevant authorities • Litigation 	<ul style="list-style-type: none"> • Reduction of GHG^{*1} emissions through promotion of environmental plans and setting and taking initiative on SBT^{*2} • Promotion of environmentally conscious design (global warming, resource conservation, recyclability, hazardous substances, packaging) • Capital investment related to environmental activities, including energy saving and global warming countermeasures • Implementation of supply chain management (formulation and implementation of green procurement standards) • Reporting of Scope 1, 2 and 3 emissions and implementation of third-party certification • Acquisition and maintenance of ISO 14001 certification • Confirmation of legal compliance through environmental audits • Disclosure of initiatives related to climate change and other environmental issues
Technology Risks (Mid-to-Long Term) <ul style="list-style-type: none"> • Replacement of existing products and services with low-emission alternatives • Failed investment in new technologies • Cost of transition to low-emission technologies 	<ul style="list-style-type: none"> • Development of new technologies through R&D investment • Implementation of intellectual property activities • Mobile capital investment mainly in key growth businesses • Capital investment related to environmental activities, including energy saving and global warming countermeasures
Market Risks (Mid-to-Long Term) <ul style="list-style-type: none"> • Changes in customer behavior • Uncertainty in market signals • Rise in raw material costs 	<ul style="list-style-type: none"> • Promotion of environmentally conscious design • Capital investment related to environmental activities, including energy saving and global warming countermeasures • Market research and feedback on product development
Reputation Risks (Mid-to-Long Term) <ul style="list-style-type: none"> • Changes in consumer preferences • Criticisms of the industrial sector • Increased concerns among stakeholders, or negative feedback from them 	<ul style="list-style-type: none"> • Reduction of GHG emissions through promotion of environmental plans and setting and taking initiative on science based targets • Capital investment related to environmental activities, including energy saving and global warming countermeasures • Promotion of environmentally conscious design • Response to environmental risk management • Implementation of natural environment conservation activities, including the protection of local biodiversity • Disclosure of initiatives related to climate change and other environmental issues
■ Physical Risks	
Acute Risks (Short-to-Long Term) <ul style="list-style-type: none"> • Increased severity of extreme weather such as cyclones and floods 	<ul style="list-style-type: none"> • Formulation and periodic review of BCPs^{*3} • Implementation of supply chain management (formulation and implementation of green procurement standards, decentralization of production sites by purchasing from multiple companies, etc.)
Chronic Risks (Mid-to-Long Term) <ul style="list-style-type: none"> • Changes in precipitation patterns and extreme variations in weather patterns 	<ul style="list-style-type: none"> • A certain amount of investment every year in environmental activities, including initiatives against climate change • Reduction of GHG emissions through promotion of environmental plans and setting and taking initiative on science based targets

*1 Greenhouse gas *2 Science Based Targets *3 Business continuity plan

Table 2 Examples of Climate change-related Opportunities and Initiatives by the Mitsubishi Electric Group

Social Challenges (Opportunities)	Examples of the Group's Initiatives
■ Resource Efficiency	
<ul style="list-style-type: none"> • Use of more efficient modes of transport (modal shift) • Use of more efficient production and distribution processes • Promotion of recycling • Relocation to a more efficient building • Reduction in water usage and consumption 	<ul style="list-style-type: none"> • Development of products suitable for resource conservation, such as thinner materials and smaller tubes • Promotion of plastic recycling • Verification of plastic sorting technology in collaboration with other companies, joining the alliance "CLOMA"^{*1} • Energy conservation and reduction of operation costs for buildings as a whole through ZEB (net Zero Energy Building), etc. • Development of Ville-feuille^{*2} and other linked control technologies for mobility and building equipment • Provision of systems for water distribution management, water storage and discharge through dam management, and water intake management for agricultural water • Promotion of reclaimed water use • Strengthening of products and solutions that support e-F@ctory^{*3} • Promotion of a modal shift • Localization of production and sales bases
■ Energy Source	
<ul style="list-style-type: none"> • Use energy sources that contribute to carbon neutrality • Use of new technologies • Shift toward decentralized energy generation 	<ul style="list-style-type: none"> • Effective use of electricity and response to needs for system stabilization accompanying the expansion of renewable energy and decentralization of power sources <ul style="list-style-type: none"> - Large energy storage systems - VSC-based high-voltage direct current systems "HVDC-Diamond"^{*4} - Smart medium voltage DC distribution network system D-SMiree^{*5} - Distributed power supply system/VPP system - Multi-region digital power supply system (multi-region EMS)^{*5} - Heat pump technology^{*6}
■ Products and Services	
<ul style="list-style-type: none"> • Development and/or expansion of goods and services that contribute to carbon neutrality • Development of new products or services through R&D and innovation • Ability to diversify business activities • Shift in consumer preferences 	<ul style="list-style-type: none"> • Development of energy-saving products optimized for local climate conditions and needs • Development of innovative new products such as the Misola,^{*7} a lighting fixture that imitates a deep blue sky and natural light in indoor spaces. • Development for further improving energy efficiency of railway vehicles and Railway LMS on INFOPRISM^{*8}, a solution for streamlining maintenance • Demonstration of ZEB-related technologies, including the construction of demonstration facilities • Development and supply of the EcoMBR^{*9} filtration membrane cleaning system for water treatment • Provision of smart meters • Development and supply of energy conservation equipment that facilitates the measurement of energy consumption and the collection and analysis of energy consumption data • Global supply of high-efficiency equipment, including electric power train systems • Development and supply of low-loss SiC devices • Centralized GHG emissions data management solution "cocono"^{*10} • Localization of production and sales sites • Balanced promotion of short-, medium- and long-term research and development
■ Resilience	
<ul style="list-style-type: none"> • Participation in renewable energy programs and adoption of energy efficiency measures • Resource substitutes/diversification 	<ul style="list-style-type: none"> • Effective use of electricity and response to needs for system stabilization accompanying the expansion of renewable energy and decentralization of power sources • Contribution to preventing global warming by using observation satellites, strengthening the monitoring of meteorological phenomena and the global environment, understanding of disaster situations, and promoting disaster prevention^{*11} • Meteorological radar system • Field Edge[®] image-based water level measurement device • Provision of BCP solutions, such as data centers, teleworking, and video conferencing services

*1 [Contributing to Solving the Marine Plastic Waste Problems "Joining CLOMA"](#)

*2 [Smart city/building IoT platform "Ville-feuille"](#) <Japanese site>

*3 [Introduction of e-F@ctory](#)

*4 [Topics: VSC-based high-voltage direct current systems "HVDC-Diamond"](#)

*5 [Energy & Industrial Systems Group](#)

*6 [Topics: "ecodan" series](#)

*7 ["misola" blue sky lighting](#) <Japanese site>

*8 [Topics: Solution that supports safe, secure, and efficient railway operations](#)

*9 [Water treatment technology using membrane bioreactor with ozonated water](#) <Japanese site>

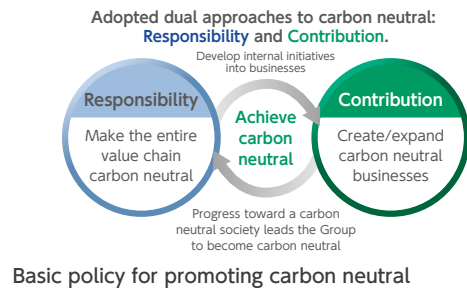
*10 [Centralized GHG emissions data management solution "cocono"](#) <Japanese site>

*11 [Observation Satellites](#)

Promotion of carbon neutrality

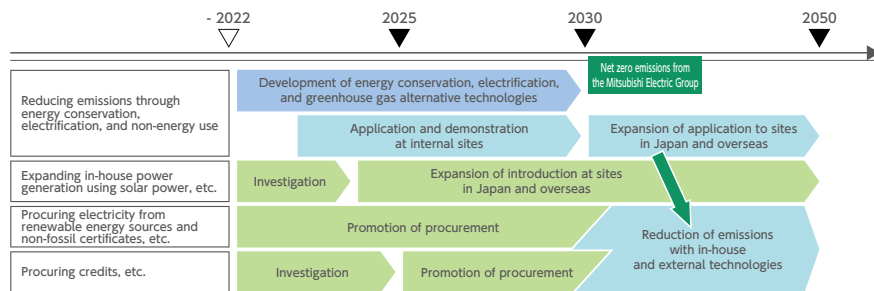
The Mitsubishi Electric Group is working to achieve carbon neutrality from the aspects of responsibility and contribution. While continuing and growing our business, we aim to achieve net zero greenhouse gas emissions from our own operations and to achieve carbon neutrality throughout our value chain by 2050. In May 2022, we announced an interim target of "reducing our own emissions to 50% of the fiscal 2014 level by fiscal 2031," and in May 2023, we changed the interim target to "aiming for net zero greenhouse gas emissions from factories and offices by fiscal 2031" to proactively join in the international trend to limit the increase in global average temperature to 1.5°C or less. In Japan, we also participate in the GX League, a collaboration between industry, government, academia, and private citizens to achieve carbon neutrality by 2050, which is led by the Ministry of Economy, Trade and Industry (METI).

We will apply our internal initiatives to our business and return the positive impacts on the Mitsubishi Electric Group resulting from progress made in these initiatives throughout society to our business. In this way, we will work to achieve carbon neutrality by mutually reinforcing each other's efforts.



Responsibility: Carbon neutral initiatives in the entire value chain

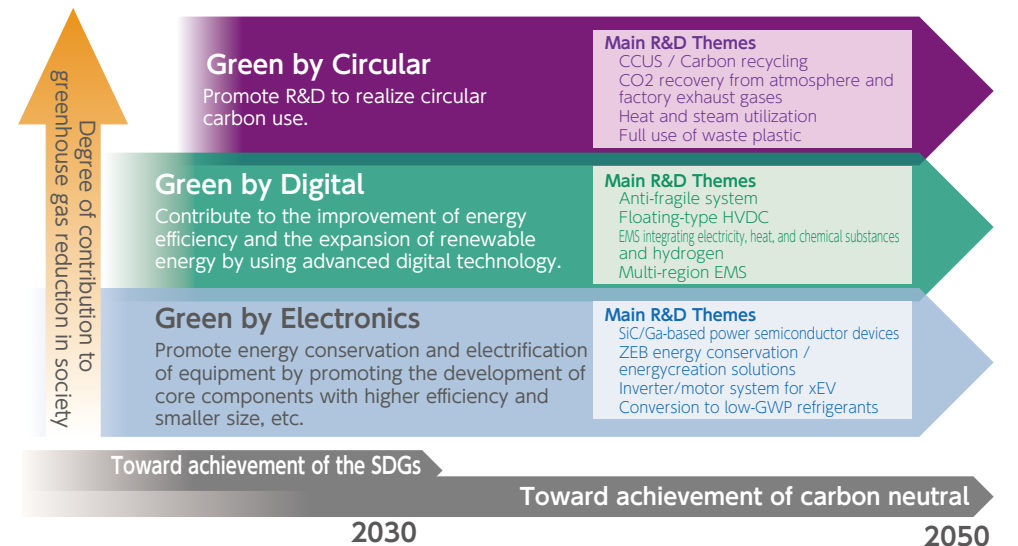
The Mitsubishi Electric Group has set out to achieve net zero greenhouse gas emissions in the entire value chain by 2050. As initiatives to reduce such emissions at factories and offices, we aim to achieve net zero greenhouse gas emissions from factories and offices by fiscal 2031 by (1) reducing emissions through energy conservation, electrification, and non-energy use; (2) expanding in-house power generation using solar power, etc.; (3) procuring electricity from renewable energy sources and non-fossil certificates, etc.; and (4) procuring credits, etc.



Contribution: Create/expand businesses that contribute to carbon neutral

To make society as a whole carbon neutral, we have established a development roadmap up to 2050 and will accelerate R&D in three innovation areas: Green by Electronics, Green by Digital, and Green by Circular.

As an example of our efforts, we have established the Mitsubishi Electric Energy & Carbon Management Collaborative Research Center with Tokyo Institute of Technology to promote research and development of energy and carbon management technologies, including environmental value trading of electricity, heat, and chemical substances as well as carbon recycling technologies.



CCUS (Carbon dioxide Capture, Utilization and Storage), HVDC (High Voltage Direct Current), EMS (Energy Management System), ZEB (net Zero Energy Building), GWP (Global Warming Potential)

Development roadmap for achieving carbon neutral

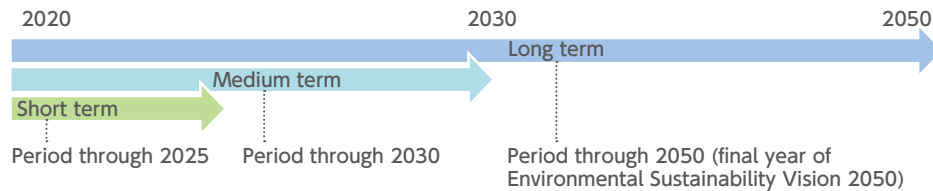
Scenario-based Analysis and Resilience

The corporate activities of the Mitsubishi Electric Group are assessed through scenario analysis based on IPCC* representative concentration pathway scenarios. The assessment is made based on two scenarios: a scenario that shows the state of transition (social trend) when keeping the global average temperature rise to below 2°C compared to pre-industrial levels (the 2°C scenario), and a scenario in which the temperature rises nearly 4°C as a result of continuing with conventional global warming countermeasures (the 4°C scenario).

* IPCC: Intergovernmental Panel on Climate Change

The scenario analysis forecasts up to 2050 with periods classified as shown below.

- Long-term: Period through 2050 (final year of Environmental Sustainability Vision 2050)
- Medium-term: Period through 2030
- Short-term: Period through 2025



Risks related to climate change and the Mitsubishi Electric Group's initiatives

Climate-related risks can be broadly divided into risks associated with the transition to a decarbonized society (transition risks) and risks associated with the physical impacts of global warming (physical risks). These risks can result in increased expenses (for production, internal administration, financing, etc.) and decreased revenues.

If the 2°C scenario progresses, social demand for reducing greenhouse gas emissions is expected to grow, raw material costs are expected to rise due to changes in the energy demand and supply balance, and the amount of generated power by renewable energy sources is expected to increase, in the transition to a decarbonized society. As a result of efforts to realize such a society, the likelihood of transition risks arising from the tightening of laws and regulations on greenhouse gas emissions and an increase in the burden of technological development will be relatively high (compared to physical risks).

If the 4°C scenario progresses, there is expected to be a significant increase in the frequency and severity of heavy rains and floods and a chronic rise in temperature. Physical risks such as the suspension of operations and disruption to supply chains due to disaster will be relatively high (compared to transition risks).

To address these risks, the Mitsubishi Electric Group is implementing the initiatives shown in "Table 1: Examples of Climate-related Risks and Initiatives by the Mitsubishi Electric Group."

