

Materiality 3

Promoting a Decarbonized Society

Decarbonization Initiatives



Environmental Action Plan Achievements for Fiscal Year 2024

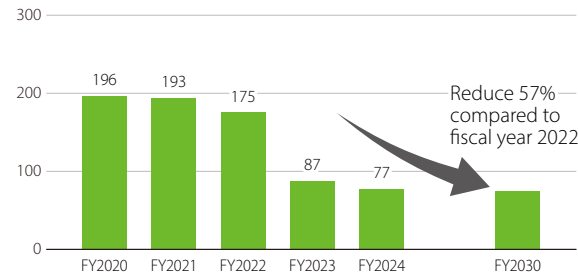
[Summary] → [p.049](#)Environmental Action Plan Targets for Fiscal Year 2025 [Summary] → [p.050](#)

Achievements

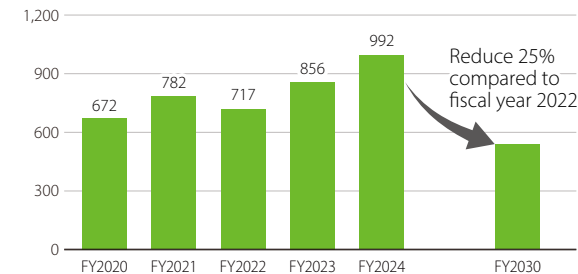
The Nikon Group calculates greenhouse gas emissions in the entire value chain in accordance with the Greenhouse Gas Protocol (GHGP).

Scope 1 and Scope 2 emissions for fiscal year 2024 amounted to 76,929 tons-CO₂e, a reduction of 56% compared with fiscal year 2022 and meeting our fiscal year 2024 target (50% reduction compared with fiscal year 2022). As we describe on the following pages, the impact of renewable energy resulted in a significant reduction. We will continue to make steady progress toward achieving our medium-term targets. Our Scope 3 results were 991,775 tons-CO₂e emissions. We conducted reduction measures that include making products smaller, lighter, and more energy-efficient. However, total emissions rose approximately 16% over the previous fiscal year. This result was due to an increase in Category 2 (capital goods) emissions due to the construction of Nikon headquarters and an increase in emissions from categories related to sales and production volume growth.

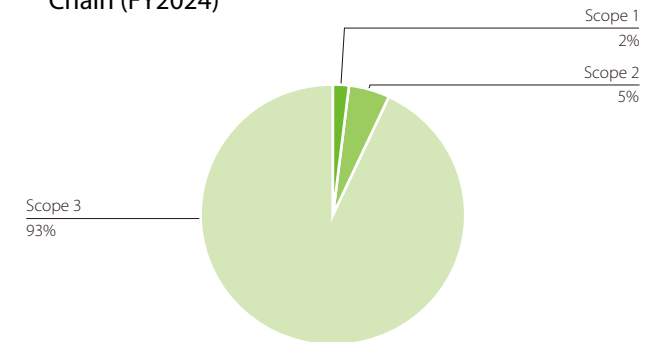
● Scope 1+2 Emissions

(thousand tons-CO₂e)

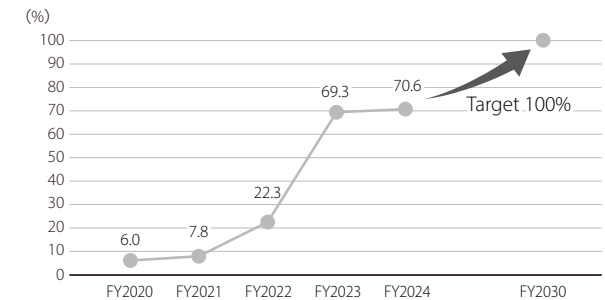
● Scope 3 Emissions

(thousand tons-CO₂e)

● Ratio of Greenhouse Gas Emissions in the Value Chain (FY2024)



● Ratio of Renewable Energy as a Share of Electric Power Consumption



Basic Approach

In light of the emerging impacts of climate change and social trends toward decarbonization, the Nikon Group established, in our Nikon Environmental Policy, a commitment to reduce greenhouse gas emissions in our value chain, including business operations, procurement partners, and customers, toward mitigating climate change. The policy also includes environmental considerations throughout the product life cycle, while the Nikon Long-Term Environmental Vision describes how we will realize a decarbonized society, which is one of the pillars of this vision (see the figure to the right for Nikon Group's SBTs related to GHG reduction targets). Our target is to achieve a 100% rate of renewable energy adoption rate by fiscal year 2030.

