

Climate Change Initiatives (Disclosure Based on TCFD)

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

Governance

Promotional System

In fiscal 2023, the Mitsubishi Electric Group positioned the realization of sustainability at the cornerstone of its management policy. Since the beginning of fiscal 2024, we have been working to further strengthen governance to achieve “value creation” and “foundation enhancement” through various initiatives, including addressing climate change.

For our efforts to address climate change, we have established a Carbon Neutrality Subcommittee under the Sustainability Committee to discuss issues such as targets for carbon neutrality in our own group and throughout the value chain. The analysis of short-term and medium-term risks, opportunities, and their financial impact has been transferred from the TCFD Working Group (ended in June 2024), which had been established under the Sustainability Committee, to the Sustainability Innovation Group.

Policy for Initiatives

Under our long-term environmental management vision through 2050, titled Environmental Sustainability Vision 2050, we aim to reduce greenhouse gas emissions from factories and offices to net-zero by fiscal 2031 and to reduce greenhouse gas emissions throughout the entire value chain to net-zero by fiscal 2051. In February 2024, we updated our short-term plan, Environmental Plan 2025 (FY2025–2026), based on the Environmental Sustainability Vision 2050, aiming to achieve even higher targets than those certified by the SBT Initiative.

Strategy

The Mitsubishi Electric Group views the transition to a decarbonized society not as a business risk but as an opportunity common to all its businesses. Based on this recognition, we are integrating initiatives related to Environmental Sustainability Vision 2050, Environmental Plan 2025, and SBTs into our business strategies and advancing technological and business development accordingly.

Business Strategy

Among the wide range of businesses, the Mitsubishi Electric Group operates, we consider electrification, promotion of renewable energy adoption, energy conservation, energy management, and smart control as key factors in society's move toward decarbonization.

Climate Change Risks and Opportunities in the Short, Medium, and Long Terms

The Mitsubishi Electric Group assesses the impact of climate-related risks and opportunities that are expected to affect each of its businesses in the short-term, medium-term, and long-term, referring to climate scenarios presented by external organizations (such as the IEA) and economic development projections for each country and region.

Periods

Short-term: Period through fiscal 2026 (period of the Environmental Plan 2025 and the medium-term management plan)

Medium-term: Period through fiscal 2031

Long-term: Period through fiscal 2051 (final year of the Environmental Sustainability Vision 2050)

Magnitude of Impact

Under the supervision of the Executive Officer in charge of Sustainability, the executive officers and heads of relevant business divisions determine whether the anticipated events in each business qualify as significant risks (high impact). This is also confirmed in Mitsubishi Electric Group's comprehensive risk management process.

Risks Related to Climate Change

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 costs (for production, internal management, financing, etc.) and decreased revenues.

If the transition to a decarbonized society, which is the premise of the Group's business strategy, progresses, it is expected that there will be an increase in social demand for reducing greenhouse gas emissions in all products and services, changes in energy supply and demand, changes in the energy mix due to increased power generation from renewable energy sources, and the progress of the electrification of automobiles (shift to EVs). Moreover, in this case, transition risks such as the tightening of regulations on greenhouse gas emissions, increased burden of technological development, and delays in technological development could exceed physical risks.

To address transition risks, the Mitsubishi Electric Group is already working to reduce greenhouse gas emissions by implementing its environmental plan and setting SBTs. So, for example, even if regulations on greenhouse gas emissions are tightened, we believe that the impact will be minor. We estimate that, even if material prices soar, the impact can be minimized by more vigorously pursuing environmentally conscious design, which will in turn also support the global warming countermeasures, resource conservation, and recyclability that we are already working on. Moreover, in anticipation of the tightening of regulations such as air conditioner refrigerant regulations and the development competition for low-carbon and high-efficiency technologies, we are strategically combining short-term, medium-term, and long-term R&D investments for the development of new technologies. Additionally, we are also making capital investments in environmental activities, including global warming countermeasures such as energy conservation.