For example, even if laws and regulations strengthen the curtailment of greenhouse gases under the 2°C scenario, the Group can mitigate the impacts of such a regulatory move, as it is already working to reduce its emissions through its Environmental Plan and participating

in science-based targets. Similarly, the impact of rising raw material costs can be mitigated by further promoting environmentally conscious design, which is already being implemented with respect to tackling global warming, resources conservation, and improved recyclability. We are also making capital investments related to environmental activities, including energy saving and other measures to combat global warming. Additionally, we are investing in the research and development of new technologies in a well-balanced manner from the short, medium, and long-term perspectives.

In response to physical risks, such as flooding, which will materialize under the 4°C scenario, we have formulated a business continuity plan and review it once a year while moving ahead with the decentralization of production sites. We are also taking steps to prevent production problems in the supply chain, such as by purchasing from multiple companies and having our suppliers operate multiple production plants.

Examples of climate change-related opportunities and initiatives by the Mitsubishi Electric Group

As the 2°C or 4°C scenario progresses, social issues arising from climate change and the need to respond to them are expected to become more apparent.

For example, if the 2°C scenario progresses, it is predicted that the amount of power generated by renewable energy will increase. The Mitsubishi Electric Group is capable of contributing to addressing needs for effective use of electricity and system stabilization that stem from such expansion of renewable energy and the decentralization of power sources, by providing large energy storage systems, smart medium- and low-voltage direct current distribution network systems, distributed power source operation systems / virtual power plant (VPP) systems, and multi-region digital power delivery systems (multi-region EMS).

If the 4°C scenario progresses, frequent heavy rain and floods are expected. Using observation satellites, the Group is able to enhance the monitoring of meteorological phenomena and the global environment, understand disaster situations, and help prevent disasters.

The Mitsubishi Electric Group has a wide range of businesses. Our strength is our ability to provide a wide range of products, services, and solutions that contribute to solving social issues arising from climate change. We therefore believe that we have sustainable growth opportunities over the short to long term through our solutions to these social challenges as shown in Table 2 "Examples of Climate-related Opportunities and Initiatives by the Mitsubishi Electric Group."

Resilience of Climate change-related Strategies

As a result of this assessment of the risks and opportunities associated with climate change and our efforts to address them, we believe that the Mitsubishi Electric Group is resilient to the risks associated with climate change and can achieve sustainable growth by resolving social issues caused by climate change under both the 2°C or 4°C scenarios.

Risk Management

Processes for addressing climate change-related risks and opportunities

The Mitsubishi Electric Group uses a business strategy decision-making process and a comprehensive risk management process to identify, assess, and manage risks and opportunities related to the global environment, including climate change.

Each of Mitsubishi Electric's department (business groups, corporate divisions), and affiliated companies in Japan and overseas will identify climate change-related risks that are relevant to them, consider how to respond to such risks and turn them into opportunities, and proactively incorporate them into their business and divisional strategies. The CSO (Chief Strategy Officer) will also formulate an overall management strategy for the Mitsubishi Electric Group based on the formulated business and divisional strategies, the policies for seizing opportunities related to climate change, the return on investment of measures to achieve carbon neutrality, and the carbon costs estimated by ICP (Internal Carbon Pricing).

At the same time, as part of the Mitsubishi Electric Group's comprehensive risk management, we will identify, assess, and properly manage issues that have significant impacts on management in various risk areas, including risk management related to climate change.

Mitsubishi Electric Group risk management system and positioning of global environmental risks

The Mitsubishi Electric Group's global environmental and other risks, including risks related to climate change, are primarily managed by each corporate division of Mitsubishi Electric and its subsidiaries and affiliates in Japan and overseas. In addition, under the direction of the Chief Risk Management Officer (CRO), the corporate division (i.e., the division in charge of the risk) identifies, assesses, and manages risks based on its knowledge in each area of expertise.

Risks in each specialty area identified and assessed by the divisions in charge of such risks are consolidated by the Corporate Risk Management Division, and their impacts on group management are evaluated through relative comparisons among each risk, etc. The CRO determines their materiality, and all Executive Officers discuss the risks (comprehensive evaluation of risks/measures).

Risks comprehensively assessed through the above process are shared with relevant parties, including management. The Group considers global environmental risks, including climate change, to be highly material because they have significant impacts on the realization of a sustainable global environment, one of the Group's materialities.

Management process for risks related to the global environment

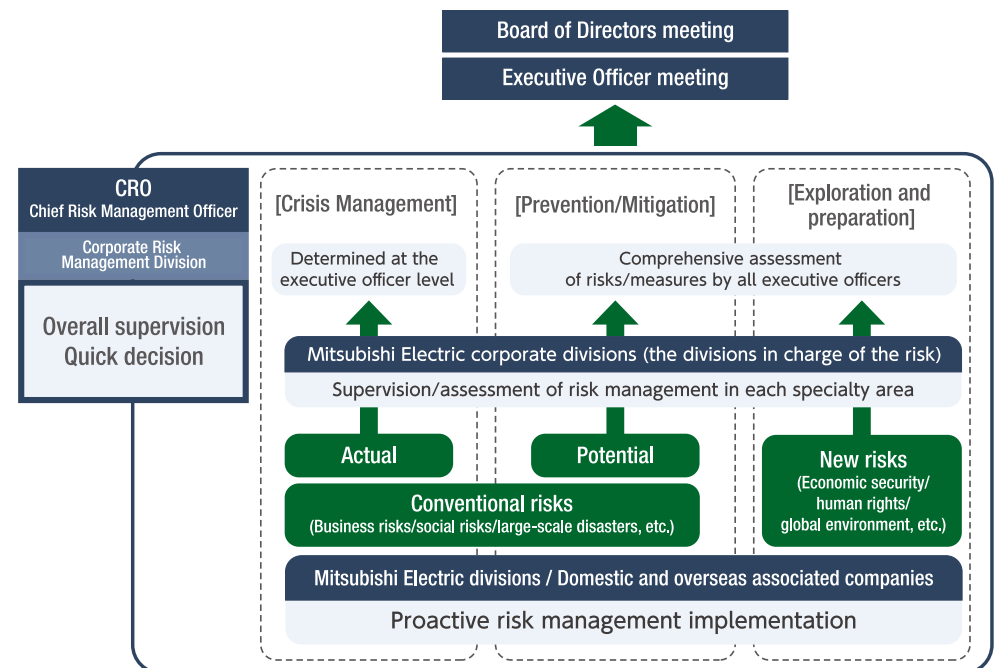
Global environmental risks, including climate change, are identified, assessed, and managed by the Executive Officer in charge of Corporate Total Productivity Management & Environmental Programs and the Corporate Environmental Sustainability Department, the department in charge of risk, under the direction of the CRO, in accordance with the Mitsubishi Electric Group risk management system described above.

Based on the results of such comprehensive risk assessment, the Executive Officer in

charge of Corporate Total Productivity Management & Environmental Programs and the Corporate Environmental Sustainability Department identify and assess risks by subdividing global environmental risks into smaller risks, taking into account legal trends, technological trends, market trends, external evaluations, and other factors. Based on the results, the Executive Officer and the Department formulate an environmental plan as a medium-term risk management measure and an environmental implementation plan as a one-year measure.

Each group organization (business groups, affiliated company, etc.) formulates its own annual environmental implementation plan based on these plans and reports the results to the Executive Officer in charge of Corporate Total Productivity Management & Environmental Programs and the Corporate Environmental Sustainability Department.

The Executive Officer in charge of Corporate Total Productivity Management & Environmental Programs and the Corporate Environmental Sustainability Department then review the results of the identifying and assessing of global environmental risks, taking into account the results of each organization and social trends, and in turn report the results to the Corporate Risk Management Division and, if necessary, revise the environmental plan and reflect the results in the environmental implementation plan for the following fiscal year.



Risk Management Framework

Indicators and Targets

Calculating and Understanding Greenhouse Gas Emissions in the Value Chain

The Mitsubishi Electric Group calculates and tracks greenhouse gas emissions (Scope 1, 2 and 3) in its value chain. For calculation and assessment, we refer to the GHG Protocol and the Basic Guidelines on Accounting for Greenhouse Gas Emissions Throughout the Supply Chain published by Japan's Ministry of the Environment.

Long-Term Target

In our long-term environmental management vision up to 2050, the so-called Environmental Sustainability Vision 2050, the Mitsubishi Electric Group has set a target to reduce greenhouse gas emissions throughout the entire value chain to net-zero by 2050.

Mid-Term Targets

The Mitsubishi Electric Group has reviewed its Scope 1 and Scope 2 targets in order to strengthen its efforts towards reducing greenhouse gas emissions, and it has set a new target during fiscal 2024 of "Achieving net zero greenhouse gas emissions from factories and offices by fiscal 2031."

In addition, the following greenhouse gas emission reduction targets were approved by the Science Based Targets initiative in January 2020.

- Scope 1 and 2: Reduce greenhouse gas emissions by 18% by 2030 compared to fiscal 2017 levels
- Scope 3*: Reduce greenhouse gas emissions by 15% by 2030 compared to fiscal 2019 levels

* Scope 3 emissions cover Category 11 (Use of sold products)

Short-Term Targets

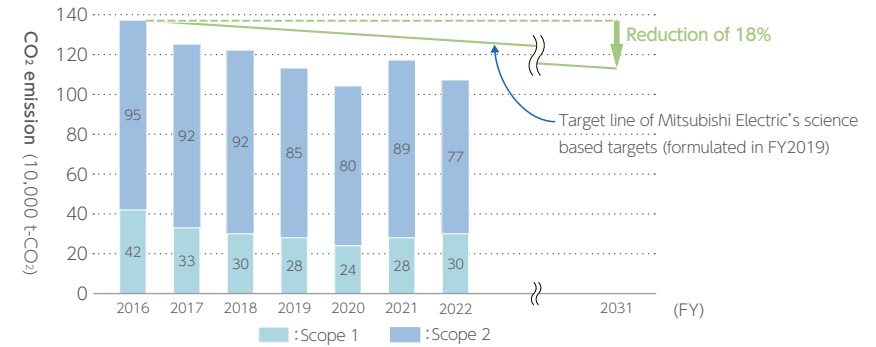
Since fiscal 1994, the Mitsubishi Electric Group has formulated an Environmental Plan every three years that sets out specific activity targets. We are presently pursuing various activities in line with the current Environmental Plan 2023 (fiscal 2022 to 2024) which sets out indicators and targets in four areas based on the action guidelines of the Environmental Sustainability Vision 2050, namely: "environmental contribution through products and services," "reducing the environmental impact of business activities," "pursuing business innovations," and "publicizing and sharing new values and lifestyles."

For details, see "Environmental Plan 2023"

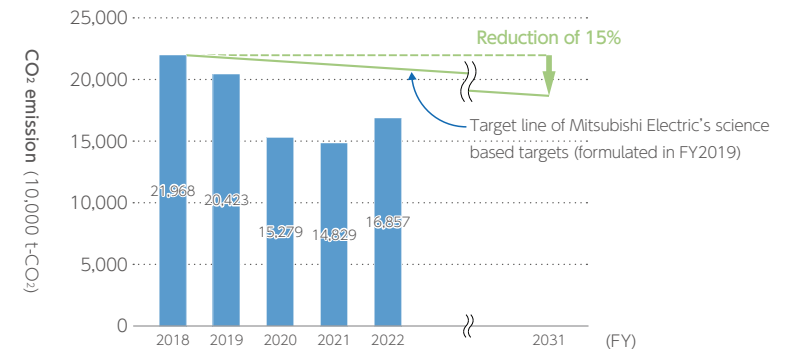
[Environmental Plan 2023](#)

Progress

Initiatives to achieve greenhouse gas emission reduction targets are making steady progress.



Scope 1 and 2 emissions*¹ (Mitsubishi Electric Group)



Scope 3 emissions*² (Mitsubishi Electric Group)

*1 Scope 2 is location based. The CO₂ emission coefficient for electricity is calculated in reference to the following: Japan—the latest figures published by The Electric Power Council for a Low Carbon Society (ELCS); Overseas—the latest figures published by International Energy Agency. The global warming potential for greenhouse gases is calculated in reference to figures published in the IPCC Fifth Evaluation Report.

*2 The scope of third-party verification for Scope 3 emissions includes Category 11 (Use of sold products).

Third-party Verification

The Mitsubishi Electric Group has set targets for its greenhouse gas emissions (Scopes 1, 2 and 3) and amount of water intake and drainage. These targets have been verified by a third party in compliance with ISO 14064-3 to ensure reliability of the data.

* The scope of third-party verification for Scope 3 emissions includes Category 1 (Purchased goods and services), Category 6 (Business travel), Category 7 (Employee commuting), and Category 11 (Use of sold products).

For details, see "Third-party Verification Report (Environmental Disclosure of 5 items)"

[Third-party Verification Report \(Environmental Disclosure of 5 items\)](#)

The Structure of Our Environmental Management System

Scope of Environmental Management

The Mitsubishi Electric Group operates an ISO 14001:2015 compliant environmental management system that covers Mitsubishi Electric and its major affiliates.

Environmental Plan and Environmental Management Plan

The Mitsubishi Electric Group formulates an environmental plan every three years, comprised of measures and targets for realizing the Environmental Sustainability Vision.

To achieve the targets of this environmental plan, each management organization formulates and acts on a yearly environmental implementation plan.



(1) Formulation of a Fiscal Year Plan–(2) Formulation of an Environmental Management Plan
Based on environmental plans, objectives and action plans are determined for that fiscal year.

(3) Company-wide Environmental Managers' Meeting

A meeting is held that is attended by all people who are responsible for promoting environmental practices. Information such as focus issues and policies is shared and confirmed.

(4) Confirmation of Progress and Achievements

Every six months, the Corporate Environmental Sustainability Department compiles environmental performance data and other relevant information, and reports them to the Executive Officer in charge of Corporate Total Productivity Management & Environmental Programs, who is responsible for environmental management. The Executive Officer then conducts a review and modifies environmental plans as necessary (e.g., when any significant change occurs in the business environment related to the Group).

(5) Reporting of Annual Environmental Results

The Corporate Environmental Sustainability Department compiles environmental performance data and other relevant information for the fiscal year to report to the Executive Officer in charge of Corporate Total Productivity Management & Environmental Programs.

(6) Management Review

The Executive Officer in charge of Corporate Total Productivity Management & Environmental Programs carries out the review of activity results and reconsiders environmental plans and/or the environmental implementation plan for the next fiscal year if necessary.

Our activity level is enhanced through the “formulation,” “implementation,” “verification of results,” and “review” of the plans throughout the fiscal year. In addition to this, audits and inspections on an “as needed” basis ensure that appropriate activities are carried out.