Our Medium-Term Management Plan for fiscal years 2022 to 2025 defines targets to reduce Scope 1 and Scope 2 greenhouse gas emissions by 46.5% compared with 2013 levels to achieve a 30% rate of renewable energy use. We achieved these targets ahead of schedule in fiscal years 2023 and 2022, respectively. We will continue working toward achieving our fiscal year 2030 targets.



Nikon Environmental Policy

The Nikon Group's SBTs ^{*1} (Certified in January 2024)

- Net-Zero target

Reach net zero ^{*2} greenhouse gas emissions across the value chain by fiscal year 2050

- Short-term targets

Reduce Scope 1 and 2 GHG emissions by 57% by fiscal year 2030 compared to the base year of fiscal year 2022

Reduce Scope 3 greenhouse gas emissions by 25% by fiscal year 2030 compared to the base year of fiscal year 2022



^{*1} Science Based Targets (SBT) initiative The SBT initiative is a collaboration between CDP, an international NGO working on environmental issues such as climate change, the United Nations Global Compact, World Resources Institute, and the World Wide Fund for Nature. The initiative targets achieving the Paris Agreement-mandated objective of holding the increase in the global average temperature to below 2°C above pre-industrial levels. It certifies the CO₂ emission reduction targets of companies that are in line with emissions reduction scenarios based on scientific facts.

^{*2} Reducing GHG emissions (Scope 1, 2, and 3) across the value chain by 90% and neutralizing remaining emissions in accordance with standards set by the SBT Initiative

Strategy

Risk

We recognize the following climate change risks faced by the Nikon Group.

● Financial impact

High: 10 billion yen or more, Medium: 1 to 10 billion yen, Low: 1 billion yen or less

● Urgency

High: Within 3 years, Medium: 3 to 10 years, Low: Later than 10 years

Risks Faced by the Nikon Group			Financial Impact	Urgency	Response
Physical risks (acute and chronic)	An increase in typhoons, floods, and other weather-related disasters could disrupt supply/operations or reduce asset values due to damage to major production sites (Japan, Thailand, etc.) and supplier sites, disruption of logistics networks, and other factors. In addition, a rise in sea levels may increase the probability of these risks.		Medium	Medium	<ul style="list-style-type: none"> Building a resilient supply chain Promoting business continuity management (BCM)
	A rise in average temperatures could lead to increased electricity costs due to increased load on cooling and other air conditioning equipment. In particular, strict temperature controls required in manufacturing and transporting precision equipment may become unreasonably difficult, or management costs may increase.		Small	Low	<ul style="list-style-type: none"> Promoting aggressive energy-saving activities
	Long-term changes in precipitation patterns, as well as droughts, could constrain the use of water resources and adversely affect operations.		Medium	Low	<ul style="list-style-type: none"> Reducing water withdrawal Promoting water resource recycling
Transition risks	Policies and regulations	<ul style="list-style-type: none"> Introduction or expansion of carbon pricing policies, such as carbon taxes, could increase Nikon's operating costs if applied to us. In addition, purchase prices may increase if these are applied to suppliers. Changes in national energy policies where we have business sites could lead to higher electricity prices, which would increase operating costs and purchasing costs. 	High *	Medium	<ul style="list-style-type: none"> Reducing greenhouse gas emissions through promotion of energy conservation and adoption of renewable energy Reducing greenhouse gas emissions through modal shifts and improved distribution routes Requiring suppliers to reduce greenhouse gas emissions
	Technologies	<ul style="list-style-type: none"> Failure to reduce emissions during product use and shift to low-carbon manufacturing methods and materials could result in reduced sales opportunities. 	High	Low	<ul style="list-style-type: none"> Reducing greenhouse gas emissions through promotion of energy conservation and adoption of renewable energy Improving energy-saving performance for products Creating new materials and manufacturing methods
	Markets/ Reputation	<ul style="list-style-type: none"> Failure to adequately meet customer decarbonization requirements could result in reduced sales opportunities. Inadequate response to decarbonization could damage our evaluations/reputation and affect stock price and sales. 	Medium	Low	<ul style="list-style-type: none"> Reducing greenhouse gas emissions through promotion of energy conservation and adoption of renewable energy Promoting proactive information disclosure

