

# Environment

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# Promotion of Strategic Environmental Management

## Policy

The Meiden Group ensures that each employee contributes to the protection of the global environment and the creation of a prosperous society through their day-to-day work according to the President's Environmental Policy, and promotes sustainability management to achieve sustainable growth of society and improved corporate value.

## The President's Environmental Policy

### 1. Basic Policy

The Meiden Group aims to engage in sustainability management and achieve corporate growth based on the corporate philosophies of "Illuminating a more affluent tomorrow" and "For customer peace of mind and satisfaction" by tackling the issues of adapting to and mitigating climate change, recycling resources, and preserving biodiversity, in order to realize a sustainable society.

### 2. Action Guidelines

1. We promote the development of new products and innovative technologies that contribute to the global environment and strive to develop, design, manufacture, and actively increase sales of environmentally conscious products by conducting environmental impact evaluation for the entire lifecycle of our products, from initial material procurement to final disposal.
2. In order to achieve reductions in our greenhouse gas emissions towards our goal of becoming carbon neutral, we strive to promote initiatives that conserve the environment in our business activities at home and abroad, such as:
  - Reduction and proper management of harmful components
  - Promote waste recycling
  - Conserve water resources
  - Implement renewable energy
  - Promote energy conservation
  - Electrify equipment powered by fossil fuels
3. Eliminate banned materials, prevent contamination, and protect the environment and comply with all laws, regulations, rules and other requisite matters related to the environment.

4. While promoting sustainability management, we strive to maintain and improve it through the PDCA (Plan-Do-Check-Act) Cycle and we aim to improve our environmental performance.
5. We strive to improve all our employees' understanding of sustainability management and invigorate and promote active participation in environmental contribution activities through environmental education.

Revised April 1, 2025

## Environmental Vision

The Meiden Group is working to reduce the environmental impact of its business activities in four areas: Power Infrastructures, Public, Industrial & Commercial Sector Business, Mobility & Electrical Components Business, and Field Service Engineering.

Specifically, we provide value in the form of “realizing green, safe, and stable electricity provision” in the field of Power Infrastructures; “contributing to building sustainable infrastructure” in the area of Public, Industrial & Commercial Sector Business; “contributing to the realization of cutting-edge technology and technological innovation for mobility” in the area of Mobility & Electrical Components Business; and “realizing a secure and safe society through maintenance services” in the area of Field Service Engineering Business.

The Environmental Vision identifies realization of “a carbon-free society,” “a circulating society,” and “a society in harmony with nature” as the missions of a 21st-century company, and lists them as goals. We are working to conduct sustainability management with “human resources and communication” at its core.



## Activities to Realize Our Environmental Vision

### A. Working Toward the Realization of a Carbon-free Society

#### < Reducing greenhouse gas emissions >

- Reduce greenhouse gas emissions from business activities
- Contribute to customers' efforts to become carbon-free through our products and services

### B. Working Toward the Realization of a Recycling Society

#### < Promoting the 3Rs >

- Promote re-use of resources and water in business activities
- Contribute to construction of sustainable infrastructure through business

### C. Working Toward the Realization of a Society in Harmony with Nature

#### < Conservation of natural resources >

- Use land in an environmentally considerate manner, minimize impact on ecosystems, and preserve biodiversity
- Prevent contamination by harmful chemicals and ensure water safety

### D. HR and Communication

#### < Professional development and communication >

- Improve environmental literacy to promote research, development, and manufacturing
- Promote two-way communication and collaboration with stakeholders

Strategy

## The Meiden Group's Medium to Long-term Environmental Targets

### FY2030 Greenhouse Gas Emissions Reduction Targets (Third Meiden Environmental Vision)

In November 2021, the Meiden Group declared its long-term goal of achieving carbon neutrality by 2050. We also established our FY2030 greenhouse gas emission reduction targets as our medium-term goal. That same year we announced the Second Meiden Environmental Vision, which was recognized by the Science Based Targets (SBT) initiative<sup>\*1</sup> as being consistent with the Paris Agreement<sup>\*2</sup>. Stringent, ambitious targets were set in 2025 that aimed for a 50% reduction of emissions from business activities (Scope 1+2), and a 30% reduction of emissions from business-related activities (Scope 3) by FY2030

compared to FY2019 levels (the Third Meiden Environmental Vision). These targets renewed our SBT certification as they were recognized by the SBT initiative with the 1.5°C standard.

FY2030 greenhouse gas emissions reduction targets	First Meiden Environmental Vision (Enacted in FY2018)	Second Meiden Environmental Vision (Enacted in FY2021)	Third Meiden Environmental Vision (Enacted in FY2025)
Emissions from business activities (scope 1+2)	30% reduction (compared to FY2017)	30% reduction (compared to FY2019)	50% reduction (compared to FY2019)
Emissions from business-related activities (Scope 3)	NA	15% reduction (compared to FY2019) (Category 11)	30% reduction (compared to FY2019) (All categories)



\*1 SBT Initiative: An international initiative by the United Nations Global Compact (UNGC), the Worldwide Fund for Nature (WWF), the CDP, and the World Resources Institute (WRI).

\*2 Paris Agreement: An international framework "to limit average global temperature rise to well below 2°C compared to pre-industrial levels and to strive to limit it to 1.5°C," which was adopted at COP21 in 2015.

SBT certification (PDF:132KB)  >

## Major Initiatives to Achieve Greenhouse Gas Emission Reduction Targets

### ◆ Main Measures to Cut Greenhouse Gas Emissions

FY2030 greenhouse gas emissions reduction targets	Reduction measures (extract)
Emissions from business activities (scope 1+2) 50% reduction (compared to FY2019)	<ul style="list-style-type: none"> <li>Replacing SF<sub>6</sub> gas (replacing with dry air, etc.)</li> <li>Capital investment (replacing aging equipment, introducing high-efficiency equipment, replacing gas with electricity, etc.)</li> <li>Procurement of renewable energy power (non-fossil fuel certificate, power menus, etc.)</li> <li>Switching company-owned cars to electric vehicles</li> </ul>
Emissions from product use (scope 3, category 11) 30% reduction (compared to FY2019)	<ul style="list-style-type: none"> <li>Supply chain engagement (Scope 3 calculation assistance)</li> <li>Eco-friendly product design (eliminating use of SF<sub>6</sub> gas, and downsizing products and making them more efficient) 3 elements of green products</li> <li>Promoting LCA activities</li> </ul>
Overall	<ul style="list-style-type: none"> <li>Generating innovation</li> <li>Promoting internal carbon pricing</li> </ul>

## ◆ Transition plan for becoming carbon neutral

Emissions category	GHG reduction measures	FY2024	FY2025	FY2026	FY2027	FY2028-2030
Emissions from business activities (Scope 1, 2)	Replacing SF <sub>6</sub> gas (replacement with dry air, etc.)		Electric testing	SF <sub>6</sub> gas-free (drying)		
	Capex		Toprunner transformers (power receiving and transforming equipment)			
			Update older equipment (Use LED lighting, update air conditioning)			
			Improved energy efficiency (heat pumps)			Utilize low temperature heat sources
				Factory energy management systems		
Emissions from other companies involved in business activities (Scope 3)				Electric boilers, Non-CO <sub>2</sub> boilers		
	Renewable energy procurement (non-fossil fuel certificate, power menu, etc.)		Procure renewable energy and partially use solar at Tokyo, Numazu, Ota, and Kofu			
			Procure renewable energy at Nagoya			
			Affiliated companies within Japan			
		Use solar energy in the USA and Vietnam	Procure renewable energy and partially use solar at overseas factory sites			Affiliated overseas companies
Emissions from other companies involved in business activities (Scope 3)	Switching company-owned cars to electric vehicles	Gradually acquire EVs/hybrids		Entire fleet EVs/hybrids		Freight, etc.
	Supplier support			Supply chain engagement (Scope 3 calculation assistance)		
	Eco-friendly product design			Compact, high-efficiency		
				SF <sub>6</sub> gas-free		
			Three elements of green products (reduce GHGs, promote the 3Rs, and eliminate hazardous substances)			
				Promote LCA activities		

## Promotion of Ongoing Activities

We have developed an action plan for each Medium-term Management Plan and we are continuously working to conduct reforms in order to realize the environmental vision.