Sharing Information with Environmental Managers in Each Organization

Within the Mitsubishi Electric Group, in addition to the technology committees for different issues and meetings held by the people in charge of each organization, general meetings are held and attended by all people responsible for promoting the environmental practices for each division in Japan and overseas. The aims of such meetings include confirming key issues and unifying the approaches to these that the various divisions take, as well as sharing useful information such as “favorable case examples” of each other’s practices and “matters to watch out for” on a regular and continuous basis. Such meetings are useful for improving overall management levels.

The “Company-wide Environmental Managers’ Meeting” and the “Overseas Regional Environmental Meeting” are representative of this practice. The former brings together all environmental managers from across Japan. The latter is held in our four overseas regions (the Americas, Europe, China and the rest of Asia). In fiscal 2023, almost all of these meetings were held online to prevent the spread of COVID-19. In Europe, where restrictions were lifted ahead of other regions, we resumed in-person meetings during the latter half of the fiscal year.

Training of Environmental Personnel

Developing Personnel to Proactively Engage in Environmental Activities

The Mitsubishi Electric Group recognizes “nurturing human resources” as one of its key activities in accordance with the action guideline to “challenge to develop business innovations for future generations,” as set forth in the long-term environmental management vision, “Environmental Sustainability Vision 2050.”

We strive to foster a corporate culture in which each Mitsubishi Electric Group employee takes the initiative to create a new lifestyle in harmony with nature as an ordinary citizen. To this end, all employees participate in an annual e-learning program, “Mitsubishi Electric Group Environmental Management.” We also develop human resources who possess a high degree of expertise and who accept diverse values and proactively tackle environmental issues, on a continuous basis. Furthermore, in order to provide effective training, we employ various educational curricula in accordance with each employee’s role and expertise.

Environmental Education System

Target	Lecture Name
Employees Having Environmental Responsibilities	<ul style="list-style-type: none"> ● Environmental Management Representative Training ● Environmental Section Manager Training ● New Environmental Section Manager Training ● MELCO Seminar Environmental Courses <ul style="list-style-type: none"> - Waste Management - Energy Saving Law - Chemical Substances Management - Environmental Basic Guidance - Environmental Audits - ISO 14001 - Introduction to Environmental Issues - Training Internal Auditors
General Employees	<ul style="list-style-type: none"> ● e-Learning for All Employees, Mitsubishi Electric Group Environmental Management ● Training for Specific Ranks <ul style="list-style-type: none"> - Training for New Section Chiefs for All Companies - Common Basic Training for New Employees ● Environmental Course for Employees Dispatched Overseas ● Initiatives to Live in Harmony with Nature and Foster Environmental Awareness <ul style="list-style-type: none"> - Preserving Biodiversity at Business Sites - Satoyama Woodland Preservation Project - Mitsubishi Electric Outdoor Classroom ● Outdoor Classroom Leader Development/Satoyama Preservation Projects, Mitsubishi Electric Outdoor Classroom Promotion Meetings

Preventing Environmental Incidents

Preventing Environmental Incidents through Information-Sharing and Equipment Inspections

Both within Japan and overseas, the Mitsubishi Electric Group strives to prevent environmental incidents, such as the leakage of substances that may result in water or soil pollution or have a negative impact upon the environment. Owing to its efforts, the Group received no administrative punishments or penalties for any environmental violation in fiscal 2023.

As preventive measures, Mitsubishi Electric ensures that its entire workforce is fully familiar with the relevant laws and regulations, revises company rules to reflect any updates to such laws and regulations, and ensures these updates are made known throughout the Group. In the case of a problem (e.g., minor oversight) occurring, Mitsubishi Electric shares the cause and countermeasures throughout the entire Group to prevent it from reoccurring. Aiming to increase the awareness of environmental risk management, the Mitsubishi Electric Group’s offices and factories across Japan take measures such as watching internal training videos that introduce examples of problems and the establishment and renewal of important laws, thereby firmly instilling environmental management issues across a wider range of occupational levels. In addition, periodic facilities inspections are carried out at all Group bases, the results of which are compiled into necessary measures from time to time and utilized.

Environmental audits are also conducted at major affiliated companies overseas in an effort to uncover and prevent environmental risks.

Responding to Soil and Groundwater Pollution

As stated in our internal rules, the Mitsubishi Electric Group’s business sites (works, laboratories, etc.) conduct environmental assessments such as when there is a change in land characteristics. These assessments are based on a survey method that complies with relevant laws and regulations, and the necessary countermeasures or solutions are implemented in accordance with the state of pollution.

In fiscal 2023, we assessed survey results and countermeasures regarding the condition of soil and groundwater due to land utilization for a total of eleven cases and have confirmed that all cases were handled appropriately.

Regarding areas that were recognized as having groundwater or soil pollution problems in the past, we purify the land using methods compliant with laws and regulations, and continue to regularly report the results of our monitoring to relevant government organizations.

Appropriate Storage and Processing of PCB Waste and Devices Containing PCBs

Mitsubishi Electric conducts inspections at all bases that store PCB waste (waste containing polychlorinated biphenyl) and/or handle devices containing PCBs at least once a year to confirm the status of PCB storage and usage.

In fiscal 2023, we completed disposal of waste having a high PCB concentration that had been stored by Mitsubishi Electric.

With respect to low-concentration PCB waste and devices containing PCBs, Mitsubishi Electric and its domestic affiliates disposed of 522 units (114.5 tons) and 41 units (45 tons) of devices respectively in fiscal 2023.

Customers can confirm whether or not an electrical device manufactured by a Mitsubishi Electric Group company contains PCB by referring to a list available on the corporate website.

ISO Certification

Mitsubishi Electric has obtained company-wide multi-site (collective) ISO 14001:2015 certification. This certification structure was chosen as part of our attempt to strengthen compliance by the company as a whole and to further strengthen our contribution to the environment through business operations based on our environmental plans.

Please refer to “ISO 14001 Certificate of Registration (Scope: Mitsubishi Electric Corporation)” for details of sites included in the multi-site certification. Among all Group companies required to report on their environmental management system, roughly 50% have acquired ISO 14001 certification.

[ISO 14001 Certificate of Registration \(Scope: Mitsubishi Electric Corporation\)](#)

Environmental Audits

The Mitsubishi Electric Group combines the multiple types of environmental auditing shown below in order to carry out checks from various perspectives. These audits are performed at each business site to confirm their compliance with laws and regulations, the operational status of the environmental management system, and the progress of environmental action plans.

Overview of the Four Types of Environmental Audits

	Internal auditing at business sites	Mutual auditing between business sites	Auditing of affiliated companies	Auditing by the audit division
Implementing body	All Mitsubishi Electric business sites (head office, branches, works and R&D centers) and affiliated companies	All Mitsubishi Electric business sites (head office, branches, works and R&D centers)	Mitsubishi Electric (head office and works)	Mitsubishi Electric (head office audit division)
Subject of audits	Other organizations within the same business site	Other business sites	Affiliated companies	Mitsubishi Electric and affiliated companies
Frequency of audits	Once a year	Once a year	Once every two to three years	Once every three years

Environmental Plan 2023

| Formulation Background and Concept

Environmental Plan 2023 (FY2022–2024) is the first environmental plan formulated based on Environmental Sustainability Vision 2050. In order to achieve “carbon neutrality” and a “circular economy,” we will promote innovation in development and accelerate the reduction of our products’ environmental impact through their entire lifecycles. Since implementing this plan, we have also started to track progress towards the target effective utilization rate of plastic waste.

Products	<p>Environmental activities starting from product development</p> <p>Starting from fiscal 2022, we have been assessing the extent of reduction of the environmental impact of newly developed products (or improvement rates from previous models) over our entire product range, using indices specified for each product.</p> <p>We will centrally manage the energy consumption of each product and the environmental data of materials that are used as well as packaging materials, and apply the PDCA cycle to raise our level of environmentally conscious designs.</p>
+	
Services	<p>Expansion of environmental solutions and services</p> <p>We will make energy-saving proposals for systems using integrated solutions, strive to extend the service life of equipment through maintenance, and promote the modernization of elevators and escalators. We will also enhance our resource recycling solutions, including the reuse of air-conditioning piping, and further expand the “closed-loop recycling” of plastics.</p>
+	
Business Activities	<p>Maintaining/improving measures to reduce the environmental impact of business activities</p> <p>When constructing new buildings and introducing energy-saving equipment, we will ensure strict compliance with all relevant energy-efficiency guidelines. We will also continue to manage the reduction of energy usage by establishing targets to improve the operations of our facilities. Furthermore, we will strive to introduce renewable energy that is suited to each area, and strengthen our governance of waste.</p>

The targets of Environmental Plan 2023 and the results of fiscal 2023 are as shown in the chart below. Steady progress is being made in reducing CO₂ emission from our products and from our plants and offices. Toward the realization of a circular economy, we will promote the effective utilization of plastics with an eye on achieving the FY2024 targets.

Note that the target for reducing CO₂ emission from our company has been changed from the initial target that had been established at the time of formulation of the plan to reflect the new fiscal 2031 target established in 2022.

Targets for Environmental Plan 2023 and Fiscal 2023 Results

Activity	KPI	Target set in Environmental Plan 2023	Fiscal 2023 results
Environmental contribution through products and services			
Expanding our contribution to CO ₂ emission reduction with new products	Improvement rate of new products over previous models	1% or more in fiscal 2024	2.8%
Improving the usage rate of recycled plastics	Usage rate of recycled plastic (molding materials)	10% or more in fiscal 2024	8.1%
Reduction of the environmental impact of our business activities			
Reducing CO ₂ emitted from our company	CO ₂ emission (Scopes 1 and 2)	Reduction of 30% or more compared to fiscal 2014	27% reduction
Improving the effective usage rate of plastic waste	Effective usage rate of plastic waste (in Japan)	90% or more in fiscal 2024	92.5%
Using water effectively	Water consumption per unit of sales in high-risk sites	Reduction of 4% or more by fiscal 2024 compared to fiscal 2020	16% reduction
Publicizing and sharing new values and lifestyles			
Promoting the “Mitsubishi Electric Outdoor Classroom” and “Satoyama” Woodland Preservation Project”	Number of areas where activities are held	39 areas	38 areas

We have set indexes and targets in order to measure the progress of product improvement initiatives undertaken by the Mitsubishi Electric Group as a whole and by our business sites. With respect to items that may require creative efforts by each business site, we will encourage participation from all business sites and employees, without setting across-the-board targets.

Measures Regarding “Environmental Contribution through Products and Services” and “Pursuing Business Innovations”

Making Our Environmental Contribution Visible and Setting Targets

We will make our environmental contribution visible and set targets by following the below procedure. In doing so, we aim to instill in our employees awareness of environmentally friendly design, particularly among our designers, and to strengthen this awareness.

- (1) Define the operating conditions and evaluation items* for carrying out an environmental performance evaluation of each product group (including systems and solutions).
- (2) Centrally manage the environmental performance of products using an electronic system. This will facilitate the collection and analysis of data.
- (3) Set targets for each product group and assess their achievement at the development and design stages (during design reviews).

Further improvements will be made based on the results of the above.

* Global warming countermeasures and resource-saving efforts are mandatory evaluation items. Other than these, appropriate items are selected for each product group from recyclability, volume of chemical substances used, and weight of packaging materials used.

Examples of Environmental Performance Evaluation Items

Classification	Evaluation item
(1) Global warming (mandatory)	<ul style="list-style-type: none"> • Contribution to reducing greenhouse gas emissions • Power consumption during operation
(2) Resource saving (mandatory)	<ul style="list-style-type: none"> • Amount of recycled plastics used • Weight of product/ component
(3) Recyclability	<ul style="list-style-type: none"> • Number of components • Standardization of materials • Non-use of flame retardants • Improvement of ease of disassembly • Material labeling • Reduction of instruction manuals
(4) Chemical substances	<ul style="list-style-type: none"> • Reduction of substances of concern contained in products
(5) Packaging materials	<ul style="list-style-type: none"> • Packaging materials (plastics, etc.) • Weight and volume of packaging materials

Expansion of Recycled Plastic Use

In order to expand the use of recycled plastics, we will promote the development and trial production of products using recycled plastics at relevant business sites.

Measures Regarding “Initiatives to Reduce Environmental Impact of Business Activities”

Setting CO₂ Emission Targets in Annual Plans and Formulating Measures

Business groups in charge of production works formulate CO₂ emission reduction plans and measures as part of their annual business plans. Based on these plans, they strive to reduce their CO₂ emissions.

Thorough Efforts to Improve Energy Efficiency in Buildings and Facilities

We strictly observe the Building Energy-saving Guidelines when planning the construction of new buildings or the refurbishment of existing structures, and the Production Facilities Energy-saving Guidelines when introducing new production facilities at our factories.

Expanding the Introduction of Renewable Energy

We will expand the introduction of renewable energy using the following two approaches.

- (1) Examine the best means for each region, including the installation of solar power generation systems, examination of other renewable energy sources, and utilization of the green electricity certificate, and identify issues.
- (2) Examine how to effectively utilize any surplus electricity from solar power generation, including the use of self-consignment systems.

Effective Utilization of Plastic Waste

We will aim to achieve a 100% effective usage rate of used plastics by 2035. Toward this end, we will promote the visibility of waste sources and the quantitative management of plastic waste by setting target values. We will also survey and share information about recycling contractors possessing the required technologies.

Measures Regarding “Publicizing and Sharing New Values/Lifestyles”

We will further enhance our interaction with and contribution to local communities by holding the Satoyama Woodland Preservation Project and the Mitsubishi Electric Outdoor Classrooms in an integrated manner. We will also focus on environmental activities such as the cleaning of local areas, which will also help to spread information about plastic pollution in the world’s seas and oceans. The outcomes of our initiatives in Japan and overseas will be published as and when needed, and the Group’s contribution to environmental improvement will be made visible.

From the perspective of proposing new lifestyles, we will begin our efforts from within the Group, such as by making active use of remote working to save energy and optimize work-life balance, and encouraging the use of reusable cups/bottles to establish the habit of being environmentally conscious in all aspects of everyday life. By having each employee practice an environmentally conscious lifestyle, we hope to eventually spread these activities to local communities.