On the other hand, if economic development is prioritized over climate change countermeasures in countries around the world, it is predicted that there will be an increase in the frequency of heavy rains and floods, intensification of extreme weather events, and chronic temperature increases. In this case, physical risks such as the suspension of operations due to disasters and the disruption of supply chains could exceed transition risks. In response to physical risks such as floods, we have formulated a business continuity plan (BCP), which we review annually, and are decentralizing our production sites. In the supply chain, we are also striving to purchase from multiple companies and requesting our suppliers to operate multiple plants to avoid situations that could hinder production.

Climate-related risks and opportunities in the short, medium, and long-terms

Major Category	Item	Short-term	Medium-term	Long-term	Risks	Opportunities	Impact on Business	Impact on Strategy	Impact on Financial Plan	Magnitude ¹	Frequency ²
Policy/Regulation	Carbon tax	○	◎	◎	Additional costs incurred for operations, raw materials, procurement, etc.	Providing products and services that contribute to decarbonization	Increased business costs, fluctuations in sales	Early response based on CN transition plan	Investment in CN technology development	Medium	High
	Refrigerant regulations	○	◎	○	Decreased sales due to inability to comply with regulations	Increased sales by complying with regulations and selling high-performance products	Fluctuations in sales	Early and advanced response to regulations and technology development Gain advantage over competitors	Investment in refrigerant technology development	Large	High
Industry/Market	Soaring material prices	○	○	◎	Raw material costs, etc., soar due to the impact of climate change	Successful material procurement through multiple sourcing, etc.	Increased business costs	Securing multiple suppliers, strengthening SCM	Investment in strengthening SCM	Medium	Medium
	Decarbonization of transportation	○	○	◎	Soaring transportation costs for aircraft, ships, etc.	Increased demand for social system business (railway-related)	Increased business costs, fluctuations in sales	Development of CN solutions with competitive advantage	Investment in CN technology development	Medium	Medium
	Changes in energy mix and energy demand trends	○	◎	◎	Market shrinks due to the introduction of renewable energy and delays in global electrification	Increased sales of various equipment due to expanded electricity demand	Fluctuations in sales	Early and advanced response to regulations and technology development Gain advantage over competitors	Investment in CN technology development	Large	High
	Fluctuations in EV demand	○	◎	◎	SiC demand does not increase due to slow growth in EV demand	SiC demand expands and SiC becomes widespread due to increased EV demand	Significant increase/slowdown in profits	Expansion of SiC production/expansion of production of conventional products such as Si	New construction/down sizing of SiC factories	Large	Medium
Technology	Fluctuations in air conditioning demand	○	○	◎	Decreased sales due to failure in technology development	Increased sales due to climate change adaptation demand and sales of energy-saving and high-performance products	Fluctuations in sales	Early and advanced response to regulations and technology development Gain advantage over competitors	Investment in technology development	Large	High
	Spread of low-carbon technologies, products, and services	◎	◎	◎	Lagging behind competitors in technology development and commercialization in all business areas	Increased sales by selling low-carbon and high-efficiency products and services in all business areas	Fluctuations in sales	Early and advanced response to regulations and technology development Gain advantage over competitors	Investment in technology development	Large	High
Regulation	Development of CO ₂ utilization technology	○	○	◎	Not achieving self-CN if unable to develop	Achieving self-CN by 2050, selling technology	Future increase in costs for CN credits	Medium- to long-term development of CCUS and carbon chemical recycling technology	Investment in CO ₂ utilization technology development	Medium	High
Physical Risks (Acute)	SBT 1.5°C target certification	◎	—	—	Lagging behind competitors if certification fails	Status as an excellent company if certification succeeds	Fluctuations in sales	Obtaining SBT 1.5°C target certification one year ahead of schedule	No specific impact	Medium	High
	Intensification of abnormal weather	○	◎	◎	Business activities suspended due to typhoons, localized heavy rain, etc.	Providing disaster prevention and mitigation solution business	Losses due to business suspension, fluctuations in sales	Strengthening and reviewing BCP	Capital investment related to BCP strengthening	Large	Medium

◎: Main period when the impact materializes. ○: Period related to the manifestation of the impact.
¹1: Magnitude of the overall impact on the business, comprehensively evaluated from the perspectives of business, strategy, and financial planning.
²2: Frequency at which the business is affected by the risk or opportunity.