## Deployment to the Action Plans



## Medium-term Management Plan, and Action Plan for FY2025-2027

Strategic Target	Actions	Corresponding Environmental Vision
1. Contribute to environment through products and services	1) Expand businesses that contribute to the environment	A. A Carbon-free Society
		A. A Carbon-free Society
	2) Promote environmentally conscious design	B. A Circulating Society
		C. A Society in Harmony with Nature
	3) Manage chemicals in products	C. A Society in Harmony with Nature
2. Reduce the environment impact of business operation	4) Promote the 3Rs of product components	B. A Circulating Society
	1) Reduce greenhouse gas emissions	A. A Carbon-free Society
	2) Manage chemicals properly	C. A Society in Harmony with Nature
	3) Promote the 3Rs (reduce, reuse, recycle)	B. A Circulating Society



Strategic Target	Actions	Corresponding Environmental Vision
	4) Maintain water resources	B. A Circulating Society
		C. A Society in Harmony with Nature
	5) Conserving biodiversity	C. A Society in Harmony with Nature
3. Promote environmental communication	1) Disclose information, conduct PR	A. A Carbon-free Society
		B. A Circulating Society
		C. A Society in Harmony with Nature
		D. Human Resources and Communication
	2) Contribute to sustainable society	A. A Carbon-free Society
		B. A Circulating Society
4. Promote environmental management	1) Strengthen management of Meiden Group companies	D. Human Resources and Communication
	2) Strengthen value chain management	D. Human Resources and Communication
5. Reform environmental awareness	1) Develop environmental management personnel	D. Human Resources and Communication
	2) Strengthen environmental training and awareness-raising activities	D. Human Resources and Communication

#### Results Data

## FY2024 Environmental Targets and Results

The level of achievement for targets in FY2024, the final year of Medium-term Management Plan 2024, is as follows.

Please refer to the corresponding page for details of each item.

### Achievement of 2024 Environmental Targets

Rating: ☆☆☆ = target achieved, ☆☆ = improvement over previous year, ☆ = work in progress

Strategic Targets	Actions	FY2024 Environmental Targets (Japan)	FY2024 Results	Rating
Contribute to environment through products and services	Promote environmentally conscious design	GHG reduction contribution by ECBs: 10,000,000 tons	4410,000 tons	☆
		Promote Scope 3, category 11 reductions: -6% (compared to. FY2019)	-11%	☆☆☆
Reduce the environmental impact of business operations	Reduce greenhouse gas emissions	Japan: Total emissions (Scope 1+2): -10% (compared to FY2019)	-25%(compared to FY2019)	☆☆☆
		Overseas <sup>*1</sup> : Total emissions (scope 1+2): -4% (compared to FY2019)	+19% (compared to FY2019)	☆
		Consolidated: Total emissions (Scope 1+2): -6% (compared to FY2019)	-15%	☆☆☆

		Renewable Energy Adoption Rate: 40% Domestically	41%	☆☆☆
	Manage chemicals properly	VOC emissions: 70 tons or less	71 tons	☆
	Promote the 3Rs	Total waste reduction: 1% (compared to the previous fiscal year) All sites in Japan (excludes Construction Service Business Units)	-12% (compared to the previous fiscal year)	☆☆☆
		Zero waste emissions* <sup>2</sup> at 10 sites* <sup>3</sup> : Maintain recycling rate at about 90% : 1% or less final waste emissions	Recycling rate: 91.3% Final disposal rate: 1.7%	☆☆
	Conserve water resources	1% reduction in water use (compared to the previous fiscal year) : 4 main manufacturing sites* <sup>4</sup>	Increased 0.4% compared to the previous fiscal year	☆
	Conserve biodiversity	Conservation of ecosystems in green spaces (elimination of introduced species, Nationally Certified Sustainably Managed Natural Site certification): 4 main manufacturing sites* <sup>4</sup>	Confirmed the condition of green spaces and biotope management, undergrowth removal and extermination of designated invasive species, nature observation meetings	☆☆☆
Promote environmental management	Strengthen value chain management	Green procurement rate (own standards): 90% or greater	90%	☆☆☆

\*1 Main overseas production sites

\*2 The Meiden Group's definition of zero waste emissions: Recycle at least 99% of total output (excluding construction sludge) of waste, etc. (industrial waste, ordinary waste, and valuables).

\*3 Scope of zero waste emissions initiatives: manufacturing sites in Japan [Numazu Works, Ota Works, Nagoya Works, KOFU MEIDENSHA ELECTRIC MFG. CO., LTD., MEIDEN CHEMICAL CO., LTD. (Sagami Works), MEIDEN HOKUTO CORPORATION (Atsugi Works)], EAML Engineering CO., LTD., Engineering Service Business Units and two Construction Service Business Units

\*4 Four main sites: Numazu Works, Ota Works Development and Laboratory, Nagoya Works, and KOFU MEIDENSHA ELECTRIC MFG. CO., LTD.

#### Targets

## FY2025 Environmental Targets

At the Meiden Group, we formulated Medium-term Management Plan 2027 to cover the three years from fiscal 2025 and we are working to implement sustainability management.

In particular, we have developed greenhouse gas emissions reduction targets for the next three years by back-casting based on the fiscal 2030 greenhouse gas emissions reduction targets in the Third Meiden Environmental Vision.

Our environmental targets for FY2025 are as follows. We changed the target for the zero waste emissions standard to a resource reclamation rate of 90% or greater.

#### FY2025 Environmental Targets

Strategic Targets	Actions	FY2025 Environmental Targets (Japan)
Contribute to environment through products and services	Promote environmentally conscious design	9.0 million-ton reduction in GHG emissions by Environment-Contributing Businesses* <sup>1</sup>
		Scope 3, category 11: Improve reduction policies in Business groups Scope 3, category 1: Formulate a system and establish standards

Reduce the environmental impact of business operations	Reduce greenhouse gas emissions	Japan: Total emissions (scope 1+2): -40% (compared to FY2019)
		Overseas: Total emissions (scope 1+2): 0% (compared to FY2019)
		Consolidated: Total emissions (Scope 1+2): -30% (compared to FY2019)
		Japan: Rate of renewable energy implementation: 70%
		Overseas: Rate of renewable energy implementation: 20%
	Manage chemicals properly	VOC emissions: 65 tons or less
	Promote the 3Rs	Total waste: -1% (compared to previous fiscal year): All sites in Japan (excluding Construction Business Unit)
		Recycling rate: 90% or greater <sup>*2</sup>
	Conserve water resources	Reduce water withdrawals 3% (compared to FY2023) <sup>*3</sup>
	Conserve biodiversity	Conservation of ecosystems in green spaces (elimination of introduced species, Nationally Certified Sustainably Managed Natural Site certification, etc.): 4 main manufacturing sites <sup>*3</sup>
Promote environmental management	Strengthen value chain management	Green procurement rate (own standards): 90% or greater

\*1 Direct or indirect GHG reductions (estimated) from replacing standard products and services with the Meiden Group's products and services (revised calculation method from FY2022)

\*2 Main manufacturing sites (Japan): Numazu Works, Ota Works, Nagoya Works, Plant Construction & Engineering Business Group, KOFU MEIDENSHA ELECTRIC MFG. CO., LTD., MEIDEN CHEMICAL CO., LTD., MEIDEN HOKUTO CORPORATION, MEIDEN ENGINEERING CORPORATION, MEIDEN PLANT SYSTEMS CORPORATION, EAML Engineering CO., LTD.

\*3 Four main manufacturing sites: Numazu Works, Ota Works, Nagoya Works, and KOFU MEIDENSHA ELECTRIC MFG. CO., LTD.

# Environmental Management

## Policy

The Meiden Group is promoting environmental management that brings together business strategy and environmental activities.

We continually improve our environmental management system as we evaluate its adaptability and effectiveness.

## Organization

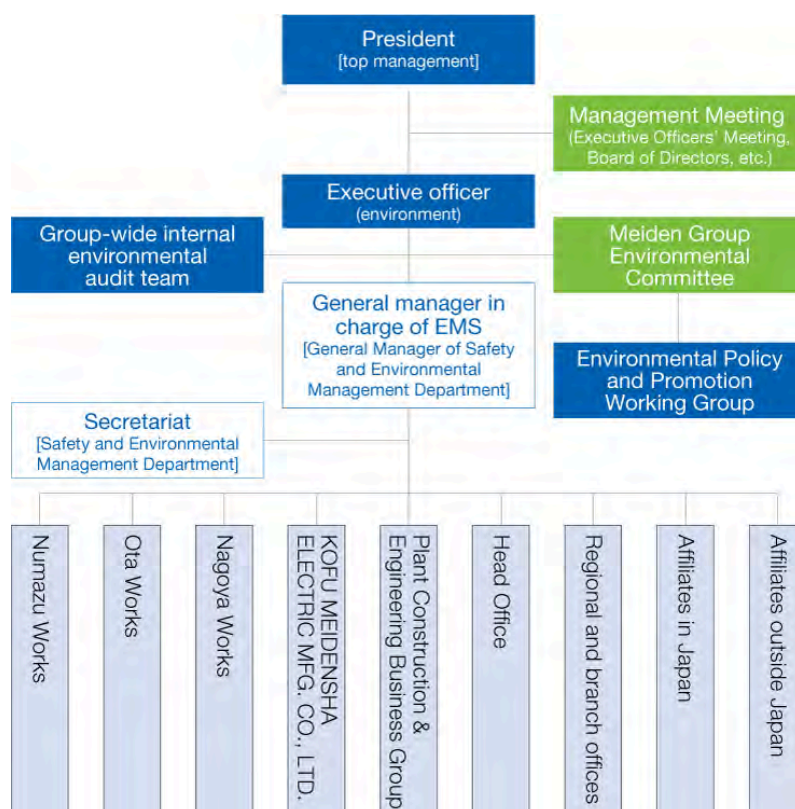
### Environmental Management Promotion Organization

Under the leadership of the President, who is our chief executive officer, the executive officer (environment) oversees the environment management of the Meiden Group overall, while the general manager (GM) in charge of EMS works to maintain and improve the environmental management system (EMS).