Environmental Considerations for Value Chain Management



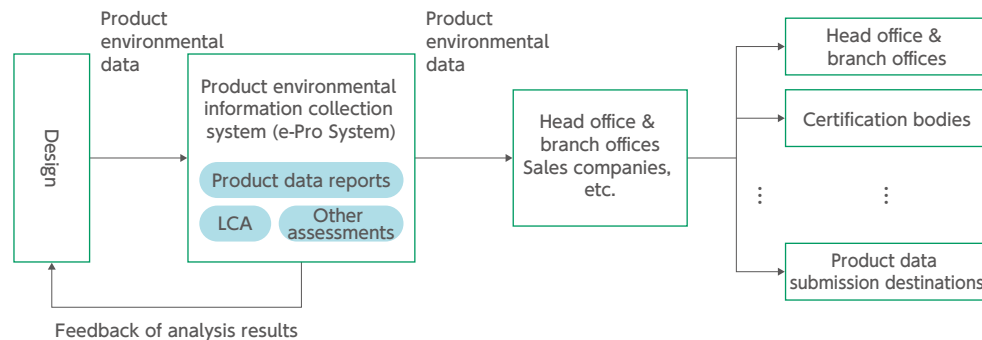
Implementation of Environmentally Conscious Design

Utilization of a product environmental information collection system

To ensure proper disclosure of product environmental information to outside the company and to respond to environmental laws and regulations in each country, a product environmental information collection system (e-Pro System) has been established that centrally manages such data as CO₂ emissions from product use and the environmental data of raw materials and packaging materials, among others. This system conforms to customer requirements to provide product data. It also contributes to promoting eco-conscious design, by enabling environmental assessment and LCA* to be implemented within the e-Pro system and fed back to design departments.

Additionally, to strengthen product designs that respond to social needs for decarbonization, an eco-design subcommittee engages in internal activities for sharing best practices and other information on laws, regulations, and eco-conscious designs in each country. It also examines the validity of LCA calculations and examines product assessment items.

* LCA: Life Cycle Assessment. Quantitative assessment of the environmental load generated from throughout the life cycle of products and services.



Utilization of product environmental data based on the product environmental information collection system (e-Pro System)

Resource recycling initiatives

To contribute to the circular economy, we promote resource recycling initiatives through product design for environment. Under the Environmental Plan 2023, we promote such initiatives mainly for plastic materials, which have a high environmental impact.

Evaluating improvements in the usage rate of recycled plastics

For plastic parts to be used in products, we can effectively utilize resources and help reduce environmental impacts by increasing the use of recycled plastics and by reducing plastic use.

Under the Environmental Plan 2023, we use the following new indexes to evaluate the usage rate of recycled plastics and to promote resource recycling initiatives.

$$\text{Usage rate of recycled plastics (\%)} = \frac{\text{Procurement volume of recycled plastics}^*}{\text{Procurement volume of plastics}^*} \times 100$$

* Procurement volume at main sites

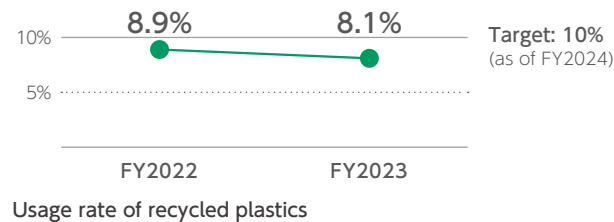
Targets and achievements of our efforts to improve the usage rate of recycled plastics

Under the Environmental Plan 2023, we are working to improve the usage rate of recycled plastics by 10% or more by fiscal 2024.

In fiscal 2023, the usage rate of recycled plastics reached 8.1%, which fell short of the target for fiscal 2024. However, we are promoting the use of recycled plastics in a variety of products, including vacuum cleaners and heat pump cooling and heating systems, and we will continue to expand our initiatives.

We are also working to reduce plastic use and promoting initiatives for a variety of products, including heat pump electric water heaters and general-purpose motors.

We will continue to contribute to society by striving to increase the use of recycled plastics and reducing plastic use.



Research and Development of Products and Technologies to Solve Environmental Issues

Example Development and Operation of ZEB for Net-Zero Energy Consumption

In October 2020, Mitsubishi Electric completed the construction of a net-zero energy building test facility, SUSTIE, on the premises of the Information Technology R&D Center (Kamakura City, Kanagawa Prefecture). This new facility conducts research and development aimed toward the further spread of ZEBs^{*1}. Looking ahead to the future of ZEB, we are working to realize Mitsubishi Electric's original ZEB+[®] (zeb plus)^{*2} concept and to enhance the functionality of buildings, for example by increasing the efficiency of working environments.



ZEB testing facility "SUSTIE"

SUSTIE received the highest rating, five stars, and ZEB^{*4} under the BELS^{*3} energy-saving certification; the highest rank of S from the CASBEE Wellness Office^{*5}, which is a certification of health and comfort; and the highest platinum rank of the WELLBuilding Standard[®] (the "WELL certification"), an international certification program to evaluate building environments. This makes SUSTIE the first in Japan to receive the highest ranks from each of BELS, the CASBEE Wellness Office, and the WELL certificate^{*6}.

*1 ZEB: Net-Zero Energy Building

*2 ZEB+[®]: Mitsubishi Electric's unique initiative that aims to enhance building functionality by adding such values as productivity, comfort, convenience, and business continuity to ZEB, and managing a building throughout its lifecycle.

*3 Building-Housing Energy-efficiency Labeling System: An evaluation program for displaying the energy-saving performance of buildings with high energy-saving efficiency in Japan.

*4 ZEB: The highest rank of the BELS certification system.

*5 Tools for evaluating the office parts of buildings with respect to how healthy they are for their users, building specifications that help maintain and promote comfort, their performance, and initiatives.

*6 As of July 29, 2022, according to internal research.

Learn more about SUSTIE on our website.

[SUSTIE \(ZEB test facility\)](#)

[ZEB test facility SUSTIE achieves platinum level WELL certification](#)

Example Synchronous Reluctance Motor system for railway vehicles successfully saves energy for the first time in the world

Mitsubishi Electric collaborated with Tokyo Metro Co., Ltd. to install the synchronous reluctance motor (SynRM) with high energy-saving performance and the synchronous reluctance motor system (SynTRACS®)* composed of inverters to control the motor on the model 13000 vehicles of the Hibiya Line on a trial basis in order to carry out a long-term evaluation test of energy consumption during commercial operation, etc., confirming that they can save approximately 18% more energy than the induction motor system.

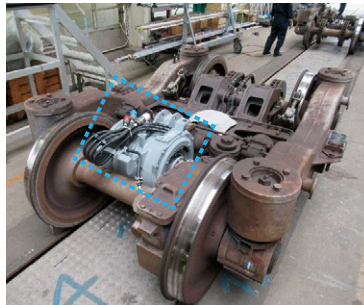
The SynRM runs on the reluctance torque generated by the interaction between the stator's magnetic field and the magnetic poles created by the difference in magnetic resistance in the rotor iron core. Compared to the induction motors widely used in railway vehicles, these motors feature lower rotor heat loss as well as superior efficiency and mass characteristics.

This quantitative confirmation through commercial operation of the energy-saving effects of a SynRM for railway vehicles is a world first.

* SynTRACS is a trademark of Mitsubishi Electric Corporation.



Long-term evaluation of model 13000 vehicles of the Hibiya Line



Installation of SynRM on a trial basis



Evaluating the Status of Environmental Initiatives by Our Suppliers

The Green Accreditation System Is Introduced in Consideration of Biodiversity and Environmental Risk

In April 2006, the Mitsubishi Electric Group introduced a Green Accreditation System based on the Green Procurement Standards Guide established in September 2000 and revised in July 2020. Under the system, suppliers in and outside of Japan are evaluated with respect to their status of acquisition of environmental management system accreditation, compliance with statutory and regulatory requirements, management of chemical substances contained in products, and biodiversity initiatives, and suppliers that meet the Company's criteria and standards are certified. With regard to suppliers who do not meet the Company's criteria and standards, efforts are made to minimize environmental risks by engaging them in discussion and providing guidance for improvement as necessary so they can make relevant corrections. New suppliers are also asked to comply with the Green Procurement Standards Guide before commencing transactions.

Major suppliers accounting for the top 80% of total purchase amount are evaluated once every three years to renew their accreditation. In fiscal 2023, approximately 400 companies (including offices) were evaluated. 87% of them acquired and/or renewed their Green Accreditation, but 46 companies that were not up to standard were subject to guidance and improvement requests from Mitsubishi Electric.



 Green accreditation

Design/
Development

Procurement

Production

Packaging/
Transportation

Usage

Disposal/
Recycling

Reducing CO₂ from Plants and Offices

| Targets and Achievements

The Mitsubishi Electric Group is working to realize Environmental Sustainability Vision 2050 by promoting activities to reduce the emission of greenhouse gases (CO₂, SF₆, HFCs, PFCs originating from energy) from plants and offices.

Under the Environmental Plan 2023 (FY2022-2024), we aim to reduce greenhouse gas emissions by more than 30% by fiscal 2024 compared to fiscal 2014. Toward achieving this target, we will step up our efforts to thoroughly save energy in our plants and offices and to expand the use of renewable energy.

Since we included small offices overseas, etc. in the calculations for fiscal 2022, CO₂ emissions increased compared to fiscal 2021, but the greenhouse gas emissions for fiscal 2023 decreased to a CO₂-equivalent of 1.05 million tons. In fiscal 2023, we accelerated our initiatives to deploy photovoltaic equipment and to procure renewable energy as well as to reduce CO₂ emissions originating from energy by deploying high-efficiency devices and to reduce non-CO₂ greenhouse gas emissions by switching to gases with a lower GWP.

In addition to establishing and operating energy-saving guidelines for buildings and production facilities, and promoting thorough energy saving in plants and offices, Mitsubishi Electric is also placing a focus on utilizing renewable energy. Going forward, we will flesh out further details of the road map for greenhouse gas reduction and promote measures for even greater reduction, toward the steady achievement of our targets.

| Initiatives to Reduce CO₂ Originating from Energy and Their Results

Toward reducing CO₂ originating from energy, we systematically introduce and update high-efficiency and energy-saving equipment, improve operations, and extend energy conservation measures to production lines. In fiscal 2023, these and other energy conservation-saving measures reduced emissions by 18 kt, which, together with a reduction of 102 kt through the use of renewable energy and other measures, resulted in a reduction of 120 kt compared to the previous year.

Half of the major achievements were realized through the introduction of high-efficiency machinery, while activities to develop energy-efficient technologies implemented by an internal technical committee also produced solid results. These activities also focus on visualizing and reducing the wasteful use of utilities and production equipment during nonoperational hours.

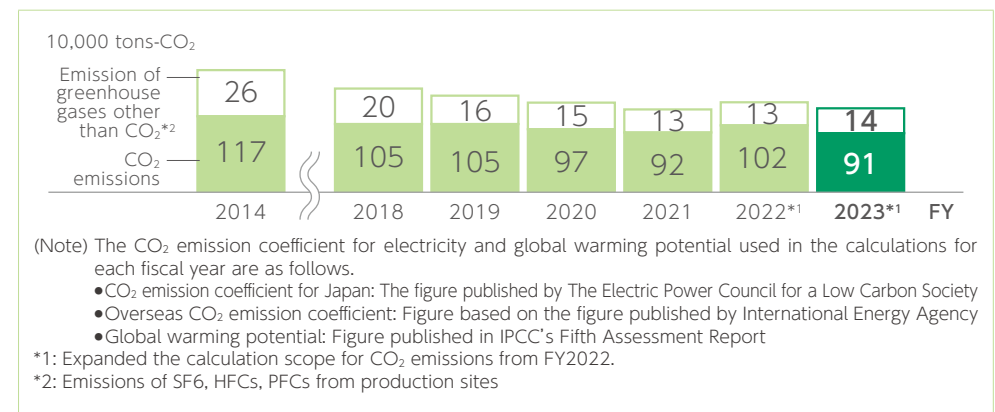
In the classification system (SABC assessment) based on Japan's Energy Savings Law, 6 out of 19 specific Group companies in Japan, including Mitsubishi Electric, have been recognized as excellent business operators (S Class) in terms of energy conservation.

| Initiatives to Reduce SF₆, HFCs and PFCs, and the Results

Three types of non-CO₂ greenhouse gases are emitted by the Mitsubishi Electric Group in its business activities: SF₆ (sulfur hexafluoride), HFCs (hydrofluorocarbons), and PFCs (Perfluorocarbons). SF₆ is used inside gas-insulated switchgear for electrical insulation, as well as in the etching process during semiconductor and liquid-crystal display production.

HFCs are used as refrigerants in air conditioners and refrigerators, while PFCs are used during the etching process in production of semiconductors and liquid-crystal displays.

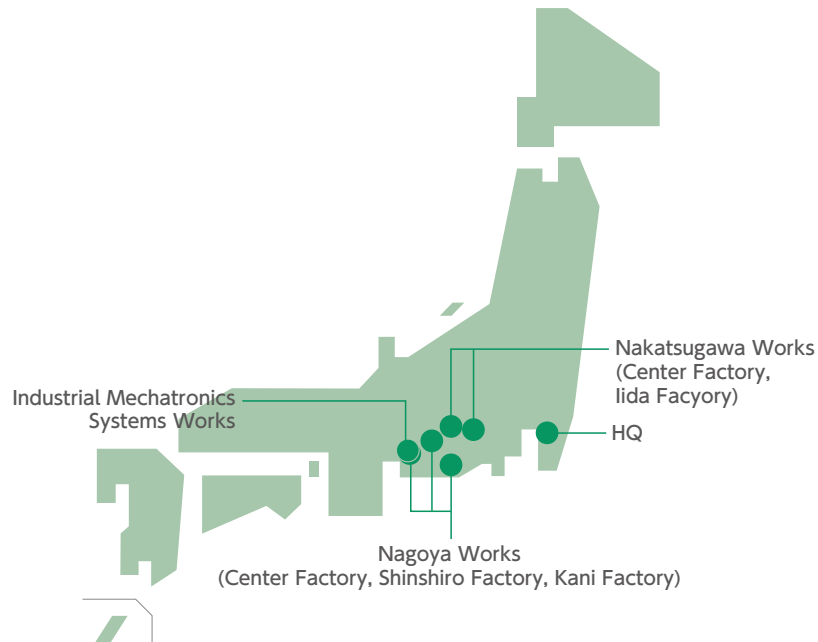
In fiscal 2023, emissions were reduced by 93 kt due to the switch to lower GWP refrigerants, operational improvements and continued gas recovery and capture, but emissions were 140 kt, partly due to the impact of increased production.



CO₂ emissions from plants and offices (Mitsubishi Electric Group)

Adoption of renewable energy

The Mitsubishi Electric Group utilizes renewable energy at 103 business sites. In addition, as of fiscal 2023, we had completed our transition to 100% renewable energy for the power used at offices and plants (manufacturing facilities) at 19 business sites (9 in Japan (Mitsubishi Electric: 7, affiliates: 2), 10 overseas).