* Specific example: Carbon tax system in the Netherlands

In 2021, the Netherlands began levying a carbon tax equivalent to 30 Euros per ton of greenhouse gas emissions, targeting manufacturing firms and other firms in the industrial sector. This carbon tax is set to increase by 10 Euros every year, and by 2030 it is expected to have risen to 125 Euros per ton of emissions. A similar trend toward the introduction of carbon taxes can be seen in other countries in Europe. While the Nikon Group's business areas do not currently fall within the scope of such carbon taxes, there is a possibility that the scope of applicability may be extended in the future. For instance, the Nikon Group's manufacturing companies in Europe had total annual greenhouse gas emissions of around 1,300 tons in fiscal year 2020. If these companies were to become subject to carbon taxes and no measures were taken to reduce emissions, the Group could face an annual carbon tax bill of around 162,500 Euros.

Opportunities

The Nikon Group recognizes the following opportunities in connection with climate change.

Opportunities for the Nikon Group	Applicable Period
<ul style="list-style-type: none"> Rising evaluation of Nikon by consumers, institutional investors, and others for our technologies and business activities (as follows) contributing to a decarbonized society could lead to increased sales and higher stock prices. <ul style="list-style-type: none"> Increase energy efficiency in society with additive manufacturing and fine processing using optics Additive processing contributing to longer product lifespans through repair of existing parts, etc. Robots with sophisticated hands and eyes and device manufacturing processes, that enhance <i>Monodzukuri</i> (manufacturing) efficiency Longer lasting light sources and more durability in our products that contribute to a healthy global environment Image production technologies that contribute to a society where people connect transcending time and space and real and virtual 	Short- to long-term
<ul style="list-style-type: none"> Achieving efficiency in production processes and distribution, as well as carrying out energy-saving activities, could reduce future carbon taxes and energy costs. 	Short- to long-term
<ul style="list-style-type: none"> Total Supply Chain Management, a practice designed to prepare for physical risks, and improvements in our BCM, could make our business structure more robust. 	Short-term

Strategy

In November 2018, Nikon endorsed the Task Force on Climate-related Financial Disclosures (TCFD) established by the Financial Stability Board (FSB). We conduct disclosures based on the TCFD final report.

Nikon conducts analyses of climate-related risks and opportunities by comprehensively considering a number of factors, such as the characteristics of business, the location

conditions of production sites and business facilities, the recent degree and frequency of natural disasters due to climate change, industry trends, trends in related laws and regulations, representative concentration pathway (RCP) scenarios used in the IPCC climate change forecasts, and survey results and scenarios carried out by external research institutes. Accordingly, we identify and evaluate risks under the 2°C and 4°C scenarios.

The 2°C scenario recognizes the tightening of greenhouse gas emissions and other regulations, as well as the associated market demands. The 4°C scenario recognizes the rising frequency in natural disasters, including flooding and rising temperatures. In both scenarios, we recognize the changes in costs associated with the transition to renewable energy, and we undertake measures to adapt to climate change as a business strategy, taking the financial impacts into account. The Nikon Group will continue to carry out and improve our scenario analysis going forward.

We conduct sustainability initiatives, including climate change response, under our Medium-Term Management Plan. We also reflect an evaluation of sustainability initiatives, including climate change, in officer remuneration.