In addition, our Group-Wide internal environmental audit team, an independent organization, audits environmental management initiatives, legal compliance, EMS effectiveness, and more, and offers ideas for improvement.

The executive officer (environment) chairs the Meiden Group Environmental Committee (MGEC), our highest decision-making body for environmental initiatives. The MGEC identifies issues to address, including risks relating to climate change and the like, sets environmental targets and formulates action plans, conducts management reviews, responds to emergency situations, reviews and reports on environmental measures and working groups (WGs), and sets environmental management policy directions.

For the most important issues, the executive officer (environment) and GM in charge of EMS consult with the Executive Officers' Meeting, Board of Directors, and the like as needed and then act as decided by top management.



Council	Objective/overview
Management Meeting	Taking account of internal and external issues, it sets the business direction and strategy of the Meiden Group as a medium-term management plan and annual profit plan.
Meiden Group Environmental Committee	Its objective is to set a unified environmental policy for the Meiden Group overall and smoothly operate an environmental management system, following the Meiden Group Environmental Health and Safety Management System Manual.
Environmental Policy and Promotion Working Group	It establishes working groups to conduct a detailed review of individual environmental issues.

## Responding to Environmental Risks and Opportunities

Phenomena (issues) related to environment		Risks	Opportunities	Carrying out initiatives
Government (political) Laws and Regulations	<ul style="list-style-type: none"> <li>Carbon neutrality and mitigation and adaptability to climate change</li> <li>GX growth strategy</li> <li>Maintaining energy supply</li> <li>Support for prior investment by Japanese government, and carbon pricing</li> <li>The Sixth Basic Environment Plan</li> <li>The 7th Strategic Energy Plan</li> </ul>	<ul style="list-style-type: none"> <li>Bearing the cost of emissions trading</li> <li>Sudden jumps in fuel and material prices</li> <li>Energy supply and demand failure</li> <li>Emergence of competitors</li> <li>Increased competitiveness from other companies</li> <li>Insufficient energy supply</li> </ul>	<ul style="list-style-type: none"> <li>Increased demand for eco-friendly products</li> <li>Increased competitiveness in GX-related products and businesses</li> <li>New energy, renewable energy, and VPP market expansion</li> <li>Expansion of the decarbonized energy market</li> </ul>	<ul style="list-style-type: none"> <li>Increasing contribution of products and services to the environment</li> <li>Reducing the environmental impact of business activities</li> <li>Promoting environmental management</li> </ul>
Economy	<ul style="list-style-type: none"> <li>Automobile electrification and digitalization</li> </ul>	<ul style="list-style-type: none"> <li>Sudden jumps in fuel and material prices</li> </ul>	<ul style="list-style-type: none"> <li>Expanded EV motor/inverter market</li> </ul>	<ul style="list-style-type: none"> <li>Expanding products' contribution to the environment</li> </ul>

Phenomena (issues) related to environment		Risks	Opportunities	Carrying out initiatives
	<ul style="list-style-type: none"> <li>Fluctuating energy prices</li> <li>Exchange rate fluctuations</li> <li>Compliance with CDP, SBT, EU taxonomy, etc.</li> <li>Strengthening the value chain</li> <li>Medium- to long-term economic growth of developing countries</li> </ul>	<ul style="list-style-type: none"> <li>Decrease in profit due to inflation</li> <li>Withdrawal of investment if perceived as reluctant to decarbonize</li> <li>Reduced investment in environmental management</li> <li>Compliance at overseas locations</li> <li>Zero value chain CO<sub>2</sub> emissions in the future</li> </ul>	<ul style="list-style-type: none"> <li>Trust and recognition from stakeholders</li> <li>Investment in growth (overseas markets)</li> <li>Increased international competitiveness</li> <li>Increased corporate value through information disclosure</li> <li>Capital investment to conserve energy</li> <li>Accelerating improvement of operational efficiency</li> </ul>	<ul style="list-style-type: none"> <li>Countermeasures to procurement risks</li> <li>Coordination of environmental initiatives at overseas production sites</li> <li>Promoting environmental communication</li> <li>Promoting environmental management</li> <li>Reducing the environmental impact of business activities</li> </ul>
Society	<ul style="list-style-type: none"> <li>Adoption of Sustainable Development Goals (SDGs)</li> <li>Responding to resource circulation</li> <li>Environmental initiatives directed at value chain</li> <li>Disclosure of information on water risk countermeasures</li> <li>Lifestyle changes (ecology-oriented)</li> </ul>	<ul style="list-style-type: none"> <li>Decline of corporate value</li> <li>Decline of employee awareness</li> <li>Increasing reputation risk, risk of lawsuits</li> <li>Value chain risk (legal violations, use of prohibited chemicals, etc.)</li> <li>Increased costs due to utilization of recycled materials</li> <li>Increased flooding, water shortages, water pollution</li> </ul>	<ul style="list-style-type: none"> <li>Increased corporate sustainability</li> <li>Increased employee awareness, employees facing the same direction</li> <li>Trust and recognition from stakeholders</li> <li>Reduced costs due to decreased reliance on scarce resources, and reduced emissions</li> </ul>	<ul style="list-style-type: none"> <li>Building an appealing company image</li> <li>Transforming environmental awareness</li> <li>Promoting environmentally considerate design</li> <li>Promoting environmental communication</li> <li>Strengthening value chain management</li> <li>Conservation of water resources</li> <li>Diversification of recruitment methods</li> <li>Responding to compact cities</li> </ul>
Technology	<ul style="list-style-type: none"> <li>Making eco-friendly products more compact and efficient</li> <li>Advancement of ICT and IoT technologies, acceleration of DX</li> <li>High-efficiency power transformer technology</li> </ul>	<ul style="list-style-type: none"> <li>Increased new players (IT companies)</li> </ul>	<ul style="list-style-type: none"> <li>Increased demand for eco-friendly products</li> <li>Utilizing ICT and IoT and strengthening system technologies and product capabilities</li> <li>Enhanced rollout of one-stop services</li> </ul>	<ul style="list-style-type: none"> <li>Expanding products' contribution to the environment</li> </ul>
Legal Restrictions	<ul style="list-style-type: none"> <li>Failure to comply with overseas laws</li> <li>Tightened overseas environmental regulations</li> <li>Chemical regulations based on autonomous management</li> <li>Promoting 3Rs with products</li> <li>Fourth basic recycling plan</li> </ul>	<ul style="list-style-type: none"> <li>Penalties and loss of reputation due to non-compliance with overseas laws</li> <li>Work environment deterioration and occupational illnesses due to incomplete risk management</li> <li>Increased cost of virgin materials</li> </ul>	<ul style="list-style-type: none"> <li>Utilization of recycled materials</li> <li>Thorough chemical risk assessment</li> <li>Utilization of recycled materials</li> </ul>	<ul style="list-style-type: none"> <li>Promoting environmental management</li> <li>Coordination of environmental initiatives with overseas locations</li> <li>Stronger management of chemicals in products</li> <li>Proper management of chemicals</li> <li>Communicating information on hazards and toxicity, conducting risk assessments, managing concentration standards, using protective eyewear, protective gloves, etc.</li> <li>Promoting environmentally considerate design</li> </ul>

Phenomena (issues) related to environment		Risks	Opportunities	Carrying out initiatives
Natural Environment	<ul style="list-style-type: none"> <li>Large-scale disasters</li> <li>Ecosystem abnormalities</li> <li>Temperature and precipitation volume changes, abnormal weather</li> <li>Depletion of resources</li> <li>Microplastics issues</li> <li>Occurrence of disasters</li> <li>Promoting 3Rs with products</li> </ul>	<ul style="list-style-type: none"> <li>Business continuity</li> <li>Increasing reputation risk, risk of lawsuits</li> <li>Utilization of biodegradable plastics</li> <li>Disrupted value chain due to flood, etc.</li> </ul>	<ul style="list-style-type: none"> <li>Expanding sales of products as countermeasures for locally heavy rainfall</li> <li>Conducting community contribution initiatives, enhancing corporate value</li> <li>Increasing demand in water business due to water risks</li> <li>Utilization of recycled materials and promotion of the 3Rs for products</li> </ul>	<ul style="list-style-type: none"> <li>Promoting environmental communication</li> <li>Promoting environmentally considerate design</li> <li>Contributing to environment through products and services</li> </ul>

## ISO 14001 Certification Status (as of March 31, 2025)

We are expanding the scope of bodies certified under ISO 14001, the international standard for environmental management systems. All 22 manufacturing sites in Japan and overseas have finished earning certification.