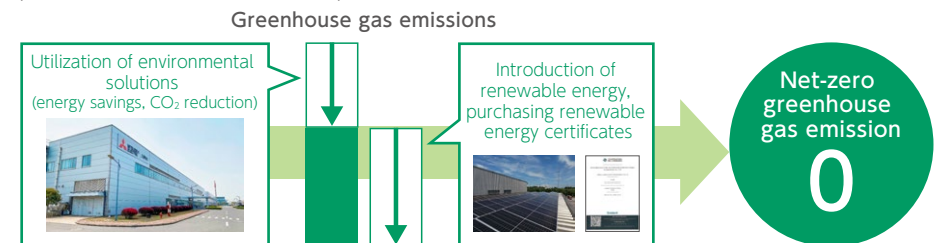


Business sites using 100% renewable energy (Mitsubishi Electric business sites in Japan)

Case Example Net-zero greenhouse gas emission achieved by Mitsubishi Electric Automation Manufacturing (Changshu) Co., Ltd.

In China, the manufacturing industry accounts for roughly 70% of total power consumption, befitting its moniker as “the world’s factory.” In recent years, however, it has begun promoting decarbonization of the manufacturing industry as a national policy, based on a declaration to “achieve carbon neutrality (net-zero CO₂ emission) by 2060.”

Mitsubishi Electric Automation Manufacturing (Changshu) Co., Ltd. (MEAMC), which operates in China, has also been directing its efforts to save energy and reduce CO₂, taking advantage of the Mitsubishi Electric Group’s environmental solutions such as the E-JIT* System. It has also introduced renewable energy, purchased renewable energy certificates, and achieved net-zero greenhouse gas emissions in June 2021 as the first plant to do so within the Group.



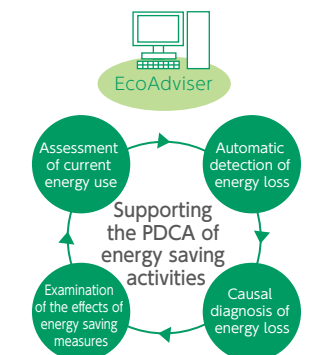
* E-JIT (Environment & Energy Just in Time): Mitsubishi Electric’s comprehensive solution to simultaneously optimize the efficiency of environmental measures, maximize energy efficiency, and strengthen production efficiency.

Case Example Helping Customers to Reduce CO₂ emissions using the energy-saving analysis & diagnosis application EcoAdviser

The Mitsubishi Electric Group offers an application called EcoAdviser to contribute to saving energy in entire plants. EcoAdviser comprehensively supports customers engage in continuous energy saving activities by visualizing the status of power usage by each production facility and automatically analyzing energy loss and its causes via AI.

Mitsubishi Electric Fukuyama Works has achieved an annual energy savings of roughly 10% with certain facilities by using this application. Moreover, the time required for data analysis and for identifying causes of energy loss has been reduced by approximately 90% compared to conventional methods.

Monitoring and analysis of power consumption status



Effective Usage of Plastic Waste

In Environmental Plan 2023 that has been newly launched in fiscal 2022, we have set forth a target of achieving effective plastic utilization rates of 90% or more in Japan by fiscal 2024. This target is based on the Ocean Plastics Charter that was adopted at the G7 Summit and the Resource Circulation Strategy for Plastics formulated by the Ministry of the Environment. It also conforms to the Act on Promotion of Resource Circulation for Plastics that went into force in April 2022.

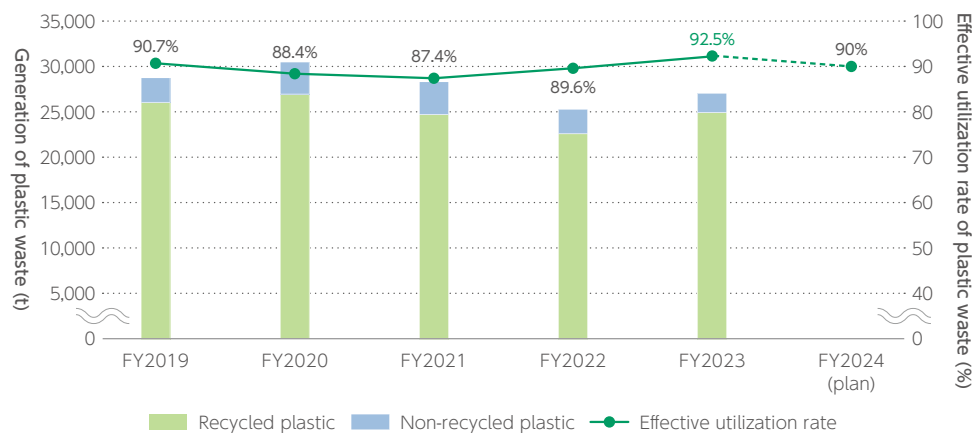
Target values have been individually established for each site according to their actual (average) effective utilization rates from fiscal 2018 to 2020, instead of applying uniform targets across all sites.

Status of initiatives by the Mitsubishi Electric Group (in Japan)

Toward improving the effective utilization rate of plastic waste, we conducted a survey of the present state of plastic waste at our business sites in fiscal 2022, and we are considering ways to enforce proper sorting and to conduct a review of plastic recycling companies.

In fiscal 2023, 270,000 tons of plastic waste were generated, which was 9.5% more than the previous year, but the effective utilization rate of plastic waste in Japan reached 92.5%, achieving the target for fiscal 2024.

Going forward, we will endeavor to further control plastic waste output by promoting sharing of information on recycling companies among our business sites and visualization of plastic waste. We will also strive to increase the ratio of material recycling for plastics, etc.



Plastic waste output, effective utilization rate, and target values

Status of initiatives by the Mitsubishi Electric Group (overseas)

Overseas laws, regulations, and waste treatment situations vary according to country and region. Therefore, we plan to address the plastic waste issue overseas by assessing the actual state of plastic waste and the status of material and chemical recycling. Then we will establish targets suitable for each region's situation and work toward achieving them.

Specification, Disposal and Transportation of Hazardous Wastes

The Mitsubishi Electric Group specifies hazardous wastes as follows, monitors their output and appropriately disposes of them in compliance with the laws and regulations of the regions in which our facilities are located. We also carry out material recycling and thermal recycling where we can in order to reduce final disposal (landfill) volume.

- Mitsubishi Electric and affiliates in Japan: "Specially-controlled industrial wastes" specified by the Japanese Waste Disposal Law
- Overseas affiliates: Hazardous wastes defined by local laws and regulations

Wastes containing polychlorinated biphenyl (PCB) are managed separately based on the "Law concerning Special Measures for Promotion of Proper Treatment of PCB Wastes, PCB Special Measures."

In fiscal 2023, total hazardous waste emissions of Mitsubishi Electric Group companies in Japan amounted to 1,445 tons, of which 436 tons were recycled. That of overseas affiliates totaled 5,192 tons, of which 3,251 tons were recycled.

Reducing Water Usage

| Managing Water Risk

Water risk is increasing worldwide with ever-more serious water shortages and pollution, as well as abnormal weather caused by climate change. This also affects the production of both raw materials and products, making corporate water risk management more important.

Water risk within the Mitsubishi Electric Group is evaluated as part of our corporate risk management framework. The evaluation factors in the influence on stakeholders, as well as the impact on ecosystems. We use the results of this assessment to prioritize countermeasures for each business site and take clear action. We also take measures to minimize any impact on the surrounding environment, such as by ensuring compliance with wastewater standards in each region. Furthermore, during product development, we evaluate product impact on water sources and their lifecycles and strive to minimize the impact.

| Response to High-Risk Sites

Mitsubishi Electric Group uses WRI Water Aqueduct^{*1} and other risk assessment tools to keep track of current and future water risk at business sites both in Japan and abroad (including the presence of water stress^{*2}). Based on this data, overseas business sites with particularly high water risks have been identified as high-risk sites in consideration of their regional characteristics (i.e., seasonal high water/drought conditions of oceans and rivers from which water is taken) and business characteristics (i.e., water usage accompanying production activities).

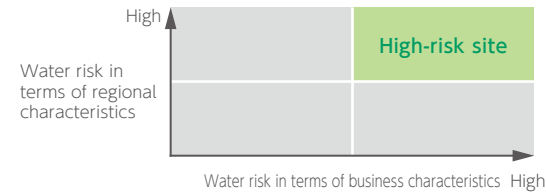
To reduce water usage in high-risk sites (total of five sites), Environmental Plan 2023 sets forth a target of “reducing water usage per unit of sales by 4% or more by fiscal 2024 compared to fiscal 2020.” The five selected sites together account for roughly 5% of total water usage by the Mitsubishi Electric Group as a whole and roughly 8% of total sales.

By distributing survey sheets to high-risk sites, we confirmed the status of water conservation at facilities that use water and their efforts to reuse water. Additionally, based on the results of these surveys, water faucets were replaced with water-saving faucets, and the use of recycled water was promoted. As a result, water usage per unit of sales was reduced by 16% in fiscal 2023 compared to fiscal 2020. By implementing effective water risk measures in consideration of regional characteristics and circumstances at each Group business site, we aim to co-exist in harmony with local communities.

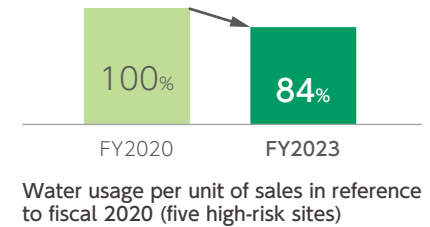
We will continue to strengthen our efforts based on this policy with a focus on high-risk sites.

*1 WRI Aqueduct: Water risk assessment tool developed by the World Resources Institute (WRI).

*2 Water stress: Water stress levels can be defined by an index that indicates how close the relationship is between the supply and demand of water. When maximum water availability per capita falls below 1,700 m³, it is considered that water stress is present.



Conceptual diagram of water risk analysis



Water usage per unit of sales in reference to fiscal 2020 (five high-risk sites)

| Status of Water Usage and Water Intake/Drainage/Reuse

Status of Water Usage

The water usage of the Mitsubishi Electric Group in fiscal 2023 was 14,980,000m³, and the amount per unit of sales was 3.0m³/million yen.

In Japan, in addition to reusing water in production processes, we promoted the use of greywater by treating wastewater for water purification to use as toilet water and as supply water for cooling towers. In addition, our efforts to reduce groundwater consumption through rainwater harvesting resulted in water consumption of 13,036,000m³, of which 3,969,000m³ was reused (reuse rate of 30%). Overseas, we focused on reducing water intake by reusing water and expanding use of greywater.

Status of Water Intake

At business sites of the Mitsubishi Electric Group, water is taken to be used mainly for cooling, cleaning and adjusting the concentration of water-based paints, and as a solvent, an additive to materials and a heat medium. In fiscal 2023, the production increase associated with the resumption of economic activities that had fallen due to the COVID-19 pandemic resulted in a water intake of 10,878,000m³, which is an increase of approximately 134,000m³ compared to the previous fiscal year.

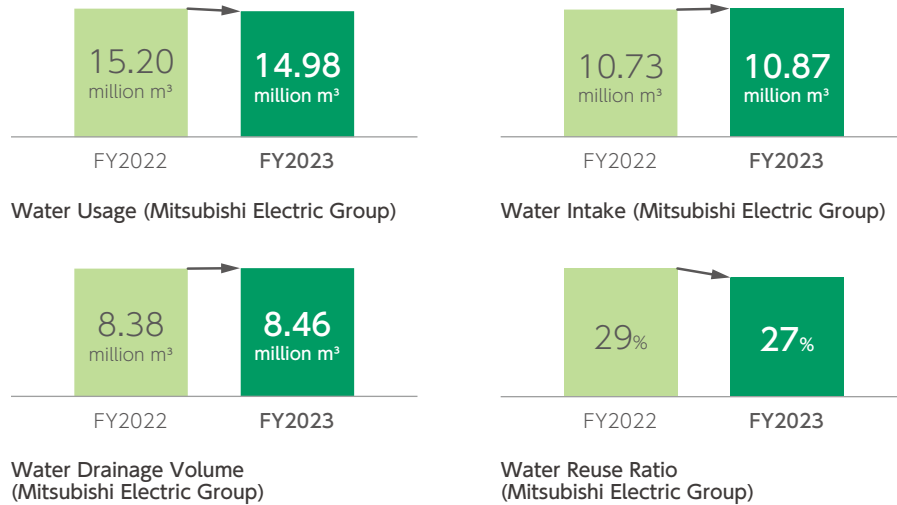
Status of Water Drainage

To avoid exceeding standard values set for each drainage point, the Mitsubishi Electric Group's business sites have established even more stringent voluntary standards, based on which water is treated before it is discharged. When there is a certain drainage standard in place according to properties specific to the water area, such a standard is also incorporated into our standards. Compliance with these standards is confirmed through measurements conducted on a regular basis. Water drainage in fiscal 2023 was 8,467,000m³.

Status of Water Reuse

At Mitsubishi Electric Group's business sites, not only fresh intake water, but water that has been used once is reused after it is treated and recycled.

In fiscal 2023, since the closure of the liquid crystal display manufacturing plant resulted in lower production of LCDs, which use a high volume of recycled water, water reuse across the entire Mitsubishi Electric Group fell to 4,102,000m³, making the water reuse ratio 27%. Meanwhile, at our sites in Southeast Asia, because we deployed water reprocessing facilities, the water reuse ratio improved to approximately 6% from the previous fiscal year.



For the details of water usage, please refer to "Material Balance."

[Material Balance](#)

Case Example Reducing water use by recycling wastewater

In Thailand, economic development has brought about a serious water shortage, and there has been a rising awareness of the importance of water resources. In January 2020, the Thai Ministry of Industry has even issued a request to manufacturing industries for their cooperation in reducing the amount of wastewater that is discharged outside of factories and promoting efficient water use.

Under this situation, Mitsubishi Electric Automation (Thailand) Co., Ltd., an affiliated company based in Bang Chan Industrial Estate in Bangkok, succeeded in reducing the amount of wastewater discharged outside the plant and in reducing 600 m³ of annual use of water supply, by recycling wastewater at its wastewater treatment facility and using the recycled water to nurture a wall garden (approx. 228 m²) installed in a rest area within its site. Recognized for its environmental initiatives including the wall garden, the company has been certified as an ECO Factory in Thailand.



Wall garden using diskidia (foliage plant)



Mitsubishi Electric Automation (Thailand) Co., Ltd.

Managing Chemical Substances

Regulations on chemical substances to prevent pollution are becoming stricter by the year.