Nikon Long-Term Environmental Vision and Medium-Term Environmental Goals → p.048

Governance

The Nikon Group sets reduction targets and manages data for each location. The Local Environmental Subcommittee secretariat, which operates under the Environmental

Subcommittee, checks the results and the status of achievement of targets for each party. The subcommittee examines risks and opportunities related to climate change, drafts strategies and indicators/targets, and manages progress for the Nikon Group as a whole. The Sustainability Committee determines risks and opportunities, and discusses strategies, indicators, targets, and performance, deciding whether to make decarbonization-related investments.

Environmental Management Promotion System → p.053

Risk Management

The Risk and Compliance Committee manages risks overall for the Nikon Group. In addition, the Sustainability Committee identifies and assesses risks related to climate change based on reports from the Environmental Subcommittee and the content of management reviews, deliberating the response to risks identified. We conduct financial simulations in our Medium-Term Management Plan related to the potential impact of identified risks, identifying and recognizing these risks with other potential factors. We prioritize and address those risks related to laws and regulations, risks impacting the entire organization, and risks related to multiple businesses across our organization. Each site and Group company monitors energy consumption and greenhouse gas emissions on a monthly basis using an environmental data collection system.

Environment-Related Risk Management → p.057

Major Initiatives

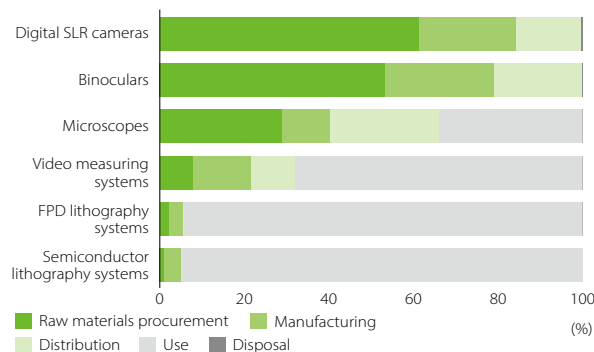
Reducing Greenhouse Gas Emissions in Products

Environmental Impact Assessment Using the LCA Methodology

Nikon calculates CO₂ emissions in each phase of a product's lifecycle by conducting evaluations of our environmental impact using the Life Cycle Assessment (LCA) methodology. We tend to see greater CO₂ emissions in the raw material procurement phase for imaging products and in the use phase for flat panel displays (FPD) and semiconductor lithography systems, as well as industrial metrology. From this data, we understand that it is important for us to make improvements at these phases, and we are therefore incorporating this into new product development.

We calculated CO₂ emissions for all new products in fiscal year 2024.

● Percentage of CO₂ Emissions throughout the Product Lifecycle for Major Nikon Products



CO₂ Reduction Measures for Products

For imaging products, we have the highest amount of CO₂ emissions at the raw material procurement phase.

The Z8 full-frame mirrorless camera launched in May 2023 is approximately 32% lighter, 30% smaller, and uses 18% fewer parts than the Z9, another full-frame mirrorless camera. As a result, we reduced CO₂ emissions over the product life cycle per unit by approximately 23%.

In addition, the NEXIV VMF-K6555 imaging and measurement system launched in December 2024 features an approximately 6% reduction in CO₂ emissions at the raw materials procurement phase compared with previous products. We also reduced the power consumption of the system by approximately 50% and CO₂ emissions by approximately 23% per unit for the product life cycle.



The Z8 full-frame mirrorless camera



The NEXIV VMF-K6555 imaging and measurement system

Promoting GHG Reductions with Procurement Partners

The Nikon Group encourages major procurement partners to calculate and reduce GHGs.

In fiscal year 2024, we participated in the CDP Supply Chain Program*, requesting that 100 major procurement partners disclose information. A total of 90 companies provided greenhouse gas emissions and other climate change-related information through the CDP platform. When making this request, we offered three briefing sessions for the procurement partners in question. We also offered individual guidance and time for question-and-answers on calculating GHG emissions as needed.

Throughout fiscal year 2025, we will continue to participate in the CDP Supply Chain Program, expanding the number of targeted procurement partners to 150 companies to better understand partner's Scope 1, 2, and 3 emissions.

* CDP Supply Chain Program: An information disclosure program conducted by CDP, an international NGO working in climate change and other environmental fields. Member companies that disclose information on climate change, water, forests, etc., through CDP use this platform to request environmental information disclosure from their suppliers.