Certification Status in Japan (numbers in parentheses indicate the number of manufacturing sites)

Company Name		Date of Certification Acquisition
1	MEIDENSHA CORPORATION* (3)	February 24, 1998
2	KOFU MEIDENSHA ELECTRIC MFG. CO., LTD.* (1)	
3	MEIDEN SYSTEM MANUFACTURING CORPORATION* (1)	
4	MEIDEN KIDEN KOGYO CO., LTD.* (1)	
5	MEIDEN KOHSAN CO., LTD.	
6	MEIDEN SYSTEM SOLUTIONS CORPORATION	
7	MEIDEN PLANT SYSTEMS CORPORATION* (1)	
8	M WINDS CO., LTD.	
9	MEIDEN UNIVERSAL SERVICE LTD.	
10	MEIDEN AQUA BUSINESS COMPANY	
11	MEIDEN TECHNO SYSTEMS CO., LTD.* (1)	
12	MEIDEN MASTER PARTNERS CORPORATION	
13	MEIDEN ENGINEERING CORPORATION	July 31, 2003
14	MEIDEN CHEMICAL CO., LTD.* (2)	November 20, 2012
15	MEIDEN FACILITY SERVICE CORPORATION	November 18, 2015
16	MEIDEN HOKUTO CORPORATION*(1)	October 3, 2013
17	EAML Engineering CO., LTD.* (1)	March 5, 2004
18	MEIDEN NANOPROCESS INNOVATIONS, INC.* (1)	January 12, 2022

\* Companies with manufacturing plants

## Certification Status Overseas (nine manufacturing sites only)

Company Name		Area	Date of Certification Acquisition
1	MEIDEN ZHENGZHOU ELECTRIC CO., LTD.*	Zhengzhou, China	October 9, 2013
2	MEIDEN HANGZHOU DRIVE SYSTEMS CO., LTD.*	Hangzhou, China	April 7, 2008
3	MEIDEN (HANGZHOU) DRIVE TECHNOLOGY CO., LTD.*	Hangzhou, China	November 14, 2023
4	MEIDEN T&D(INDIA) LIMITED *	India	January 26, 2015
5	MEIDEN METAL ENGINEERING SDN.BHD.*	Malaysia	October 9, 2014
6	MEIDEN SINGAPORE PTE. LTD.*	Singapore	February 8, 2010

\* Company with manufacturing plants

Subject locations within Group and percentage of those certified



### Initiatives

## Internal Environmental Audits

We conduct internal environmental audits separate from the external audits we get from ISO 14001 registrars. Internal audits confirm the state of improvement on concerns pointed out in external audits and check up on audit items that are marked as priorities for that fiscal year.

In FY2023, our audits prioritized “environmental factors and evaluating environmental impact,” “matters related to the establishment, analysis, and evaluation of environmental targets,” “checks of compliance obligation initiatives,” “improving human resources,” and “legal requirements (laws on waste disposal and public cleansing and laws on curbing fluorocarbon emissions).” We determined that the Group was conforming to ISO 14001:2015 requirements overall and functioning effectively.

Additionally, we surveyed the state of our overseas manufacturing sites to examine applicable environmental improvement measures.

If any concerns are pointed out during internal environmental audits, we take them as an opportunity for improvement and incorporate them into further improvement initiatives.

## Environmental Information Management System

The Meiden Group uses an “environmental information management system” that we put in place to manage and analyze environmental impact in our business activities.



The system collects and centrally manages information on environmental impact of business activities (such as automotive fuel, energy, waste, chemical substances, and water use) at Meiden Group manufacturing sites and offices, even those outside Japan.

The information so collected is used as basic data for efforts to lower environmental impact. It is also useful to ensure proper filings of information as required by the Act on Rationalizing Energy Use and Shifting to Non-fossil Energy, Act on Promotion of Global Warming Countermeasures, the electrical and electronic equipment industry's "Carbon Neutrality Action Plan," and Japanese PRTR system for reporting chemical releases and transfers.



Analysis of environmental impact with environmental information management system

## Compliance with Environmental Regulations

Each Meiden Group work site and affiliated company sets and follows voluntary standards stricter than applicable laws and regulations. This ensures we remain in legal compliance. If a legal violation or incident does occur, our rules state that management shall be notified.

In FY2024, there was one incident involving standard values being exceeded and one incident of unprocessed wastewater entering a river. There were no serious violations of environmental laws or regulations (including water intake, wastewater, other waste, and harmful chemicals). We did not receive any complaints regarding noise or odor.

### Results Data

#### Incidents relating to voluntary standards cases

	Date	Location	Content	Response measures, etc.
1	February 2024	Work site	During a centralized response test, a signal to open the bypass valve during operations was forcibly sent via a test computer, which opened the valve and released untreated wastewater into a river (for 5 minutes).	We reported to the relevant authorities that we believe some standard values for living conditions were exceeded during the 5 minutes the gate was open,, but that harmful substances as set forth in the Water Pollution Prevention Act were not released. The department tasked with enforcing the Water Pollution Prevention Act did not issue administrative orders and we confirmed that our customer was operating normally.
2	November 2024	Numazu Works	A periodic wastewater analysis returned concentrations of dissolved ferrous iron (Fe) in a final discharge outlet that exceeded the value set with Numazu City.	We reported the results to the Numazu Environmental Policy Division, but it was determined that it did not present an issue because, even though the value exceeded the

	Date	Location	Content	Response measures, etc.
			In the construction of a new septic tank on the southeast side of Works 7, wastewater was continually pumped up and discharged, and the ground water was confirmed to contain high iron levels.	predetermined value, it was low relative to the legal value and the cause was known. We were instructed to watch for any changes in the situation and for any discoloration, etc., in the water, and we are currently observing the discharge.

#### Breaches of Environmental Laws (Record)

FY2022	FY2023	FY2024
0	1	0

#### Environmental Fines (Record)

FY2022	FY2023	FY2024
0	0	0

## Environmental Accounting (FY2024)

We quantify costs, etc., relating to environmental activities, with reference to the Ministry of the Environment's "Environmental Accounting Guidelines 2005."

#### Environmental Protection Costs

		Investment (million yen)
Business area costs	Implementation of new energy-saving devices, etc.	3,658
R&D costs	R&D costs for environmentally conscious products, etc.	10,364

\* Scope of calculation: Meidensha (non-consolidated); period covered: April 2024–March 2025

#### Environmental Liabilities

		Liabilities (millions of yen)
PCB waste processing costs	Costs associated with processing PCB waste held by Meidensha	8

\* Scope: Meidensha (non-consolidated); period: April 2024–March 2025

\* We have established a reserve fund for anticipated future environmental liabilities in an amount that can be reasonably estimated as of March 31, 2025.

## Active Participation in Industry Groups Working to Address Climate Change

The Meiden Group actively participates in the following industry groups and has declared our intention to decarbonize. The Meiden Group sees no disagreement or contradiction between its policies and

directions on environmental issues and the policies and directions of these industry groups, and we are committed to furthering the initiatives of each.

- Ministry of the Environment Green Value Chain Platform Promotion Network
- JEMA Global Environmental Protection Committee
- JEMA Global Environmental Protection Steering Committee
- JEMA Product LCA Expert Committee
- JEMA Environmental Value Visualization and Utilization Committee
- Four electrical and electronic industry associations, Environmental Strategy Liaison Committee
- Four electrical and electronic industry associations, Product Chemical Substances Expert Committee
- Four electrical and electronic industry associations, Expert Committee on Measures for Chemical Substances Related to Business Establishments
- Four electrical and electronic industry associations, Expert Committee on Waste and Recycling Measures Related to Business Establishments
- Four electrical and electronic industry associations, Liaison Committee on Global Warming Countermeasures for Electrical and Electronic Equipment

## Third-Party Verification

In order to ensure the release of more accurate and reliable environmental performance data for FY2023, we have been examined by the Japan Audit and Certification Organization for Environment and Quality.

This fiscal year we added a new category for Scope 3. We will continue to examine ways to further expand applicable areas for verification.



Click pics to enlarge.

### Target Items

Amount of greenhouse gas emissions		Scope of calculation	
Scope 1	15,629 t-CO <sub>2</sub>	Scope 1 and 2 greenhouse gas emissions from the business activities of Meidensha and domestic Group companies during the period from April 1, 2024 to March 31, 2025.	
Scope 2	25,536 t-CO <sub>2</sub> (location basis)		
	15,475 t-CO <sub>2</sub> (market basis)		
Scope 3	Category 1-8, 11-13	5,080 kt-CO <sub>2</sub>	Each category emissions (scope of calculation is based on Meidensha's determination) from the business activities of Meidensha during the period from April 1, 2024 to March 31, 2025.
Water	Usage volume (Amount of water purchased and water intake)	1.6982 million m <sup>3</sup>	Water usage volume (amount purchased and amount collected) from the business activities of Meidensha and domestic Group companies during the period from April 1, 2024 to March 31, 2025.
	Discharged water volume	1.8101 million m <sup>3</sup>	Discharged water volume from the business activities of Meidensha and domestic Group companies during the period from April 1, 2024 to March 31, 2025.

## Assessment Standards

JACO certification standards based on ISO 14064-3 and ISAE 3000

ISAE3000: International Standard on Assurance Engagements (ISAE) 3000

ISO14064-3: Specification with guidance for the validation and verification of greenhouse gas assertions

## Product and Service Initiatives (Expand businesses that contribute to the environment)

### Policy

We are actively promoting initiatives that contribute to the environment in order to “realize a more affluent future” by leveraging our technology and experience honed over many years.