Opportunities Related to Climate Change

Regarding climate-related opportunities, the Mitsubishi Electric Group has a wide range of businesses and considers it a strength to be able to provide a wide range of products, services, and solutions that contribute to solving social issues caused by climate change. Therefore, we believe that we have sustainable growth opportunities from the short term to the long terms.

Whether the world prioritizes transitioning to a decarbonized society or pursues economic development over climate change countermeasures, it is predicted that the needs for solving social issues caused by climate change will become more apparent.

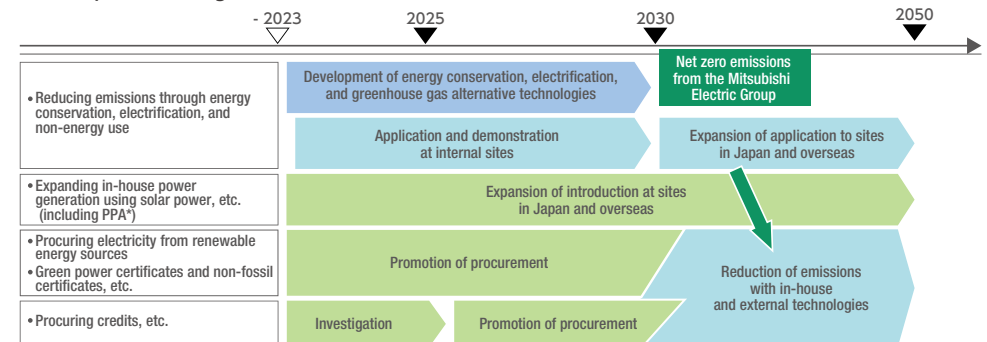
The Mitsubishi Electric Group provides large energy storage systems, smart medium- and low-voltage direct current distribution network systems, distributed power source operation systems/virtual power plant (VPP) systems, and multi-region digital energy management systems (multi-region EMS) to prepare for the diversification of power supply required by the trend toward a decarbonized society. These products meet the needs for effective use of electricity and system stabilization arising with the expansion of renewable energy and the decentralization of power sources. In addition, the increase in demand for electrified products, driven by the progress of the electrification of automobiles (shift to EVs), will lead to an expansion of demand for silicon carbide (SiC), high-efficiency power semiconductors in the Semiconductors & Devices business, and a reduction in their manufacturing costs. The expansion of SiC applications in the fields of electric railways, electric power, industry, and consumer products is anticipated.

Even if economic development is prioritized over climate change countermeasures, it is expected that revenue opportunities will expand as we contribute to the realization of a decarbonized society by providing highly energy-efficient products, services, and solutions in the air conditioning business and other areas, in response to the increase in demand due to the development of the global economy and the increase in purchasing power, as well as the increase in demand for adaptation to climate change.

Carbon Neutrality Transition Plan

The Mitsubishi Electric Group has formulated and is implementing a plan to transition to carbon neutrality targeting “net zero greenhouse gas emissions in the entire value chain by fiscal 2051” and “net zero greenhouse gas emissions from factories and offices by fiscal 2031.”