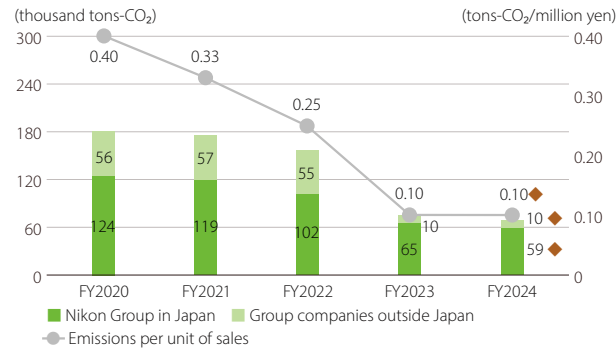
Green Procurement → p.099

Reducing Greenhouse Gas Emissions at Business Facilities

Status of CO₂ Emissions from Energy Consumption and Reduction Measures

CO₂ emissions from the energy consumption of the Nikon Group in Japan and Group manufacturing companies outside Japan for fiscal year 2024 amounted to 68,628t-CO₂, down 56.2% compared with fiscal year 2022.

● Changes in CO₂ Emissions from Energy Consumption



*1 The following values were used for CO₂ conversion factors.

[Electricity]

Japan: CO₂ emission factors without adjustment for each electric power utility noted in the "List of Emissions Factors by Electric Power Utility" specified in the Act on Promotion of Global Warming Countermeasures

UK: Residual mix

USA: NERC regional residual mix

Other countries: International Energy Agency (IEA) factors for the respective country [City gas]

Japan: Value obtained by multiplying the gas company-specific values under the guidance document of the Action on the Rational Use of Energy (Energy Conservation Act) by the figure located in Appendix 2, *List of Calculation Methods and Emissions Factors for Calculation, Reporting, and Announcement Systems*, specified in the Act on Promotion of Global Warming Countermeasures by 44/12

UK: Factors from the Report on Greenhouse Gas

Other countries: Equivalent values to a typical Japanese gas company

[Heat and other fuels]

Factors noted in the "List of Calculation Methods and Emissions Factors for Calculation, Reporting and Announcement Systems" specified in the Act on Promotion of Global Warming Countermeasures

*2 The above factors were also used for the calculation of CO₂ emissions according to market-based criteria for Scope 1 and Scope 2 on p.072

*3 Emissions have been calculated using the Emission Factors, subtracting the renewable energy portion from total energy consumption.

◆: Values in Data Index assured by third party

● Nikon Group Energy Management

The Nikon Group conducts monthly energy management operations at each business facility. Each business facility enters the amount of energy used by type into our internal

system, which is monitored by the regional Environmental Subcommittee secretariat. Any significant increase or decrease is confirmed with the person in charge at the business facility as needed. We verify the status of energy management through ISO 14001 EMS assessments, and the Environmental Subcommittee receives reports twice a year on the energy consumption by the group as a whole.

To reduce energy CO₂ emissions derived from energy consumption, the Nikon Group improves product development and production processes, makes production equipment more efficient, implements energy conservation measures, and adopts renewable energy.

In addition, we pursue initiatives and improve standards in a steady manner through employee training on energy conservation and other topics as part of employee environmental education.

● Utilizing Renewable Energy

The Nikon Group pursues renewable energy as an effort to reduce greenhouse gas emissions from business facilities.

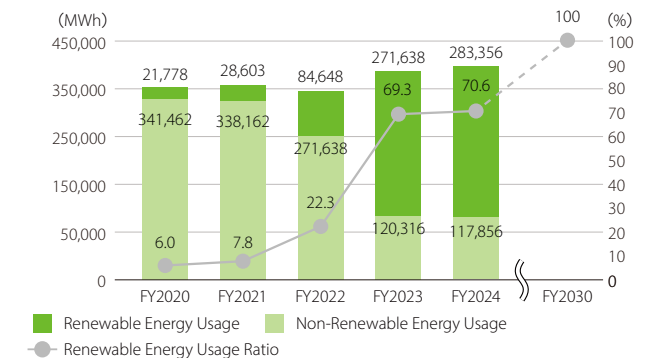
Our goal is to increase the ratio of renewable energy to electricity consumption to 100% by fiscal year 2030 through in-house power generation, electricity plans, renewable energy certificates, and other means. The result for fiscal year 2024 was 70.6%, meeting the fiscal year 2024 target (69% or more).