### Performance Data

### Contributions to Reducing Product and Service GHG Emissions

The Meiden Group aims to contribute the environment by utilizing renewable energy sources such as solar, wind, and hydroelectric power and by improving the efficiency of its products to reduce energy consumption.

Our FY2024 contribution to reduced GHG emissions was 4.414 million tons per year.

### GHG Reduction Contribution Volume (Former Environmental Contribution Volume)

Subject products / businesses	GHG reduction contribution in FY2024 (10,000 t-CO <sub>2</sub> )	Approach to calculating GHG reduction contribution
Wind power sales business*1	2.8	Emissions curbed if grid power replaced by renewable energy generation
Photovoltaic generation systems	6.4	
Hydro turbine generators (Meidensha)	103.1	
Hydro turbine generators (EAML Engineering)	2.8	
Electric railway regenerative inverters	2.3	Energy reductions from regenerative current
Electric vehicle drive unit	140.0	Emissions curbed if replacing gasoline vehicle of same grade
Control equipment and motors for electric forklifts	170.3	
Cubicle-type dry air insulated switchgear (Eco C-GIS)	0.1	Emissions curbed by not using SF <sub>6</sub> gas
Ecotank type vacuum circuit breakers*2	13.6	
Total	441.4	

\*1 Calculated by multiplying the difference in volume of GHG emissions at the point of use, by the expected life and annual sales volume. However, wind power generation is calculated based on annual power generation performance.

\*2 FY2024 data includes US manufacturing.

## Hydroelectric Power Generation Equipment

Hydroelectric power is a form of renewable energy that enables steady generation of electricity throughout the year. Meidensha has been installing hydroelectric generators since its founding, with generators installed in over 400 hydroelectric plants around the world. In light of our extensive history with hydroelectric power, this field represents a major pillar of our sustainability business because the Meiden Group can offer complete sets of equipment (waterwheels, generators, monitoring systems equipment).

Hydroelectric power generation technology has a long history and we are devising methods to integrate new technologies while also developing technology for the future. We are working on ways to improve generation efficiency via systems that use technology to analyze waterwheel flow while also utilizing AI to optimize generators. We will improve product efficiency by advancing such new technologies.

Hydroelectric power generation is an extremely useful process to both reduce GHG emissions and create a stable energy supply. We will continue to maximize that value while accelerating initiatives toward a low-carbon society.



Hydroelectric power generation equipment

## Ecotank Type Vacuum Circuit Breakers (VCB)

Expanding the SF<sub>6</sub> gas\*-free switchgear business that can contribute to a decarbonized society is one climate-change related business opportunity for the Meiden Group.

In 2007, we released a 72-kV-class Ecotank type vacuum circuit breaker to markets around the globe, and in 2020 we developed a 145-kV-class model to meet high-voltage requirements. In 2020 we also founded Meiden America Switchgear, Inc., the first North American base to handle SF<sub>6</sub> gas-free switchgear, which is doing well in the current business environment and represents one area of continued growth.

Looking toward the future, we anticipate that the introduction of the EU's restrictions on SF<sub>6</sub> gas in 2026 and other similar measures will vastly increase the decarbonization demands of the power industry. The Meiden Group cannot let such a wonderful opportunity pass as we grow business to become the world's leading vacuum circuit breaker manufacturer.

\* SF<sub>6</sub> gas: A chemically stable, non-toxic, odorless, colorless, non-flammable gas with three times the ability to withstand voltage of air at the same pressure. However, it has 23,500times the effect on

global warming of CO2 and was listed as a controlled gas in the Kyoto Protocol to prevent global warming.



Ecotank type VCB

## Electric Vehicle Drive Unit

Meiden Group supplies motors and inverters installed in electric vehicles, which are becoming more common throughout the world. In October 2023, Meiden (Hangzhou) Drive Systems Co., Ltd.'s second production line began full-scale operations manufacturing and installing integrated motor/inverter equipment. Built with Japan and China's best manufacturing systems, we are currently focusing on optimizing production load. We strive tirelessly to create smaller, more efficient prototypes based on the standard models and to improve QCD with better manufacturing technologies.



Integrated motor/inverter/gear drive unit



## Promoting Environmentally Conscious Design

### Policy

### Promote environmentally conscious design

The Meiden Group is promoting development of environmentally conscious products that reduce our impact on the environment.

#### Product environmental assessment

Any time we develop a new product, we evaluate it for energy and resource conservation, recyclability, environmental safety, and more, based on our Product Environmental Assessment Standard. If a product meets those standards, we certify it as a Meidensha Green Product.

To create products with even greater levels of environmental consciousness and contribute to the decarbonization of society, we have also introduced and operate a system of “super green products” for our company’s greenest products.

For the evaluation item “consideration of lifecycle,” we calculate CO<sub>2</sub> emissions according to a life cycle assessment (LCA), and we encourage environmentally conscious design in order to reduce CO<sub>2</sub> emissions.



### Initiatives

### Life cycle assessment (LCA) initiatives

The Meiden Group conducts an assessment of the environmental impact of a product throughout its life cycle, from procurement of components through to disposal, in accordance with our Guidelines for Environmental Action. We use the LCA method to quantify the environmental impact of products and services, which helps us to improve environmental performance at the design and development stage and to conduct product explanations to customers and PR, etc.

## Acquired certification in the SuMPO EPD environmental labeling program for our ester oil transformers

As decarbonization-related markets grow and we look ahead to responses to regulations in Japan and abroad, we acquired SuMPO EPD\*2 certification (formerly Ecoleaf) for our ester oil\*1 transformers under the Sustainable Management Promotion Organization (SuMPO) SuMPO environmental labeling program. Ours is the industry's first ester oil transformer to receive this certification.

The SuMPO EPD label is a certification system that discloses information on a product's environmental burden throughout its entire lifecycle, from sourcing material to manufacturing, distribution, and use, through to disposal and/or recycling. We received this certification for the multifaceted evaluation on the environmental impact of our ester oil transformers that extends beyond visualizations of GHG emission levels in the product lifecycle to include information on factors such as resource circulation and its effect on air and water.

Visualizing GHG emissions will contribute to increasing the accuracy of customer Scope 3 emission calculations while also identifying areas for improvements in decreasing emissions across their entire supply chain. That will help our customers decarbonize while allowing us to respond to stakeholder disclosure requests with highly transparent ESG information.

As the world transitions to a carbon neutral society by 2050, we anticipate that environmentally conscious products will command a more domineering position in the marketplace. Acquisition of this stringent EPD third-party certification will certify this product line's environmental performance from an objective standpoint while simultaneously providing a response to environmental regulations.

Moving forward, the Meiden Group will continue to develop and provide products with even greater environmental consciousness that help create a sustainable society.



An ester oil transformer with SuMPO EPD certification



\*1: Plant-derived esters, natural esters (plant oil), and synthetic esters

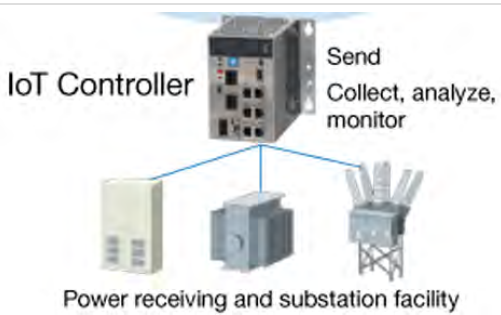
\*2: A type of EPD (Environmental Product Declaration), SuMPO's environmental labeling program, SuMPO EPD (formerly Ecoleaf), is a type III Environmental declaration that conforms with ISO 14025.

## Product environmental assessment standards

Classification	Items
Product volume reduction	<ul style="list-style-type: none"> <li>• Weight reduction</li> <li>• External dimensions and capacity</li> <li>• Reduction of number of components</li> </ul>
Energy and resource conservation	<ul style="list-style-type: none"> <li>• Reduction of power consumption</li> <li>• Water saving</li> <li>• Reduction of consumables</li> <li>• Reduction of packaging volume (reduction of plastic packaging)</li> </ul>
3R	<ul style="list-style-type: none"> <li>• Use of recycled materials</li> <li>• Separability of materials</li> <li>• Ease of collection and transport</li> </ul>
Long-term usability	<ul style="list-style-type: none"> <li>• Maintainability</li> <li>• Reliability and durability</li> </ul>
Prohibited substances	<ul style="list-style-type: none"> <li>• Environmental friendliness</li> </ul>
Life cycle consideration	<ul style="list-style-type: none"> <li>• Reduction of life cycle environmental impact</li> <li>• Disclosure of information concerning evaluation of environmental impact</li> </ul>
Environmental safety	<ul style="list-style-type: none"> <li>• Danger of fire or explosion</li> <li>• Danger at time of dismantlement</li> <li>• Environmental measures</li> </ul>
Other	<ul style="list-style-type: none"> <li>• Entered contests for national-level awards</li> <li>• Top runner products (compared to other companies)</li> </ul>