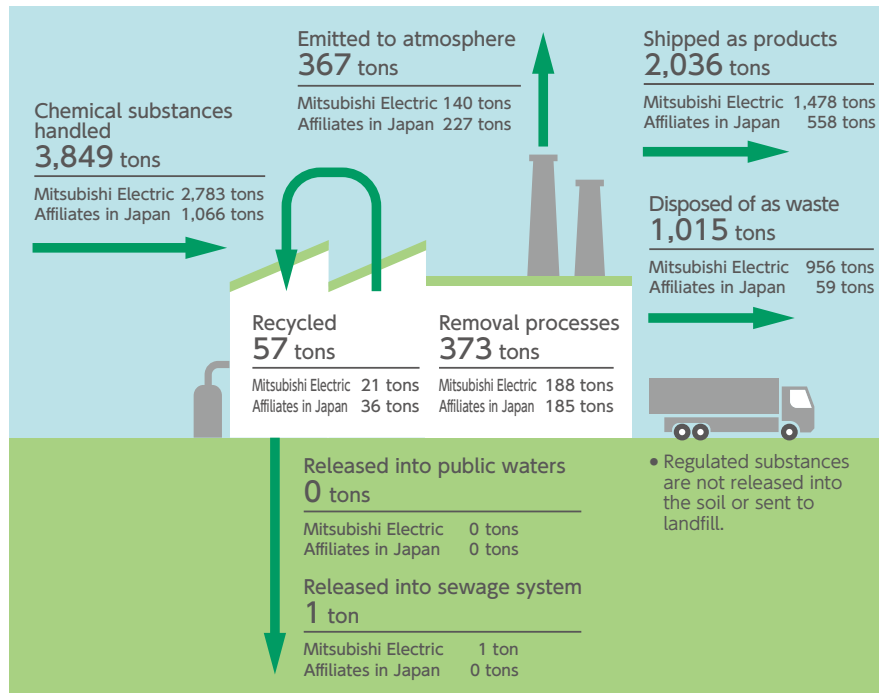
The Mitsubishi Electric Group is promoting initiatives to control and reduce emissions through the management of chemicals released from our business sites and those contained in products.

Managing chemical substances released from business sites

We utilize an internal system to manage the release and transfer of chemical substances regulated by the PRTR Law^{*1} (PRTR^{*2}) and VOC^{*3} that are released from our business sites.

In fiscal 2023, the Mitsubishi Electric Group (Japan) used 3,849 tons of chemical substances. In fiscal 2024, we will update the system in accordance with the revision of the PRTR Law.

Sulfur oxide (SOx) and nitrogen oxide (NOx) are also managed using our voluntary standards based on the laws and regulations of the regions where our business sites are located.



Fiscal 2023 Release and Transfer of Substances Regulated by the PRTR Law (Mitsubishi Electric Group Companies in Japan)

Managing the chemical substances contained in products

In order to comply with EU RoHS Directive^{*4}, EU REACH Regulation^{*5}, and other regulations on chemical substances contained in products, we globally register purchase information for materials and parts in our internal system in order to manage them. We carry out system updates as needed in anticipation of strengthening regulations, and we work to systematically reduce the usage amounts of chemical substances that are expected to be subject to regulation.

*1 PRTR Law: Act on Confirmation, etc. of Release Amounts of Specific Chemical Substances in the Environment and Promotion of Improvements to the Management Thereof.

*2 PRTR: Short for Pollutant Release and Transfer Register. A system under which companies track the quantity of substances potentially harmful to human health or the ecosystem which are released into the environment or transferred outside a business establishment through waste materials, and report this data to government authorities. The authorities then use these reports and other statistics to produce estimates on release and transfer, and announce them publicly.

*3 VOC: Short for Volatile Organic Compounds.

*4 RoHS Directive: Directive on the restriction of the use of certain hazardous substances in electrical and electronic equipment.

*5 REACH Regulation: Regulation on registration, evaluation, authorisation and restriction of chemicals.

For details on the release and transfer of chemical substances, please refer to "Material Balance."

[Material Balance](#)

Design/
Development

Procurement

Production

Packaging/
Transportation

Usage

Disposal/
Recycling

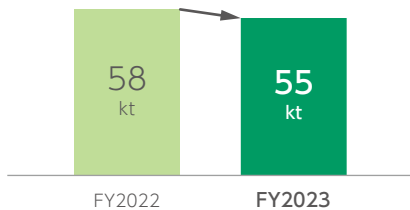
Reducing the Use of Disposable Packaging Materials

Achievements of Mitsubishi Electric Group Companies in Japan in Fiscal 2023

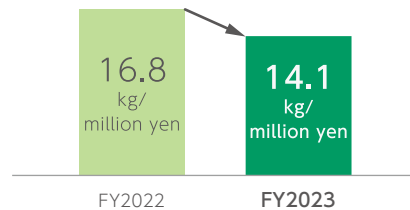
Improvements in logistics are part of Mitsubishi Electric Group's Just-In-Time improvement activities. Our basic policy is to reduce the weight of transport packaging while ensuring that products are delivered safely to customers. Based on this policy, we practice the 3Rs in packaging: reduce (simplify packaging), reuse (more returnable containers and packaging), and recycle (recycling of used packaging material).

At Mitsubishi Electric Group companies in Japan, simpler packaging is promoted, and the use of returnable containers and packaging has been expanded. Owing to these initiatives, the amount of packaging materials used was 55 kt, and the amount per unit of sales was 14.1 kg/million yen.

The amount of packaging materials used by our 23 overseas affiliates was 58 kt, and the amount per unit of sales was 43 kg/million yen.



Usage of Packaging Materials (Mitsubishi Electric Group Companies in Japan)



Packaging Materials Used per Unit of Sales (Mitsubishi Electric Group Companies in Japan)

For details of the usage of packaging materials, please refer to "Material Balance."

[Material Balance](#)

Reducing CO₂ from Logistics

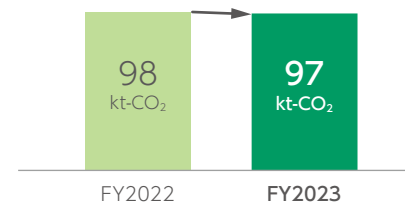
Basic Policies on Logistics (Distribution)

To improve product logistics (distribution), we strive to eliminate irrational, irregular, and wasted efforts by visualizing logistics work by quantification, with the ultimate goal of realizing Economy & Ecology Logistics (Eco-Logistics) that improve transport efficiency and economy and to reduce environmental impact.

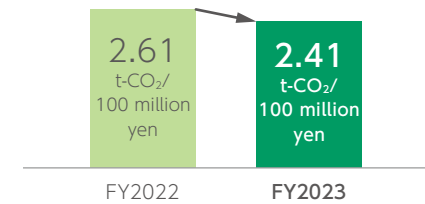
Fiscal 2023 Achievements of Mitsubishi Electric Group Companies in Japan

At Mitsubishi Electric Group companies in Japan, the following measures continued to be implemented throughout fiscal 2023. As a result, CO₂ emissions totaled 97 kt-CO₂, and the amount per unit of sales was 2.41 t-CO₂/100 million yen.

- Reviewing transportation routes
- Switching from truck transportation to rail transportation (modal shift)
- Reducing the number of trucks by improving load ratios (including Container Round Use)



Total CO₂ Emissions from Distribution (Mitsubishi Electric Group Companies in Japan)



CO₂ Emissions per Unit of Sales from Distribution (Mitsubishi Electric Group Companies in Japan)

Regarding overseas affiliates, the amount of CO₂ emitted by a total of 24 companies was 509 kt, amount per unit of sales amounted to 0.376 t-CO₂/100 million yen.

For details of CO₂ emissions from distribution, please refer to "Material Balance."

[Material Balance](#)



Contribution to Reducing CO₂ from Product Usage

As more CO₂ is emitted during product usage than during production, the Mitsubishi Electric Group has identified “reducing CO₂ from product usage” and “contributing to reducing CO₂ by product usage” as priority issues, and is working to improve its products.

Evaluation of Reducing CO₂ from Product Usage

Power consumed during product use is viewed as corresponding to the amount of CO₂ emissions resulting from generating that power. Increasing product energy efficiency can lead to a reduction of CO₂ from product use.

Environmental Plan 2023 promotes initiatives to increase product energy efficiency by evaluating improvements in product energy efficiency using the new indicator shown below, beginning with models that are newly developed in fiscal 2022.

$$\text{Improvement rate over previous models (\%)} = \frac{(\text{annual power consumption of previous models} - \text{annual power consumption of newly developed models})}{\text{annual power consumption of previous models}} \times 100$$

Evaluation of Our Contribution to Reducing CO₂ by Product Usage

Among products of the Mitsubishi Electric Group, there are some that can help customers reduce CO₂ by being used. For example, using the Group’s heat pump system has greater potential to reduce CO₂ emissions compared to using combustion-type heating and hot water systems. The Group’s inverters and power devices, as well, can reduce CO₂ by being used, since they contribute to enhancing the energy efficiency of the final products they are embedded in.

Contribution to reducing CO₂ is calculated by comparing the use of a relevant product with the use of an alternative product that would likely be used if the relevant product did not exist. It is based on the following formula, with the alternative product as the reference product.

$$\text{Contribution to reducing CO}_2 = (\text{CO}_2 \text{ emission from using a "reference product"} - \text{CO}_2 \text{ emission from using the relevant product})$$

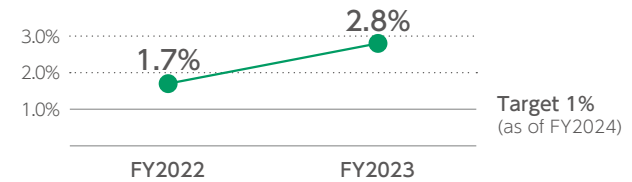
In Environmental Plan 2023, the improvement in contribution to reducing CO₂ when a customer chooses to use a Mitsubishi Electric product is calculated using the new indicator shown below, beginning with models newly developed in fiscal 2022.

$$\text{Improvement rate over previous model (\%)} = \frac{(\text{contribution to reducing CO}_2 \text{ by newly developed model} - \text{contribution to reducing CO}_2 \text{ by previous model})}{\text{contribution to reducing CO}_2 \text{ by previous model}} \times 100$$

Targets and Achievements of “Reducing CO₂ from Product Usage” and “Contribution to Reducing CO₂ by Product Usage”

Under the Environmental Plan 2023, we are working to reduce CO₂ emissions from product usage and to increase our contribution to reducing CO₂ emissions due to product usage by an average of 1% in total compared to the previous model. In fiscal 2023, we achieved an average improvement rate of 2.8% compared to the previous model thanks to improvements in a variety of products, including pressure ventilation fans and general purpose motors.

We will continue our efforts to pursue greater energy efficiency and contribution to reducing CO₂ throughout the process of developing new models as our contribution to society.



Annual energy consumed by newly developed models and average rate of improvement of contribution to reducing to CO₂ over previous models

Breakdown of products relevant to “reducing CO₂ from product usage” and “contribution to reducing CO₂ by product usage”

Evaluation item	Product examples	Indicator used to evaluate improvement rate over previous models
Reducing CO ₂ from product usage	Monitoring, control, and protection devices for power generation plants and systems, railcar air-conditioning systems, electrical equipment for railcars, movable platform gates, vacuum circuit breakers, elevators, escalators, intelligent transport systems (ITS; ETC, smart interchanges), air conditioners, refrigerators, ventilation fans, electric fans, processing machines, LED light bulbs, residential lighting fixtures, etc.	Reduction in annual energy consumed during product usage
	Turbine generators	Improvement of power conversion efficiency
	Optical communication network systems, wireless communication systems	Reduction in annual energy consumed per product performance
	Car electronic products	Reduction from the incorporation of products with power energy use, proportionally divided by weight
Contribution to reducing CO ₂ by product usage	Water heating systems (heat pump electric water heaters, electric water heaters)	Improvement of the contribution to reducing CO ₂ by using heat pumps, in reference to combustion-type heating and hot water systems
	Inverters, power devices (power modules, high power devices)	Improvement in the contribution to reducing CO ₂ gained by the incorporation of products with lower power loss
	Total heat exchanging ventilation equipment, electrical equipment for railcars (control devices)	Improvement in the contribution to reducing CO ₂ expected from the introduction of said products

Design/
Development

Procurement

Production

Packaging/
Transportation

Usage

Disposal/
Recycling

Recovery/Recycling of Used Home Appliances at a Specialized Recycling Plant

Coinciding with the enforcement of the Home Appliance Recycling Law, Hyper Cycle Systems Corporation commenced operations in Ichikawa City, Chiba Prefecture in May 1999 as the industry's first recycling plant, and has since engaged in recycling home appliances. Information obtained from this plant is fed back to product designs, to enhance the recyclability of products and to contribute to environmental conservation.

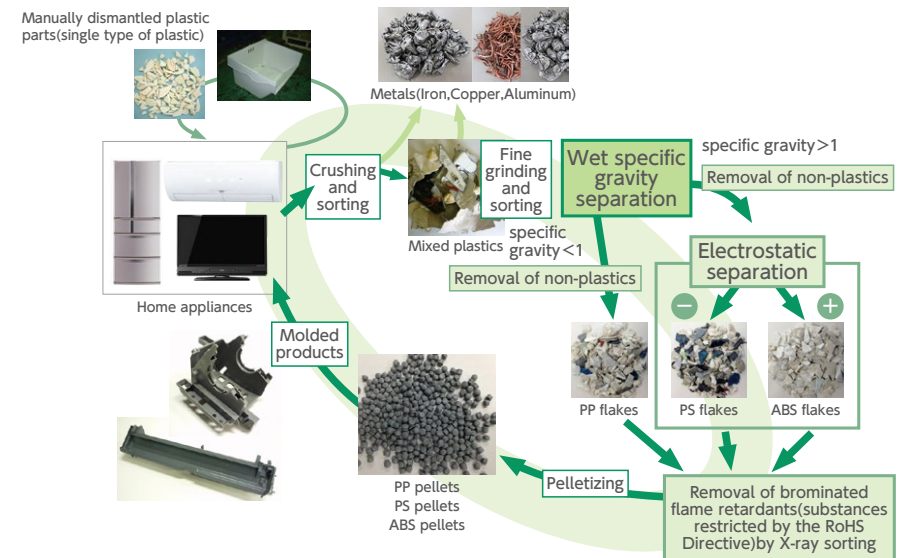


Learn more about the Mitsubishi Electric Group's home appliance recycling efforts and performance on the following website.

[Recycling Home Appliances](#)

Closed-Loop Recycling of Plastic

Since 2010, the Mitsubishi Electric Group has been fully implementing "closed-loop recycling," in which plastic recovered from used home appliances is reused in Mitsubishi Electric's new home appliance products. Green Cycle Systems Corporation utilizes Mitsubishi Electric's original technology for advanced sorting of crushed mixed plastics to recycle them into high-purity plastics that are equivalent to virgin materials.



The mixed plastic after crushing waste home appliances is recovered in high purity for each type of plastic through sorting processes such as specific gravity separation, electrostatic separation, and X-ray sorting, and is used again for new home appliances.

Flow chart of Mitsubishi Electric Group closed-loop plastic recycling

By utilizing our advanced plastics sorting technology cultivated over many years in the field of home appliance recycling, Mitsubishi Electric is promoting efforts to solve the problem of waste plastics in collaboration with companies in a variety of industries.