Roadmap for reducing emissions from factories and offices

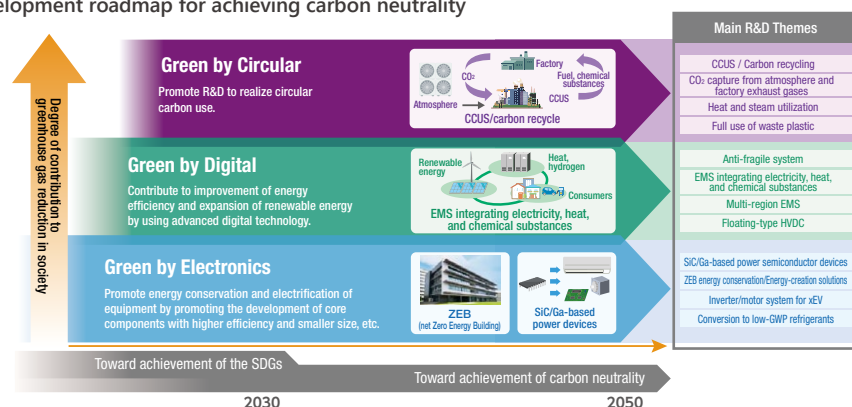


* Power purchase agreement

We are implementing a number of initiatives to reduce emissions at factories and offices: (1) reducing emissions through energy conservation, electrification, and non-energy use; (2) expanding in-house power generation using solar power, etc. (including PPA); (3) procuring electricity from renewable energy sources; (4) green power certificates and non-fossil certificates, etc.; and (5) procuring credits, etc. With these and other initiatives in place, we aim to achieve the above goals.

In addition, as a development strategy for achieving our targets for 2050, to create and grow businesses that contribute to the realization of carbon neutrality throughout the value chain and society as a whole, we will accelerate R&D in three innovation areas: Green by Electronics, Green by Digital, and Green by Circular.

Development roadmap for achieving carbon neutrality



In Green by Electronics, we will advance R&D to improve the efficiency and reduce the size of power electronics and motors, the core components that are Mitsubishi Electric's strengths, contributing to energy conservation and electrification of FA equipment, air conditioning, and other products. We will also advance R&D on net Zero Energy Buildings (ZEB), air conditioning and refrigeration systems using refrigerants with low global warming potential, and power devices using new materials.

In Green by Digital, we will use advanced digital technologies to improve energy efficiency and expand the use of renewable energy. We will advance R&D, such as demonstrating an energy management system (EMS) in Europe that balances power supply and demand between power generation using renewable energy sources and power consumption by heat pumps for air conditioning and water heating. Through these activities, we will contribute to reducing greenhouse gas emissions throughout the entire value chain.

In Green by Circular, we will advance R&D focusing on resource circulation, such as CO₂ capture, utilization, and storage (CCUS) and carbon recycling. We will advance R&D to expand the range of recyclable plastics, including those that have been difficult to recycle, such as composite materials, not only from Mitsubishi Electric products but also from other sources, contributing to the circular use of carbon.

To create and expand businesses in these green-related fields, we plan to allocate approximately 900 billion yen over the seven years from fiscal 2025 to fiscal 2031 to green-related R&D investments.

Resilience to Climate Change Based on Scenario Analysis

Overview

The Mitsubishi Electric Group has conducted scenario analysis considering long-term future uncertainties based on two scenarios: one in which the world moves toward a decarbonized society as assumed in our business strategy (2°C or lower scenario*1), and another in which economic development is prioritized over climate change countermeasures (4°C scenario*2). We set fiscal 2041 as a point in an uncertain future and analyzed the financial impact of transitioning to the 4°C scenario, with the baseline (extension of our business plan) as the 2°C or lower scenario.

*1 The demand for decarbonization technologies increases and development competition intensifies due to stricter regulations. As the electrification of society progresses, total electricity demand increases, and the percentage of renewable energy also rises.

Referenced public scenarios

- International Energy Agency (IEA) World Energy Outlook 2023, Announced Pledges Scenario (APS)
- Intergovernmental Panel on Climate Change (IPCC) 6th Assessment Report (AR6), Shared Socioeconomic Pathway (SSP1), compared to SSP2 as the current situation

*2 Physical risks materialize due to decarbonization activities being at or below the current level. Consumer purchasing power increases compared to the 2°C or lower scenario. On the other hand, extreme weather events such as heavy rain and floods intensify.