## Green Products Previously Registered

### [FY2022] Names of Registered Green Products

[Product] Smart Maintenance System for Railway Operators (a product using an IoT controller)	
Product overview	<p>In response to the shortage of new engineers due to the declining birthrate and aging population, railway operators are increasingly practicing CBM (Condition Based Maintenance) and labor-saving patrols and inspections. The purpose is to perform facility maintenance as efficiently as possible.</p> <p>To meet this need, we have developed a maintenance system that collects and stores information from sensors and meters attached to power receiving and transforming facilities and transmits it to higher-level equipment. This solution uses our IoT controller, which consumes less power than conventional products.</p>
Photo	 <p>The diagram illustrates the IoT Controller system. At the top, an 'IoT Controller' unit is shown with the text 'Send Collect, analyze, monitor' next to it. Below the controller, three components are connected by lines: a 'Power receiving and substation facility' (a large yellow box), a transformer (a blue box), and a power distribution unit (a grey box with multiple outlets). The entire system is labeled 'Power receiving and substation facility' at the bottom.</p>
How it is eco-friendly	<p>The following are features of this product, with comparisons to an earlier Meiden product.</p> <ul style="list-style-type: none"> <li>• 13% less energy consumption</li> <li>• Lifecycle CO<sub>2</sub> emissions reduced 46% thanks to maintenance efficiencies, such as labor-saving patrols and inspections</li> </ul>

[Product] Smart Maintenance System for Railway Operators (a product using an IoT controller)

LCA estimate results

Life cycle CO<sub>2</sub> emissions



For related products and details, click here. >

[FY2020] Names of Registered Green Products

[Product] Drive Robot

Product overview

An autonomous driving system for finished vehicles on a chassis dynamometer.  
An electric actuator operates the accelerator, clutch, transmission, brakes, and ignition key in the same way a human driver would.  
The main body of the drive robot has a single-body construction that is now made of carbon fiber reinforced plastic (CFRP) instead of the conventional metal.

Photo



How it is eco-friendly

The following are features of this product, with comparisons to an earlier Meiden product (a conventional seat-mounted drive robot).

- CFRP single-body construction is 55% lighter and 58% more compact
- Improved robot drive system reduces energy consumption by 22%

LCA estimate results

Life cycle CO<sub>2</sub> emissions



Awards won

Winner of FY2021 Good Design Award (only Japanese) >

Winner of 2022 Red Dot Design Award >



reddot winner 2024

Winner of iF DESIGN AWARD 2024 >



For related products and details, click here. >

## [FY2019] Names of Registered Green Products

### [Product] High-Capacity, High-Speed PM Motor/Drive System

#### Product overview

A high-capacity, high-speed PM motor (permanent magnet synchronous motor) operating at speeds of 10,000 RPM or more and inverter capable of high-frequency output. It achieves high-speed drive thanks to high-capacity, high-speed rotation technology and optimal inverter design.

#### Photo



High-capacity, high-speed PM motor



High-voltage high-frequency inverter THYFREC VT731PM

#### How it is eco-friendly



The following are features of this product, with comparisons to an earlier Meiden product (gear-increasing induction motor drive).

- With its high speed, motor volume is reduced to just one-fifth that of the conventional motor for smaller size and space savings
- PPM motor and high-speed drive reduce energy consumption by 20% as a system

#### LCA estimate results

##### Life cycle CO<sub>2</sub> emissions



[Product] Simple IP-TC EC4-TC							
Product overview	<p>Remote monitoring and control equipment using built-in PC for hydroelectric power plants.</p> <p>Runs on Linux 64-bit OS and connects to PLCs* from four manufacturers. Static electric discharge noise conforms to B-402 electric power standard.</p> <p>* PLC : Programmable Logic Controller</p>						
Photo							
How it is eco-friendly	<p>The following are features of this product, with comparisons to an earlier Meiden product (EC101D).</p> <ul style="list-style-type: none"> <li>• Optimal design reduces energy consumption by 33%</li> <li>• Changes to unit structure facilitate maintenance</li> </ul>						
LCA estimate results	<p><b>Life cycle CO<sub>2</sub> emissions</b></p>  <table border="1"> <thead> <tr> <th>Product</th> <th>Life cycle CO<sub>2</sub> emissions</th> </tr> </thead> <tbody> <tr> <td>This product</td> <td>91</td> </tr> <tr> <td>Conventional product (Developed in FY2011)</td> <td>100</td> </tr> </tbody> </table>	Product	Life cycle CO <sub>2</sub> emissions	This product	91	Conventional product (Developed in FY2011)	100
Product	Life cycle CO <sub>2</sub> emissions						
This product	91						
Conventional product (Developed in FY2011)	100						

## Product Initiatives (Management of chemical substances in products)

### Initiatives

### Management of chemical substances in products

We operate an “Environmental BOM<sup>\*1</sup> Management System” that collects and communicates information concerning chemical substances contained in products.

We work to share information with suppliers of components, materials, etc., through explanatory sessions, individual consultations, etc., using chemSHERPA<sup>\*3</sup> operated by JAMP<sup>\*2</sup>. We register the chemSHERPA, etc. provided by our suppliers with the Environmental BOM Management System to determine the aggregation of chemical substances contained in each product and compliance with regulations.

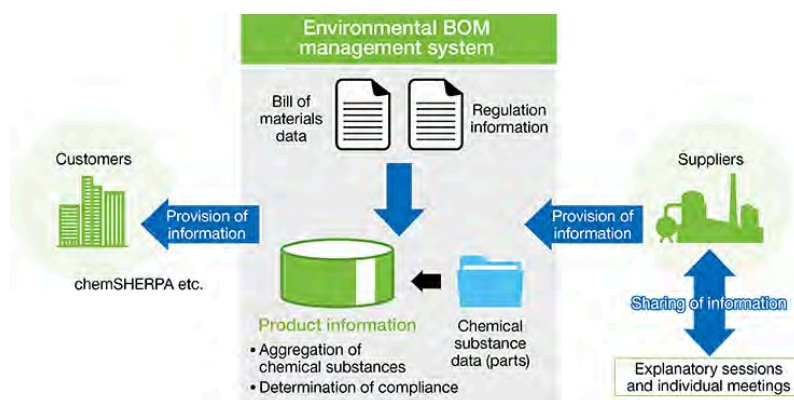
\*1 BOM: Bill of Materials

\*2 JAMP: Joint Article Management Promotion Consortium. JAMP aims to appropriately manage information about chemical substances, etc., in products, and create and spread specific mechanisms for smooth disclosure and communication within the supply chain.

\*3 chemSHERPA: A joint information transfer scheme that facilitates the disclosure/communication of chemical substances information in products, which is maintained and managed by JAMP

Meidensha is a member of JAMP. [Link](#)

### Diagram of Environmental BOM



# Climate Change

## Awareness

Since its establishment in 1897, Meidensha has produced a range of technologies, products, and services and contributed to the development of a sustainable society in its role as a manufacturing company. In particular, we are deeply involved with decarbonization and reduction of carbon through power generation systems that utilize renewable energy sources such as solar, wind, and small to medium hydroelectric, as well as energy solution services such as smart grids. Through these eco-friendly products and services, we aim to achieve a sustainable society and are working to reduce greenhouse gas emissions from business activities.

## Governance

### Monitoring of Climate Change by the Board of Directors

#### Monitoring of the Risks and Opportunities Created by Climate Change at the Level of the Board of Directors

As the highest decision-making body for environmental activities, the Sustainability Management Strategy Committee, which is chaired by the President, deliberates on responses and other actions to issues including risks posed by climate change, and also determines the direction of sustainability management. As part of its role, this committee refers important matters to the Executive Officers' Meeting and the Board of Directors, etc., to initiate activities based on executive-level decision-making.

EMS Promotion Organizations >

## Indicators

### Amount of Greenhouse Gas Emissions

#### Scope 1 and Scope 2 emissions

To enhance activities towards mitigating our environmental impact, we use internal carbon pricing and source CO<sub>2</sub>-free electricity (in FY2024, we expanded the procurement ratio at Numazu Works and Kofu Meidensha). As a result, Scope 2 emissions fell even as production increased. Overall Scope 1 emissions fell thanks to decreased use of combustion furnaces, even as the use of drying furnaces rose and SF<sub>6</sub> gas emissions increased due to greater production of power equipment products. We will continue working to

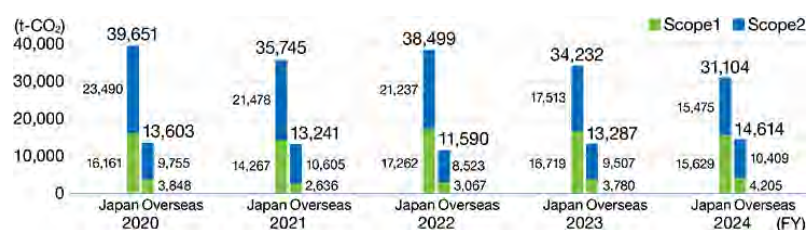


control Scope 1 and 2 emissions by continuing to promote energy-saving activities, expanding procurement of carbon-free power, eliminating SF<sub>6</sub> gas, electrifying drying furnaces, and more.