[Co-creation with External Parties](#)

For detailed information on closed-loop recycling, see the website "Plastic Recycling Comes of Age."

[Plastic Recycling Comes of Age](#)

Biodiversity Preservation Activities

Biodiversity Action Guidelines

The Earth's ecosystem is made up of diverse living organisms. All aspects of human civilization benefit from this ecosystem, but at the same time, we affect it in both direct and indirect ways. Today, damage to the ecosystem is said to be driving many species to extinction and otherwise eroding biodiversity.

In recognition of this, the Mitsubishi Electric Group has established Biodiversity Action Guidelines, which add the perspective of biodiversity as a means for living in harmony with nature to the Group's conventional measures against climate change and environmental activities aimed at achieving resource recycling. These guidelines define the role of business activities in preserving biodiversity, and outline the Group's efforts toward the development of a sustainable society through its business activities.

Resources & Procurement

Recognizing that we utilize globally procured natural resources such as minerals, fuels and plants, we shall aim to preserve biodiversity in Japan and around the world by carrying out green procurement activities.

Product Design

In designing our products and services, we shall promote the effective utilization of resources and the efficient use of energy, as well as aim to prevent the emission of substances that pose a risk to the environment.

Manufacturing & Transportation

When commencing or making changes to land use, such as when constructing factories or warehouses, we will give due consideration to protecting the biodiversity of the land in question. In manufacturing and transportation, we aim to minimize energy use, waste generation and the emission of chemical substances.

Sales, Usage & Maintenance

In our sales activities, we will work to promote better understanding among our customers of the impact that product/service usage and maintenance can have on biodiversity.

Collection & Recycling

We will actively develop recycling technologies and apply them to collected end-of-life products.

Understanding & Action

We will deepen our understanding of the importance of biodiversity and our relationship to it, and will actively and voluntarily take actions necessary to coexist in harmony with nature.

Cooperation

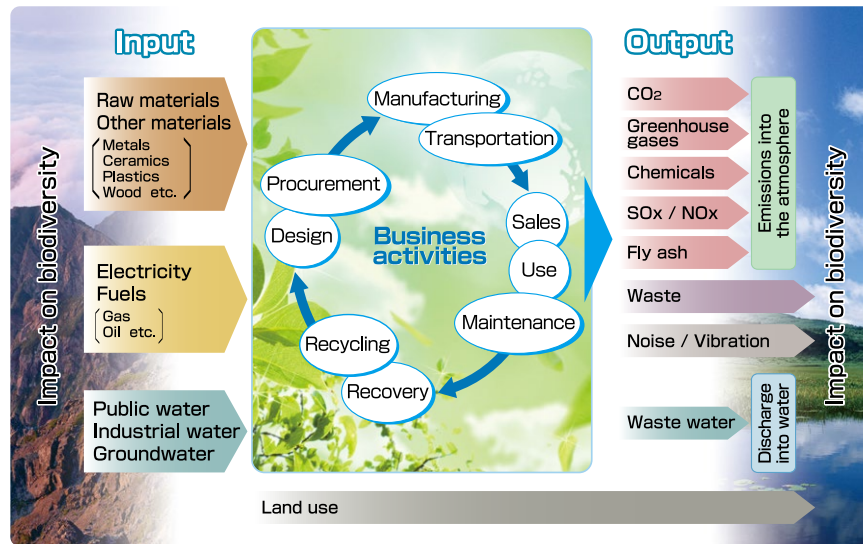
All companies in the Mitsubishi Electric Group, including overseas affiliates, will act as one, in cooperation with local communities, NGOs and governments.

Biodiversity Preservation Measures at Business Sites

Visualizing the Relationship between Business Activities and Biodiversity to Implement Proper Action

To deepen employee understanding of biodiversity, Mitsubishi Electric has summarized the relationship between the company's business activities and biodiversity in a chart as shown on the following page. Using this chart, the Mitsubishi Electric Group's business sites both in Japan and overseas are renewing their awareness of relations between their own business activities and the biodiversity and natural environment of their surrounding region, and are linking this awareness to concrete actions that contribute to communication with local communities and to the preservation of biodiversity.

Relationship between Business Activities and Biodiversity



Biodiversity Preservation Activities

Activity	Purpose	Details
Mitsubishi Electric Outdoor Classroom Mitsubishi Electric Outdoor Classroom	Foster environmental awareness among employees	In natural classroom settings such as woodlands, parks, waterways, and seacoasts, employees who serve as leaders invite families to experience nature to learn about the interrelationship between living creatures.
"Satoyama" Woodland Preservation Project "Satoyama" Woodland Preservation Project <Japanese site>	Contribute to society, drawing on the voluntary efforts of employees	Employees strive to restore parks, woodlands, rivers, and other natural areas located close to business sites.
Preserving biodiversity at business sites Preserving biodiversity at business sites	Activities centered around co-existence with nature carried out at business sites	Confirmation and appropriate management of rare species, endemic species, and non-native species; promotion of co-existence with nature; and gaining an understanding of our involvement with the surrounding natural environment.

Improving the Quality of Greenery in Line with Three Courses of Action

The Mitsubishi Electric Group has set forth three courses of action as guidelines for all business sites. They are: (1) reducing negative impact on living creatures, (2) aiming for more fruitful symbiosis with other living creatures, and (3) restoring the relationship between employees and nature in the working environment. At each business site, action plans provide for the preservation of local indigenous species, control of alien species, and development of green space in consideration of the surrounding ecosystem, to ensure these initiatives are steadily addressed in all businesses.

Three Courses of Action

Courses of Action	Examples
A Reducing negative impact on living creatures	1. Control development pressure and alien species pressure* (1) Assessment of impacts on living creatures (2) Alien species control
	2. Call attention to and preserve rare species and endemic species (1) Disclosure of list of living creatures on premises (2) Preservation of rare species and endemic species (3) Cooperation in regards to conservation issues for surrounding areas
	3. Manage pesticides, preserve greenery and natural resources (1) Control the killing/harming of living creatures (2) Consideration to natural resources, such as water and soil
B Aiming for more fruitful symbiosis with other living creatures	4. Set up functional greenery (1) System to manage green space (2) Management of land used by flying organisms (3) Development of priority land for greenery and living creatures (4) Provision of continuity of greenery with areas surrounding business sites (5) Contribution to biodiversity preservation activities in areas surrounding business sites
	5. Break away from agricultural orientations such as simplifying/specifying greenery (1) Diversification/multi-stratification of vegetation (2) Management of greenery that accords with the characteristics of plants, etc. (3) Contribution/consideration to regions
C Restoring the relationship between employees and nature in the working environment	6. Proactively utilize ecosystem services in the workplace (break rooms, individual floors) (1) Provision and utilization of opportunities for cultural services (2) Provision and utilization of opportunities for supply services
	7. Change situation from everyone being disinterested and unrelated to everyone being involved (1) Education for understanding and promoting action (2) Creation of relationships through the workplace or work duties

* Activities are carried out pursuant to the regulation on raising, planting, storing, carrying, or other handling of specified IAS in the Invasive Alien Species Act.

Specific initiatives for biodiversity preservation

The Mitsubishi Electric Group engages in initiatives that give specific consideration to all species of living creatures. These initiatives include the Mitsubishi Electric Outdoor Classroom, the Satoyama Woodland Preservation Project, and measures to reduce the impacts of development pressure^{*1} and alien species pressure^{*2} on ecosystems. As the basis of these initiatives, we have been promoting biodiversity preservation activities at business sites since fiscal 2015, with a focus on improving the quality of greenery within the premises of all business sites. The initiatives aim for all employees to make a direct contribution to regional/urban ecosystems in areas around their site by working to preserve biodiversity at their own workplace. It also encourages employees to take positive and voluntary action by regarding biodiversity as a personally relevant issue.

As these initiatives have spread, since fiscal 2020, we have been working to establish a structure to visualize the initiatives of each of Mitsubishi Electric's domestic business sites and consistently improve. In March 2020, we formulated the Biodiversity Guidelines (a check sheet) in line with the three courses. Since then, the implementation level of activities and the quality of greenery at each of our business sites in Japan have been assessed in numbers for quantitative monitoring. Each business site evaluates the situation of activities by fiscal year based on the Guidelines and calculates the improvement rate in the implementation level compared to the baseline fiscal year. By visualizing the improvement and outcomes of measures, we endeavor to establish the activities and improve outcomes throughout the organization.

Since fiscal 2022, we have been implementing the Guidelines at affiliated companies in Japan in order to widen their scope.

*1 Development pressure: An action resulting in the destruction of habitats. The construction of a new business site and development (including that in the supply chain) intended to extract natural resources are deemed as such behaviors. One such example is when the use of water by operations affects the surrounding area, the source of water, and subsequently the habitats of living creatures.

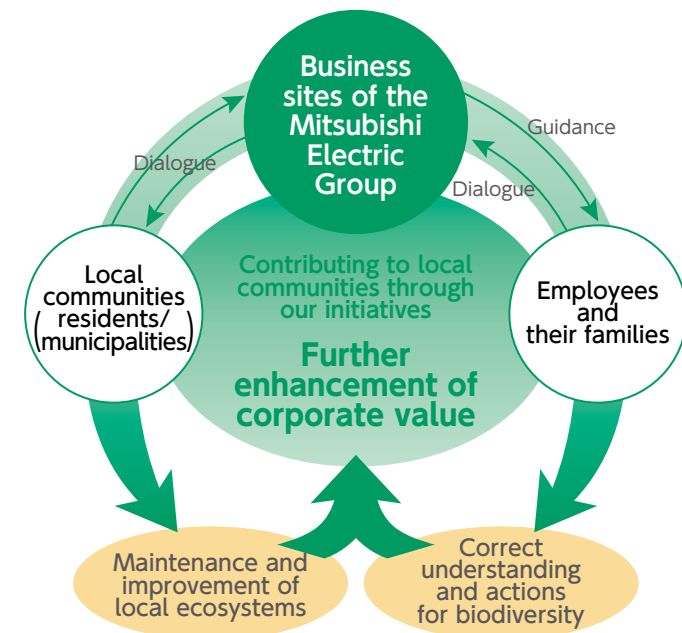
*2 Alien species pressure: When ditches, greenery at the side of buildings, and hedges are created, non-native species of insects, vegetation, etc. may be introduced. The unintentional transfer of living creatures could pose a threat to the habitats of indigenous species or trigger genetic pollution.

Enhancing Corporate Value through a Long-term Commitment to Environmental Initiatives

Since it takes many years to maintain and improve biodiversity, we must work continuously to this end.

The Mitsubishi Electric Group is committed to contributing to the attainment of the SDGs^{*1} and to implementing biodiversity preservation activities as part of its business activities. Through initiatives related to the above, we will further contribute to preserving regional ecosystems, and by earning respect and trust from local communities, we will strive to enhance our corporate value.

*1 SDGs (Sustainable Development Goals): Sustainable development goals to be achieved by 2030 included in the 2030 Agenda for Sustainable Development adopted by the United Nations General Assembly in September 2015.



Activities Contributing to Local Ecosystems

Environmental Data

Material Balance

| Manufacturing (Input)

	FY 2021	FY 2022	FY 2023
■ Manufacturing			
Materials ^{*1}	2,420 kt	2,570 kt	2,920 kt
Total energy input ^{*2,3}	19,030,000 GJ	21,150,000 GJ	20,920,000 GJ
Electricity ^{*3}	1,740 GWh	1,912 GWh	1,894 GWh
Traditional electric power	1,715 GWh	1,870 GWh	1,624 GWh
Electric power from renewable energy sources	25 GWh	42 GWh	270 GWh
City gas	34,930,000 m ³	37,960,000 m ³	35,780,000 m ³
LPG	3,725 t	3,989 t	3,780 t
Oil (crude oil equivalent) ^{*3}	10,484 kl	19,811 kl	18,659 kl
Other greenhouse gases	6,720 t	8,217 t	9,271 t
Water usage ^{*9}	148,600,000 m ³	152,060,000 m ³	149,800,000 m ³
Intake	103,140,000 m ³	107,440,000 m ³	108,780,000 m ³
Reuse	45,470,000 m ³	44,630,000 m ³	41,020,000 m ³
Chemical substances			
Controlled chemical substances ^{*4}	2,614 t	3,153 t	4,236 t
Volatile organic compounds	2,018 t	2,123 t	2,440 t

*1 Total value for shipping weight of products, plus amount of product packaging materials used, plus total amount of waste.

*2 Includes electricity, city gas, LPG, oil, etc.

*3 Figures include commercial vehicles and other company-owned vehicles (the figure for FY2021 includes the number of such vehicles for sites in Japan only, while the figures for FY2022 and FY2023 include the numbers for sites in Japan and overseas).

*4 Japan: Substances subject to Japan's PRTR law. Overseas: Controlled chemical substances designated by Mitsubishi Electric and used in amounts of 18 kg or more.

| Manufacturing (Output)

	FY 2021	FY 2022	FY 2023
■ Products			
Weight of all products sold ^{*5}	2,111 kt	2,249 kt	2,495 kt
Weight of packaging materials ^{*6}	124 kt	137 kt	130 kt
Japan	56 kt	59 kt	54 kt
Overseas	68 kt	78 kt	76 kt

■ Emissions (from manufacturing)

Emissions into the atmosphere			
Greenhouse gas emissions (CO ₂ -equivalent)	1,048 kt-CO ₂	1,161 kt-CO ₂	1,046 kt-CO ₂
CO ₂ ^{*7,9}	923 kt-CO ₂	1,033 kt-CO ₂	910 kt-CO ₂
HFCs ^{*8,9}	37 kt-CO ₂	35 kt-CO ₂	19 kt-CO ₂
PFCs ^{*8,9}	22 kt-CO ₂	24 kt-CO ₂	22 kt-CO ₂
SF ₆ ^{*8,9}	67 kt-CO ₂	68 kt-CO ₂	95 kt-CO ₂
Chemical substances			
Controlled chemical substances ^{*4}	814 t	389 t	515 t
Volatile organic compounds	792 t	645 t	882 t
NOx	25 t	28 t	40 t
SOx	1 t	0.6 t	0.3 t
Discharge into water			
Water	8,068,000 m ³	8,386,000 m ³	8,467,000 m ³
Chemical substances			
Controlled chemical substances ^{*4}	8.0 t	7.2 t	5.7 t
BOD	101 t	65 t	81 t
COD	109 t	57 t	73 t

■ Waste

Emissions	187,137 t	269,306 t	292,814 t
Non-hazardous waste	181,689 t	263,197 t	286,177 t
Hazardous waste	5,448 t	6,109 t	6,637 t
Waste treatment subcontracted out	101,605 t	84,639 t	134,100 t
In-house weight reduction	757 t	824 t	835 t
Amount recycled	147,258 t	69,984 t	223,258 t
Final disposal	121 t	1,562 t	1,561 t
Japan	28 t	445 t	117 t
Overseas	93 t	1,117 t	1,445 t

Final waste disposal ratio (Japan)	0.02 %	0.24 %	0.06 %
Final waste disposal ratio (Overseas)	0.1 %	1.3 %	1.4 %

*5 Shipping weight of products.