Several of our locations, including Tochigi Nikon Corp., Tochigi Nikon Precision Co., Ltd., Sendai Nikon Corp., Nikon (Thailand) Co., Ltd., and Optos Plc, have achieved 100% renewable energy electricity use. We will continue our efforts as we consider renewable energy additionality^{*1} and sustainability to contribute further to the wider adoption of

renewable energy in society.

*1 Requirement that the impact encourages new renewable energy installations

● Renewable Energy as a Share of Electric Power Consumption



● Membership in RE100

Nikon joined RE100^{*2}, an international initiative seeking to have companies source 100% renewable energy for electricity used in business activities. We aim to switch to 100% renewable energy-derived electricity used in the Group's business activities by fiscal year 2030, and we plan to work actively alongside other RE100 member companies to foster the development of the renewable energy market and to encourage governments in this area.

*2 RE100: Operated as a partnership by the Carbon Disclosure Project (CDP) and The Climate Group (an NPO focused on activities in response to climate change), RE100 is an international initiative with participation from companies all over the world.

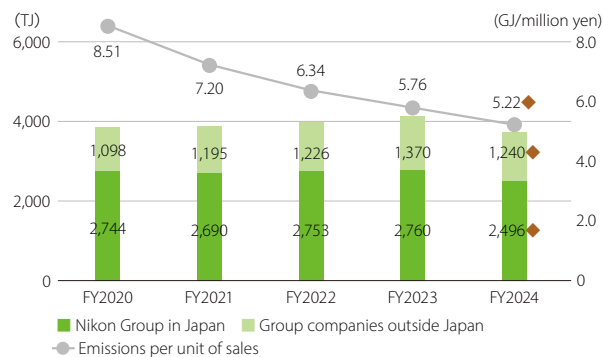


● Conserving Energy at Business Facilities

When planning new equipment installation at all Nikon Group business facilities, one important process is energy saving checks, and determining whether or not to install the equipment based on these checks. After the equipment has been installed, its energy use is monitored, and its performance is managed compared to the forecast.

Furthermore, a range of energy saving initiatives are ongoing at each business facility, including switching over to energy saving lights, using motion sensor-equipped lighting, and working to make air conditioning equipment and office machinery more efficient.

● Changes in Energy Consumption



* The following values were used for calorific-value conversion factors.

[Electric power] Factors given in the guidance document for the Periodic Report pursuant to the Act on the Rational Use of Energy (Energy Conservation Act)

[City gas]

Japan: Gas company-specific factors under the guidance document for the Periodic Report pursuant to the Act on the Rational Use of Energy (Energy Conservation Act)

UK: Values calculated from the factors for the Report on Greenhouse Gas

Other countries: Equivalent values to a typical Japanese gas company

[Heat and other fuels] Factors given in the guidance document for the Periodic Report pursuant to the Act on the Rational Use of Energy (Energy Conservation Act)