(t-CO<sub>2</sub>)

		FY2020		FY2021		FY2022		FY2023		FY2024	
		Japan	Overseas	Japan	Overseas	Japan	Overseas	Japan	Overseas	Japan	Overseas
SCOPE1 Direct emissions from in-house use of fuel, etc.		16,161	3,848	14,267	2,636	17,262	3,067	16,719	3,780	15,629	4,205
SCOPE2 Indirect emissions from power or heat purchased from an outside source	Location basis	24,479	9,755	25,160	10,605	25,737	8,523	26,381	9,507	25,536	10,409
	Market basis	23,490	-	21,478	-	21,237	-	17,513	-	15,475	10,408 <sup>*1</sup>

## Amount of Greenhouse Gas Emissions (Scope 1 and 2) – Emissions from Business Activities



Scope 1: Direct Emissions

Combustion of fuel (town gas and oil, etc.) and release of greenhouse gasses (SF<sub>6</sub> and CFCs, etc.)

Scope 2: Indirect Emissions

Combustion of fossil fuel to generate electricity (electricity company) that is consumed by the company

\*1 : Calculation standards for overseas Scope 2 market standards were based on the average power emission factors of that location's country, but CO<sub>2</sub> emissions were treated as zero when an agreement to source renewable energy was in place.

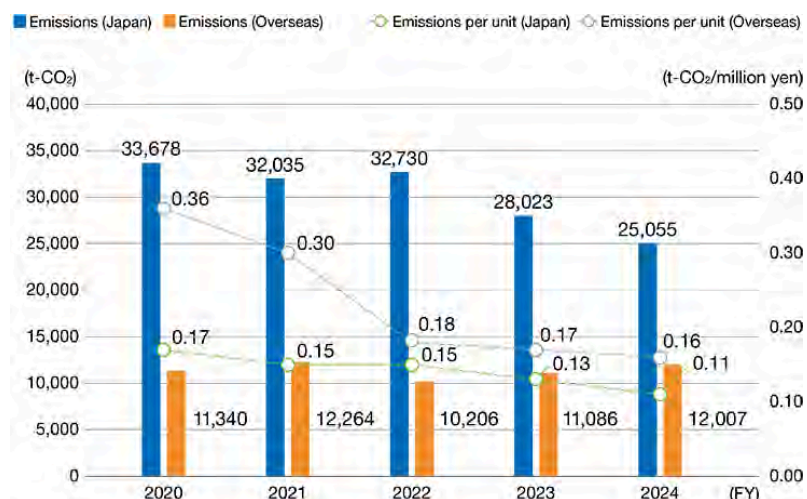
### Results Data

## Amount of CO<sub>2</sub> Emissions from Energy Sources

The Meiden Group had record sales in FY2023 and lowered its CO<sub>2</sub> emissions per unit of sales.

We also drove down CO<sub>2</sub> emissions by increasing the proportion of renewable energy used at Numazu Works, the Group's largest production site in Japan.

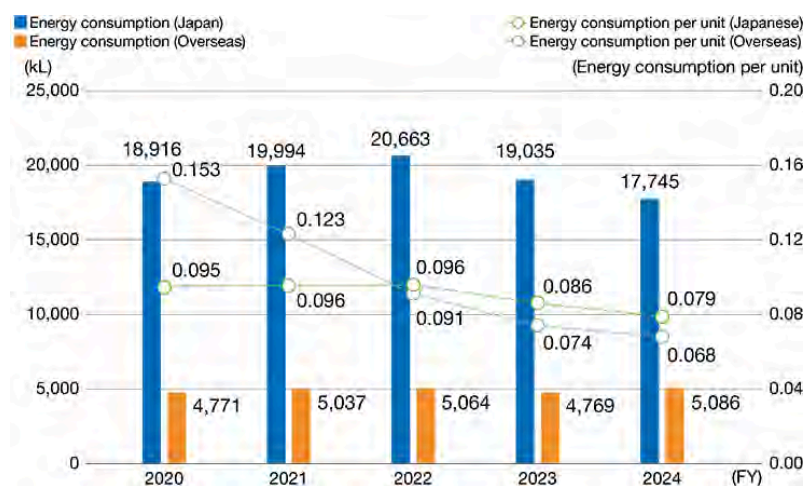
## Amount of CO<sub>2</sub> emissions from energy sources/CO<sub>2</sub> emissions per sales unit



- \* Japanese emissions: The amounts of fuel oil and fuel gas are calculated referring to the "List of Calculation Methods and Emission Factors in the Calculation, Reporting and Publication System" for the relevant fiscal year published by the Ministry of the Environment. The amount of electric power is calculated referring to the "Emission Factor List by Electric Power Company" published by the Ministry of the Environment.
- \* Overseas emissions: The amounts of fuel oil and fuel gas are calculated referring to the emission factors by country published by the GHG protocol. The amount of electric power is calculated referring to the average emission factors by country in 2010-2012 published by the International Energy Agency (IEA). Since FY2022, we have used the 2018 average emission factors by country. Since FY2024, we have used the 2023 average emission factors by country.
- \* Energy consumptions per unit are emissions (t-CO<sub>2</sub>) divided by net sales (million yen).

## Energy Consumption (crude oil equivalent)

### Energy consumption/energy consumption per unit of sales



## Reduction of CO<sub>2</sub> Emissions from Business Activities

### Introduction of Renewable Energy

In recent years, we have procured electricity from renewable sources in an effort to reduce CO<sub>2</sub> emissions from business activities.

Since FY2019, we have been working on sourcing electricity with non-fossil certificates and purchasing power from renewable sources.

In FY2024, we signed an offsite physical corporate PPA\* on April 1 to use power generated by renewable energy from the Choshi Shiosai Wind Farm owned and operated by our associate company M WINDS Co., Ltd.

\* A corporate PPA (power purchase agreement) is a contract wherein a company purchases renewable power from a power producer at a fixed price over a long period. This arrangement for sourcing energy is gaining attention because companies can help reduce CO<sub>2</sub> emissions through it. An offsite PPA is a PPA in which electricity is sourced from a distant power plant through the general transmission and distribution network. Meanwhile, a physical PPA is a PPA wherein the power producer supplies both electricity and environmental value to consumers through a retail electric utility.

To control rises in Scope 2 emissions from increased production, we are expanding the use of power derived from renewable energy sources. In Japan, the percentage of renewable energy increased from 30% in FY2023 to 41% in FY2024. Moving forward, we plan to utilize onsite power generation, PPAs, renewable energy charts, and renewable energy certificates as we expand the ratio of renewable energy in our production sites around the world, with the goal of 100% of our four major production sites in Japan and 50% of our nine overseas sites powered by renewable energy by the end of FY2027.

FY2019	November: Began sourcing CO <sub>2</sub> -free electricity from wind power through non-fossil certificates with tracking information at the Meiden R&D Center and Osaki Kaikan Hall.
FY2020	November: Signed a contract for CO <sub>2</sub> -free electricity at EAML Engineering CO., LTD. and reached 100% renewable energy use.
FY2021	April: Signed a contract for CO <sub>2</sub> -free electricity at Meidensha's Ota Works and reached 100% renewable energy use. January: Signed a contract for CO <sub>2</sub> -free electricity at MEIDEN NANOPROCESS INNOVATIONS, INC. (Chiba) and reached 100% renewable energy use.
FY2022	May: Signed a contract for CO <sub>2</sub> -free electricity at KOFU MEIDENSHA ELECTRIC MFG. CO., LTD. and reached 30% renewable energy use. May: Began sourcing CO <sub>2</sub> -free wind power at headquarters of MEIDEN KOHSAN CO., LTD. using non-fossil certificates with tracking information.
FY2023	July: Signed a contract for CO <sub>2</sub> -free electricity at Meidensha's Numazu Works and reached 20% renewable energy use. July: Signed a contract for CO <sub>2</sub> -free electricity at Meidensha's Headquarters (ThinkPark Tower) and reached 100% renewable energy use.
FY2024	April: • Signed contract to source CO <sub>2</sub> -free electricity for 100% of the power used at three Group sites in the Tokyo area (R&D Center, Osaki Kaikan Hall, and MEIDEN KOHSAN CO., LTD.) (86% under Green Basic Plan contract, 14% under offsite physical corporate PPA).

	<ul style="list-style-type: none"> <li>• Meidensha's Numazu Works gets 34% of its power from CO<sub>2</sub>-free electricity, while KOFU MEIDENSHA ELECTRIC MFG. CO., LTD. gets 44% (in addition to previous sources, it procures 14% under an offsite physical corporate PPA)</li> <li>• Meidensha's Ota Works switched from the Gunma Hydro Plan to the Green Basic Plan and now sources CO<sub>2</sub>-free electricity derived from solar, wind, and other forms of energy for 100% of its power</li> </ul>
FY2025	<p>April: • KOFU MEIDENSHA ELECTRIC MFG. CO., LTD. switched to a Green Basic Plan and now sources CO<sub>2</sub>-free electricity derived from solar, wind, and other forms of energy for 100% of its power.</p> <ul style="list-style-type: none"> <li>• Signed a contract for CO<sub>2</sub>-free electricity at Meidensha's Nagoya Works and reached 100% renewable energy use.</li> <li>• Signed a contract for CO<sub>2</sub>-free electricity at Meidensha's Numazu Works and reached 60% renewable energy use (of which 46% comes from a Green Basic Plan and 14% comes from an offsite physical corporate PPA)</li> </ul>

## TOPICS

### Offsite Physical Corporate PPA Signed, Using Wind Farm Operated by Meiden Group

On April 1, 2024, Meidensha, M WINDS Co., Ltd., and TEPCO Energy Partner, Incorporated ("TEPCO EP") entered into an offsite physical corporate PPA ("the PPA"). This arrangement uses electric power from renewable energy ("the renewable power"\*1) from Choshi Shiosai Wind Farm ("the power plant") owned and operated by M WINDS, a wholly owned subsidiary of Meidensha.