Referenced public scenarios

- IEA World Energy Outlook 2023, Stated Policies Scenario (STEPS)
- IPCC 6th Assessment Report, SSP5 (compared to SSP2 as the current situation)

Scenario Analysis Results

The Mitsubishi Electric Group has examined climate-related risks and opportunities in all its business segments. Regarding transition risks, we evaluated that three businesses, Energy Systems, Semiconductors & Devices, and Automotive Equipment, would be significantly affected by climate change in the 4°C scenario relatively, and we quantitatively estimated the financial impact.

On the other hand, for physical risks, we estimated the financial impact on the Group's major manufacturing bases across all business segments, taking the intensification of extreme weather events as an inevitable risk due to the increased frequency of extreme weather events.

The main transition risks that would affect finances due to the transition to the 4°C scenario are changes in the energy mix, changes in energy demand trends, and delay in shift to EVs.

The Energy Systems business is directly affected by changes in the energy mix and changes in energy demand trends, and is expected to see a decrease in profits due to the slow spread of renewable energy and sluggish growth in total electricity demand caused by delays in electrification. The Semiconductors & Devices and Automotive Equipment businesses would experience some concerns such as the delay in the shift to EVs leading to reduced demand for EV-related automotive equipment and the failure of SiC manufacturing costs to decrease, stagnating its widespread use in other fields. However, the impact of these concerns is expected to be minimal.

Although these three businesses would be affected by reduced opportunities under the 4°C scenario, climate change is seen as more of an opportunity than a risk in all of the Mitsubishi Electric Group's businesses. In the case of the 4°C scenario, compared with the case of the 2°C or lower scenario, each country will adopt economy-first measures, and as a result, high-performance products and services will be selected and demand will increase vigorously. For example, in the Air Conditioning Systems & Home Products

business, performance requirements for reducing greenhouse gas emissions and energy consumption would not decrease, and increased demand for adapting to climate change can be expected.

Moreover, we estimate the financial impact of the intensification of extreme weather events, a physical risk, to be smaller than the impact of transition risks.

Based on this analysis, we expect a decrease in profit due to transition risks in the Energy Systems business, as well as physical risks in all businesses. However, the opportunities presented by climate change in many businesses, including the Air Conditioning Systems & Home Products business, are also expected to bring an increase in profit. As a result, the impact on the Mitsubishi Electric Group is within the assumed range that can occur in normal business operations and is estimated to amount to a minor change in the direction of profit growth. For this reason, we do not foresee a significant financial impact even with a shift from the 2°C or lower scenario to the 4°C scenario.

Financial impact on the Mitsubishi Electric Group when society progresses to the 4°C scenario (impact on operating profit)

	Business	Content	Impact on Operating Profit
Transition risks	Energy Systems	<p>◆Changes in energy mix and changes in energy demand trends</p> <ul style="list-style-type: none"> •The market size for core network products and distributed network products shrinks due to the slowdown in the introduction of renewable energy and the progress of electrification. 	➔
	Semiconductors & Devices, Automotive Equipment	<p>◆Delay in shift to EVs</p> <ul style="list-style-type: none"> •Slowdown in the price reduction of SiC products, and stagnation in their spread to non-automotive applications. •Reduced demand for EV-related automotive equipment. 	➔
Physical risks	All Businesses	<ul style="list-style-type: none"> •Disruption of supply chains and increased damage to facilities due to the intensification of extreme weather events such as typhoons, heavy rains, and floods. 	➔
Opportunities	A/C System & Home Products	<ul style="list-style-type: none"> •Increased demand due to the development of the global economy under relatively relaxed regulatory conditions. •Optimization of annual R&D investment in line with the gradual progress of refrigerant regulation requirements in each region. 	➔
Total (transition risks + physical risks + opportunities)			➔

Risk Management

Processes for Addressing Climate Change-Related Risks and Opportunities

The Mitsubishi Electric Group uses its own 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 departments (business groups and corporate divisions) and associated companies in Japan and overseas 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.