*6 Total of disposable and returnable packaging materials.

*7 CO₂ emission coefficient for electricity calculated in reference to: <Japan> figures published by the Federation of Electric Power Companies; <Overseas> figures published by International Energy Agency.

*8 Global Warming Potential (GWP) for greenhouse gases other than CO₂ is calculated in reference to figures published in the IPCC 5th Evaluation Report.

*9 Figures for FY2022 have been re-calculated.

Transporting (Input)

	FY 2021	FY 2022	FY 2023
■ Sales and Logistics^{*10}			
Fuel for trucks (gasoline)	5,679 kl	5,725 kl	6,091 kl
Japan	5,675 kl	5,725 kl	6,091 kl
Overseas	4 kl	0 kl	0 kl
Fuel for trucks (diesel)	55,635 kl	58,778 kl	57,535 kl
Japan	41,969 kl	48,183 kl	41,185 kl
Overseas	13,666 kl	10,595 kl	16,350 kl
Fuel for rail (electricity)	1.4 GWh	1.3 GWh	1.5 GWh
Japan	1.4 GWh	1.3 GWh	1.5 GWh
Overseas	0 GWh	0 GWh	0.0 GWh
Fuel for marine transport (bunker oil)	60,037 kl	81,514 kl	91,941 kl
Japan	525 kl	397 kl	333 kl
Overseas	59,512 kl	81,117 kl	91,608 kl
Fuel for air transport (jet fuel)	20,833 kl	44,838 kl	69,255 kl
Japan	511 kl	602 kl	558 kl
Overseas	20,322 kl	44,236 kl	68,697 kl

*10 Figures for overseas affiliated companies include transportation between countries.

Transporting (Output)

	FY 2021	FY 2022	FY 2023
■ Emissions^{*11 *12}			
CO ₂	384 kt-CO ₂	515 kt-CO ₂	607 kt-CO ₂
Japan	124 kt-CO ₂	141 kt-CO ₂	126 kt-CO ₂
Overseas	260 kt-CO ₂	375 kt-CO ₂	481 kt-CO ₂

*11 Figures for overseas affiliated companies include transportation between countries.

*12 The sum of these figures and CO₂ emissions from procurement/logistics (1 kt-CO₂) make up Scope 3 Category 4 emissions (see next page).

Using (Input)

	FY 2021	FY 2022	FY 2023
■ Energy Consumption			
Energy consumed during product use ^{*13*15}	311,016 GWh	304,427 GWh	336,341 GWh

Using (Output)

	FY 2021	FY 2022	FY 2023
■ Emissions			
Greenhouse gas emissions during product usage (CO ₂ -equivalent) ^{*14*15}	154,650 kt-CO ₂	151,769 kt-CO ₂	168,568 kt-CO ₂

*13 The total amount of power consumed (estimated value) over the operating periods of finished products when using products targeted for CO₂ reduction. The operating period, which is determined for each product, is set using the product's statutory useful life (years), its number of operating years based on its design, statistical values, and other values.

*14 CO₂ emission during product usage (CO₂ equivalent): Sum of CO₂ emitted during the operation of final products. CO₂ emission coefficient for electricity calculated in reference to: <Japan> figures published by the Federation of Electric Power Companies; <Overseas> figures published by International Energy Agency.

*15 Figures for FY2021 and FY2022 have been re-calculated.

Reducing Greenhouse Gases Emitted in the Value Chain

The “★” symbol denotes Mitsubishi Electric Group greenhouse gas emissions for which third-party verification has been carried out by SGS Japan Inc.

Scope	Accounting (kt-CO ₂) (Bottom row: Total emission ratio)			Accounting Summary ¹
	FY 2021	FY 2022	FY 2023	
Category				
Scope 1 : Direct emissions from fuel use and industrial processes at our company ^{2,3}	★ 242 (0.1%)	276 (0.2%)	272 (0.1%)	
Scope 2 : Indirect emissions associated with use of electricity and heat purchased by our company ⁴				
Market based	★ 732	819	679	Calculated using the power emission coefficient based on the contract
Location based ³	★ 806 (0.5%)	885 (0.6%)	774 (0.4%)	Calculated using the average emission coefficient of power generated in the area
Scope 1 + Scope 2 (Location based)	★ 1,048 (0.6%)	1,161 (0.7%)	1,046 (0.6%)	Coverage: 99% (energy usage based)
Scope 3 : Indirect emissions outside the scope of our company's operational activities ⁴				
Category 1 Purchased goods and services ⁵	★ 9,454 (5.8%)	10,099 (6.3%)	11,947 (6.5%)	Emissions associated with activities up to the manufacturing of materials, etc. relating to raw materials, parts, purchased products, and sales ⁶
Category 2 Capital goods	334 (0.2%)	549 (0.3%)	1,048 (0.6%)	Emissions generated by the construction and manufacturing of own capital goods
Category 3 Fuel- and energy-related activities ⁵	146 (0.1%)	166 (0.1%)	148 (0.1%)	Emissions associated with procurement of fuel necessary for power generation, heat supply, etc. and power such as electricity supplied by other parties
Category 4 Upstream transportation and distribution	386 (0.2%)	513 (0.3%)	607 (0.3%)	Emissions associated with logistic processes up to the delivery to our company of materials, etc. relating to raw materials, parts, purchased products, and sales ⁷
Category 5 Waste generated in operations	0.4 (0.0%)	0.4 (0.0%)	0.6 (0.0%)	Emissions associated with transporting and processing waste produced by our company ⁸
Category 6 Business travel ⁹	★ 4.8 (0.0%)	6.1 (0.0%)	15.7 (0.0%)	Emissions associated with employee business travel ⁹
Category 7 Employee commuting ⁵	★ 40 (0.0%)	36 (0.0%)	41 (0.0%)	Emissions associated with employees commuting to and from their respective workplaces ¹⁰
Category 8 Upstream leased assets	—	—	—	Emissions associated with operation of leased assets hired by our company (Calculated by Mitsubishi Electric under Scope 1 and Scope 2)
Category 9 Downstream transportation and distribution ⁵	5.9 (0.0%)	5.2 (0.0%)	5.9 (0.0%)	Emissions associated with the transportation, storage, cargo handling and retailing of products
Category 10 Processing of sold products ⁵	2.1 (0.0%)	2.4 (0.0%)	2.2 (0.0%)	Emissions associated with the processing of interim products by business operators
Category 11 Use of sold products ³	★ 152,794 (93.0%)	148,292 (92.2%)	168,568 (91.9%)	Emissions associated with the use of products by users (consumers/business operators)
Category 12 End-of-life treatment of sold products ⁵	5.6 (0.0%)	5.3 (0.0%)	5.4 (0.0%)	Emissions associated with the transportation and processing of products for disposal by users (consumers/business operators) ¹⁶
Category 13 Downstream leased assets	13 (0.0%)	12 (0.0%)	14 (0.0%)	Emissions associated with operation of leased assets
Category 14 Franchises	—	—	—	Emissions at companies operating as franchises (Not applicable to Mitsubishi Electric)
Category 15 Investments	38 (0.0%)	26 (0.0%)	26 (0.0%)	Emissions associated with operation of investments
Scope 3 total	163,223 (99.4%)	159,711 (99.3%)	182,427 (99.4%)	
Total (Scope 2 is location based.)	164,271 (100.0%)	160,872 (100.0%)	183,473 (100.0%)	

¹ Excerpt from Basic Guidelines published by the Japan's Ministry of the Environment and Ministry of Economy, Trade and Industry.

² CO₂, SF₆, HFCs, and PFCs emissions associated with the use of city gas, heavy oil, etc., and with product manufacturing.

³ CO₂ emission coefficient for electricity calculated in reference to: <Japan> annual figures published by the Federation of Electric Power Companies; <Overseas> annual figures published by International Energy Agency.

⁴ CO₂ emissions associated with the use of electricity, etc.

⁵ Figures have been calculated using the CO₂ emission coefficient for each fiscal year specified in the "emission in intensity database for calculating greenhouse gas emissions of the organization throughout the supply chain."

⁶ Excludes some regions.

⁷ CO₂ emissions associated with product distribution/circulation (sales distribution). Subject to accounting: 53 companies (manufacturing companies).

⁸ CO₂ emissions associated with transportation of waste (waste distribution). Subject to accounting: Mitsubishi Electric.

⁹ Results for Japan. Excludes CO₂ emissions associated with actual use of taxis and accommodation.

¹⁰ Assuming that all employees use passenger rail services.

Amount of Water Intake/Drainage/Reuse

Unit: 10,000 m³

Item	Group	Japan ¹¹	Overseas	China	Southeast Asia	Europe	US	Latin America	others ¹²
■ FY 2023 results									
Water usage (water intake plus reuse)	14,980	13,036	1,943	727	937	115	41	47	76
Intake	10,878	9,068	1,810	668	880	113	41	46	62
Surface water	86	85	1	0	0	0	0	0	0
Groundwater	5,422	5,395	27	0	8	3	0	0	16
Seawater	0	0	0	0	0	0	0	0	0
Water discharged during development/mining processes	2	2	0	0	0	0	0	0	0
Water purchased from third parties	5,369	3,586	1,783	667	872	110	41	46	46
Drainage volume	8,467	7,122	1,345	580	556	101	40	35	34
Surface water	2,489	2,487	2	0	0	2	0	1	0
Groundwater	1,159	1,159	0	0	0	0	0	0	0
Seawater	54	54	0	0	0	0	0	0	0
Water discharged into third-party drainage facilities	4,765	3,422	1,343	580	556	99	40	34	34
Water reused	4,102	3,968	133	59	57	3	0	1	14
Water consumption (water intake minus drainage volume)	2,411	1,947	464	87	325	11	1	11	29
Reuse ratio (reused/used) (%)	27	30	7	8	6	2	0	1	18
Water usage per unit of sales (Water usage/sales) (m ³ /million yen)	3.0	—	—	—	—	—	—	—	—
■ FY 2022 results									
Water usage (water intake plus reuse)	15,206	13,302	1,904	752	899	124	48	47	34
Intake	10,744	8,948	1,796	670	881	121	48	47	29
Surface water	3,067	2,057	1,010	209	757	16	0	28	0
Groundwater	5,336	5,310	26	0	7	5	0	0	14
Seawater	0	0	0	0	0	0	0	0	0
Water discharged during development/mining processes	0	0	0	0	0	0	0	0	0
Water purchased from third parties	2,341	1,582	759	461	117	100	48	19	15
Drainage volume	8,385	7,221	1,164	524	489	68	43	34	7
Surface water	3,930	3,928	1	0	0	1	0	0	0
Groundwater	43	29	13	3	0	5	1	4	0
Seawater	0	0	0	0	0	0	0	0	0
Water discharged into third-party drainage facilities	4,412	3,263	1,149	521	488	61	42	30	7
Water reused	4,463	4,354	109	83	18	3	0	1	4
Water consumption (water intake minus drainage volume)	2,359	1,727	632	146	392	53	6	13	22
Reuse ratio (reused/used) (%)	29	33	6	11	2	2	0	1	13
Water usage per unit of sales (Water usage/sales) (m ³ /million yen)	3.4	—	—	—	—	—	—	—	—
■ FY 2021 results									
Water usage (water intake plus reuse)	14,860	13,143	1,717	736	868	28	48	36	—
Intake	10,314	8,734	1,580	639	831	26	48	36	—
Surface water	2,998	2,022	976	217	733	1	0	25	—
Groundwater	5,185	5,178	7	0	7	0	0	0	—
Seawater	0	0	0	0	0	0	0	0	—
Water discharged during development/mining processes	0	0	0	0	0	0	0	0	—
Water purchased from third parties	2,130	1,534	596	423	90	25	48	11	—
Drainage volume	8,068	6,986	1,082	498	493	13	48	29	—
Surface water	3,925	3,925	0	0	0	0	0	0	—
Groundwater	38	29	8	3	0	1	0	4	—
Seawater	0	0	0	0	0	0	0	0	—
Water discharged into third-party drainage facilities	4,105	3,032	1,074	495	493	12	48	25	—
Water reused	4,547	4,410	137	97	38	2	0	0	—
Water consumption (water intake minus drainage volume)	2,246	1,748	498	141	337	13	0	7	—
Reuse ratio (reused/used) (%)	31	34	8	13	4	7	0	1	—
Water usage per unit of sales (Water usage/sales) (m ³ /million yen)	3.5	—	—	—	—	—	—	—	—

¹¹ Sum of Mitsubishi Electric Corporation (non-consolidated) and affiliated companies in Japan.

¹² Areas classified as "others" from FY2022 onward due to an increase in the number of business sites in scope for the survey.

Verification Statement

In order to ensure reliability of our reports, Mitsubishi Electric gets third party verification by SGS Japan Inc. for our greenhouse gas emissions, energy consumption and water usage and drainage.

[Third Party Verification Report \(Environmental Disclosure of 5 items\)](#)

Environmental Accounting

Environmental Conservation Costs

Unit: 100 million yen

	FY 2021		FY 2022		FY 2023		Main Costs
	Capital Investment	Costs	Capital Investment	Costs	Capital Investment	Costs	
Business area activities	42	68	52	64	55	68	
Pollution prevention	3	14	7	12	2	13	Updating of processing facilities for emissions, sewage water, deodorization, etc.
Global environmental conservation	35	25	39	25	50	28	Updating of air conditioning equipment, switch to low fuel-consumption vehicles
Resource recycling	5	29	6	27	3	28	Consignment of the disposal of waste, construction of additional recycling facilities
Upstream and downstream production	0.0	2	0.1	2	0.0	2	Sewage expenses, reduction of the environmental impact of packaging
Management activities	0.8	16	0.3	18	0.4	20	Personnel expenses, employee education
R&D activities	0.9	39	0.8	26	0.6	44	Improvement of energy/resources efficiency, designs to reduce size and weight
Community activities	0.0	0.5	0.0	0.6	0.0	0.6	Outdoor classrooms, Satoyama woodland preservation activities, cleaning and greening activities in the suburbs
Environmental damage countermeasures	0.0	0.2	0.0	0.2	0.0	0.1	Purification of contaminated soil/groundwater, measuring contamination levels
Total	44	126	54	111	56	135	

Environmental Conservation Benefits

Unit: 100 million yen

	FY 2021	FY 2022	FY 2023	Main Costs
Earnings	37	68	72	Profit on sale of valuable materials (mainly metals)
Savings	7	13	12	Results of energy savings, reuse of materials/water, and introduction of equipment to reduce the input of resources
Total	44	81	84	