◆: Values in Data Index assured by a third party

● Main Energy-Saving Initiatives at Business Facilities

Energy-Saving Initiative	Initiative Content
Adjusting design and development	Reducing experiments and prototyping through effective use of AI, CAE, and external technical information
Conserving energy in production equipment	Integrating and replacing production equipment, and making existing equipment more energy-efficient
Enhancing productivity	Improving conformity rates through IE analysis, optimizing work flow lines and production spaces, and automating production
Upgrading transformer equipment	Switching over to highly efficient receiving and transformer equipment
Adjusting utilization of transformer equipment	Integrating transformers, reducing electricity consumption from equipment on standby, and switching equipment off when not in use
Upgrading air conditioning equipment	Improving cooling efficiency and streamlining equipment footprint through replacement of cooling and refrigeration equipment, reducing power consumption by replacing motors
Adjusting air conditioning usage	Optimizing temperature and humidity settings and scheduling usage periods
Reducing heat dissipation and heat absorption loss	Insulating piping and exterior walls, optimizing heat exchangers, integrating piping and bypasses
Adjusting building facilities	Upgrading to insulating window glass and energy-saving elevators
Conserving energy in lighting	Switching over to LED lights, adjusting the spacing of lights, and adjusting brightness
Conserving energy in vacuums and compressed air equipment	Switching over to highly efficient pumps, adopting bypassing for piping, optimizing pressure, and optimizing pump operation controls
Adjusting water usage	Improving the efficiency of water pumps installed in receiving tanks and optimizing piping
Upgrading company vehicles	Purchase environmentally friendly vehicles (electric vehicles, fuel cell vehicles, etc.)
Improving driving practices for company vehicles	Achieving energy-efficient driving through training to optimize driving styles and making use of driving recorder analysis

● Improving Product Development Efficiency

By continuing to strive for further improvement and evolution in the core technologies that underpin our *Monodzukuri* (manufacturing) operations, the Nikon Group is able to enhance the efficiency of development and production operations and raise quality standards. In turn, we also reduce our environmental impact by achieving reductions in energy consumption and the generation of waste.

Optical technologies, one of the core technologies of the Nikon Group, is supported by optical glass with high performance and quality. The development and manufacturing processes for optical glass use high temperatures from melting furnaces and require repeated experiments, which leads to high energy consumption and a large amount of waste. Therefore, the Nikon Group has focused on quality engineering methods to achieve significant efficiency gains in the development and manufacturing processes for optical glass, improving evaluation methods, using simulations to reduce the number of experiments, shortening lead times, and improving the accuracy of stamping (metalworking).

As a result, the Nikon Group reduced energy consumption, greenhouse gas emissions, and waste emissions, leading to a greatly reduced impact on the environment. The simulations and technical data established in these measures have been applied and extended to the development and manufacturing processes of other lens materials, thereby helping to further reduce environmental impact.

● Initiatives for Commuting and Company Vehicles

All Nikon Group business facilities are making efforts to adopt fuel-efficient, environmentally friendly vehicles, such as hybrid cars, as company vehicles.

Many business facilities are also working to mitigate environmental impact of employee commuting, through means like encouraging employees to utilize car sharing, cycle to work, and actively use public transport.

CO₂ Emissions from Non-Energy Consumption and Other Greenhouse Gas Emissions and Reduction Measures

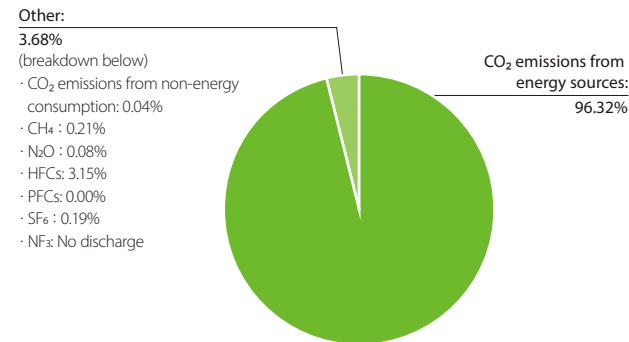
For fiscal year 2024, CO₂ emissions from non-energy sources^{*1} and other greenhouse gases^{*2} totaled 2,623t-CO₂e, accounting for 3.7% of the greenhouse gases emitted by Nikon and Group manufacturing companies. Of these gases, HFCs contained in detergents used in the manufacturing process constituted the largest category at 3.2%.

The Nikon Group is working to establish alternative technologies while implementing chemical substance management thoroughly in accordance with the Hazardous Chemical Substance Guideline in order to reduce CO₂ emissions from non-energy sources and other greenhouse gases.

*1 CO₂ emissions from non-energy sources: CO₂ generated by fire extinguishers, sprays, waste incineration, etc.