At the same time, as part of the Mitsubishi Electric Group's comprehensive risk management process, we 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 those related to climate change, are primarily managed by each division of Mitsubishi Electric and its associated companies in Japan and overseas. In addition, at the direction of the Chief Risk Management Officer (CRO), the corporate division (i.e., the division responsible for 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 responsible for such risks are consolidated by the Corporate Legal Risk Management Group, and their impacts on group management are evaluated through relative comparisons among each risk, etc. The Risk Management and Compliance Committee, chaired by the CRO, makes management decisions.

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 Sustainability and the Sustainability Innovation Group, 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 Sustainability and the Sustainability Innovation Group 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 group, associated company, etc.) formulates its own annual environmental implementation plan based on these plans and reports the results to the Executive Officer in charge of Sustainability and the Sustainability Innovation Group.

The Executive Officer in charge of Sustainability and the Sustainability Innovation Group 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 Legal and Risk Management Division and, if necessary, revise the environmental plan and reflect the results in the environmental implementation plan for the following fiscal year.

Metrics and Targets

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 through 2050, 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 Target

The Mitsubishi Electric Group set a target of "reducing greenhouse gas emissions from factories and offices to net-zero by fiscal 2031" and is conducting initiatives to reduce greenhouse gas emissions by a certain percentage each year.

Mitsubishi Electric Group's Reduction Targets after Receiving Certification from the Science Based Targets (SBT) Initiative

We have updated the Group's greenhouse gas emission reduction targets for fiscal 2031 as follows, and received certification from the Science Based Targets (SBT) initiative in January 2024. These new targets have been recognized as science-based targets for achieving the Paris Agreement's "1.5°C target." The Scope 1 and Scope 2 targets have been certified as being at a level that "limits temperature rise to 1.5°C," while the Scope 3 target has been certified as being at a level "well below 2°C."

- Scope 1 and 2: Reduce greenhouse gas emissions by 42% by fiscal 2031 compared to fiscal 2022 levels
- Scope 3:* Reduce greenhouse gas emissions by 30% by fiscal 2031 compared to fiscal 2019 levels

* The scope of Scope 3 has been expanded from the previous category 11 (use of sold products) to all categories.

Short-Term Target

Based on the action guidelines of Environmental Sustainability Vision 2050, the Mitsubishi Electric Group formulated an Environmental Plan that sets out specific activity targets. We pursued various activities in line with the current Environmental Plan 2023 (FY2022–2024) which sets out indicators and targets in four areas, 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."

In fiscal 2025, we newly formulated the Environmental Plan 2025 (FY2025–2026). In addition to setting greenhouse gas emission reduction targets for fiscal 2026 to achieve the aforementioned medium-term targets, the Environmental Plan 2025 also set targets for simple calculation of LC-CO₂*1 emissions that contribute to carbon neutrality and a circular economy, as well as targets in the nature positive domain that contribute to the realization of "30by30"*2 as advocated by the Japanese government.

*1 Life Cycle CO₂: All CO₂ emissions throughout the entire product life cycle

*2 A target to effectively conserve at least 30% of land and sea as healthy ecosystems by 2030

Progress

Among greenhouse gas emissions, the Company's calculated figures for Scope 1 and 2 in fiscal 2024 are listed in the table below.

Location-based emissions increased from fiscal 2023 to 1,071 kt due to expansion of Group's production scale and other factors. However, emissions were down by approximately 25% from the 1,430 kt emitted in fiscal 2014, the base year set in the Environmental Plan 2025. In our efforts to reduce greenhouse gas emissions, we continue to work toward our target set in the Environment Plan 2025 of a 53% reduction compared with fiscal 2014 at the end of fiscal 2026.

Market-based emissions are being reduced with the increasing use of renewable energy sources.

Scope 1 and 2 Greenhouse Gas Emissions (Mitsubishi Electric Group) (Unit: kt-CO₂)

		FY2022	FY2023	FY2024
Total of Scope 1 and 2	Location-based	1,161	1,046	1,071
	Market-based	1,095	951	910

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) and Category 11 (use of sold products).

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