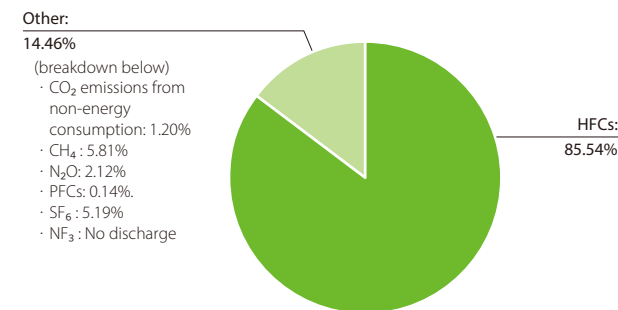
*2 Other greenhouse gas: CH₄, N₂O, HFCs, PFCs, SF₆, NF₃

● Breakdown of Greenhouse Gas Emissions from Nikon and Group Manufacturing Companies◆



◆: Values in Data Index assured by a third party

● Breakdown of CO₂ Emissions from Non-Energy Consumption and Other Greenhouse Gas Emissions◆



◆: Values in Data Index assured by a third party

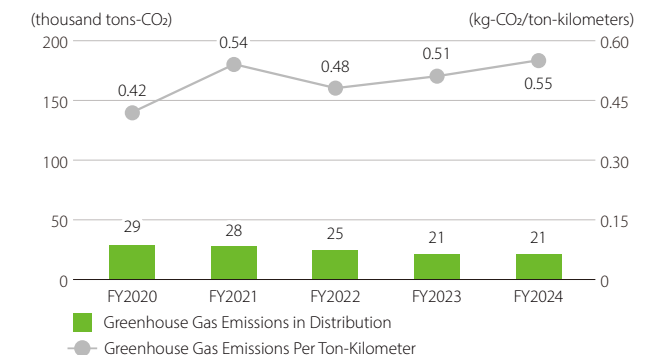
Reducing Logistics Greenhouse Gas (GHG) Emissions

Visualizing Logistics GHG Emissions

Nikon products are manufactured mainly in Asia and sold worldwide. Based on this structure, we visualize transportation routes, cargo volume, and GHG emissions, striving to reduce emissions.

In fiscal year 2024, GHG emissions for domestic transportation amounted to 531t-CO₂ and 20,406t-CO₂ for international trading, including transportation within foreign country borders. The Nikon Group achieved a 1.5% year-on-year reduction in emissions, compared to the target of 2.7%

● Logistics GHG Emissions in Japan, Internationally, and outside Japan



Use of SAF in Air Cargo Transportation

In fiscal year 2024, we began using sustainable aviation fuel (SAF) in air cargo transportation as a new initiative. SAF is a sustainable aviation fuel produced from biomass, such as waste cooking oil and sugar cane, as well as municipal waste and waste plastics.

Nikon, Nippon Express, and ANA entered into a three-way agreement for air export flights between September and December 2024, leveraging a subsidy program offered by the Tokyo Metropolitan Government. We intend to use this arrangement actively in the next fiscal year and beyond.

Promotion of Modal Shifts

The Nikon Group initiates modal shifts* to reduce environmental impact, shifting the main mode of transportation from air and trucks to marine, rail, and ferry transport.

In fiscal year 2024, subsidiary Tochigi Nikon Corporation reviewed its land transportation mode to the Port of Tokyo for ocean-bound cargo, and conducted a trial to switch from trucks to rail in January 2025. We expect the modal shift to reduce CO₂ emissions by approximately 0.9 tons per year.

* Modal shift: This term is normally used to refer to shifting the transportation mode in order to reduce the impact on the environment.

Environmentally Friendly Transportation

As well as gradually shifting over to the use of environmentally-friendly vehicles with low fuel consumption for delivery trucks, etc., the Nikon Group is also working to promote eco-driving (fuel-efficient driving) by having drivers attend regular seminars on eco-driving sponsored by the Japan Trucking Association.

We are also reducing the number of trucks used in

domestic transportation for exports from our warehouses. We accomplish this goal by improving loading efficiency through the selection of optimal packing boxes based on volume calculations and by consolidating shipments from different business units.

● Switching to Ferries for Domestic Transportation