Under the PPA, a portion of the electricity used at five Meiden Group business sites is now renewable power from the power plant.

(As of April 2024)

More than 20 years have passed since the plant started operating in December 2003, and the FIT period (October 2012 - March 2024) has now elapsed. The three companies concluded the PPA to maximize the value of the wind power plant owned by the Meiden Group and enhance corporate value.

For the three businesses, this is a first-time experiment with a PPA using a wind farm that has moved past the FIT program.



\*1 Renewable power refers to electricity generated from renewable energy sources combined with non-fossil certificates derived from renewable energy sources. Therefore, the electricity used by the consumer can be regarded as renewable energy.

## 1. Overview of the PPA

Concerning the renewable power generated with the plant, the previous arrangement used FIT non-fossil certificates\*2 with tracking information by TEPCO EP to provide only environmental value to three Tokyo area sites of the Meiden Group (R&D Center, Osaki Kaikan Hall, and Meiko Bldg.) using the Green Basic Plan.\*3






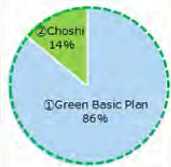
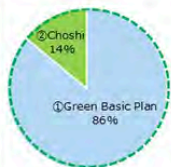

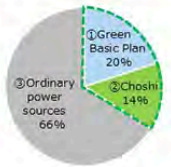
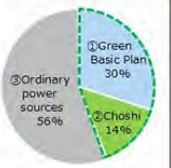
Now that the PPA has been concluded, both the power generated at the plant and the environmental value will be provided, in addition to the Green Basic Plan that TEPCO EP was already offering. With

the addition of Meidensha's Numazu Works and KOFU MEIDENSHA ELECTRIC MFG. CO., LTD.

("KOFU MEIDENSHA"), a total of five locations will be supplied. Another advantage is that the Meiden Group can use the PPA to stabilize the cost of sourcing some of its electricity, regardless of changes in fuel prices.

\*2 The Ministry of Economy, Trade and Industry issues certificates that certify the environmental value of power such as renewable energy generated without emitting CO<sub>2</sub>. Trading of certificates began on the Japan Electric Power Exchange in May 2018. Tracking information (information indicating the type of power source and location) for the power plant can be added to the certificate.

\*3 The Green Basic Plan is effectively a renewable power option offered by TEPCO EP. It combines the average power from all power sources with FIT non-fossil certificates (with tracking information) and non-FIT non-fossil certificates with renewable energy designation (with power source attribute information).

Meiden Group					
Subject site	R&D Center (Meidensha Corporation)	Osaki Kaikan Hall (Meidensha Corporation)	Meiko Bldg. (MEIDEN KOHSAN CO., LTD.)	Numazu Works (Meidensha Corporation)	KOFU MEIDENSHA (KOFU MEIDENSHA ELECTRIC MFG. CO., LTD.)
Location	2-8-1 Osaki, Shinagawa-ku, Tokyo	2-5-35 Osaki, Shinagawa-ku, Tokyo	5-5-5 Osaki, Shinagawa-ku, Tokyo	515 Kaminakamizo-aza, Higashimakado, Numazu, Shizuoka	825 Nakadate, Chuo, Yamanashi
Role	Research center for new technologies to seed product development and new businesses	A place for communication with internal and external parties, e.g., meetings with customers and internal meetings	Head office for affiliates in Japan	Main plant producing substation equipment, control systems, electronic equipment, etc.	Primarily manufactures medium- and small-capacity motors
View from the outside					
Power supply breakdown					

- ① Green Basic Plan: Effectively a renewable power option offered by TEPCO EP, which combines the average power from all power sources with FIT non-fossil certificates (with tracking information) and non-FIT non-fossil certificates with renewable energy designation (with power source attribute information)
- ② Choshi: Renewable power with attribute information that is actually generated at Choshi Shiosai Wind Farm and supplied directly to Meiden Group locations
- ③ Ordinary power sources: Power sources consisting of thermal power, FIT electricity, renewable power, wholesale power exchanges, hydroelectric power, etc.

## Promoting Internal Carbon Pricing

Internal carbon pricing is a mechanism to promote investment in equipment with a significant CO<sub>2</sub> reduction benefit. It works by setting a carbon price within a company and then using that price to calculate the cost of greenhouse gas emissions.

Meidensha introduced an internal carbon pricing system in April 2021. We use it as a resource when making investment decisions by converting carbon emissions from capital investment plans into expenses using our internal carbon price. At Meidensha, we initially set 3,000 yen/t-CO<sub>2</sub> as the internal carbon price. However, after considering the Ministry of the Environment's guidelines and the carbon price in the IEA's 1.5°C scenario, we raised our internal price to 15,000 yen/t-CO<sub>2</sub> and applied that price to capital investments from FY2023 onwards. We will continue to promote reductions in greenhouse gas



emissions in our business activities by considering environmental impact mitigation along with safety and productivity when making equipment investment decisions.

- Internal carbon price: 15,000 yen/t-CO<sub>2</sub>
- Application: Proposed equipment for FY2024 and beyond

#### Activity and Results

There were ten cases in FY2024 in which we applied internal carbon pricing. For example, we introduced equipment that is expected to significantly lower CO<sub>2</sub> emissions, such as upgrading the air-conditioning equipment at the Meiden R&D Center and replacing lighting at the Headquarters with LED bulbs.

Equipment subject to internal carbon pricing (FY2024)	387 (million yen)
Reduction due to internal carbon pricing (FY2024)	574 (t-CO <sub>2</sub> )

## Reduction of Energy Consumption

The Meiden Group makes capital investment systematically, such as introducing internal carbon pricing and replacing lighting and air-conditioning with high-efficiency equipment, to lower greenhouse gas emissions caused by energy consumption. We are in addition visualizing our power consumption and improving equipment operations, especially by practicing strict energy consumption control, such as cutting standby energy consumption on holidays and at night. To use energy more efficiently, expand energy conservation awareness, and reduce energy costs, each works and unit is endeavoring to save energy. Energy conservation rankings, showing energy use reductions, are posted on digital signage to foster awareness of energy conservation.

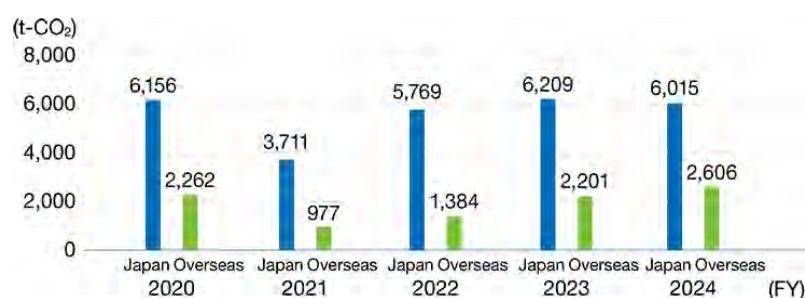
#### Initiatives and Results Data

## Reducing Emissions of Greenhouse Gasses Other than CO<sub>2</sub>

The Meiden Group's emissions of greenhouse gasses other than CO<sub>2</sub> include SF<sub>6</sub> gas, which is used for circuit breakers, etc., and CFCs, which are used as refrigerants in air conditioners.

In FY2024, emissions of SF<sub>6</sub> gas remain high due to increased production of equipment such as circuit breakers. We will continue our efforts to curb emissions and perform technical studies and verification of alternatives to SF<sub>6</sub> gas. To curb CFC emissions, moreover, we are strengthening management of air-conditioning equipment and updating facilities.

### Emissions of Greenhouse Gasses Other than CO<sub>2</sub>

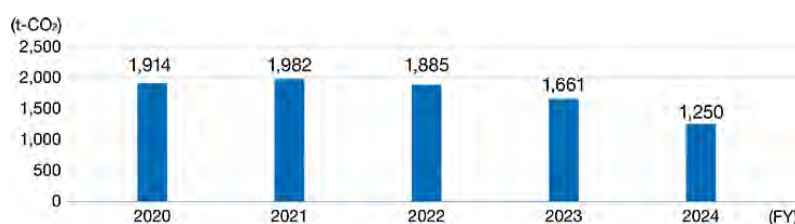


\* Overseas emissions depict SF<sub>6</sub> gas emissions only and do not include freon gases.

## Reduction of CO<sub>2</sub> Emissions from Product Transport

The transport division is working to reduce CO<sub>2</sub> emissions by practicing cargo consolidation, modal shift, and efficient transport, such as using shipping containers and switching from trailer transport to ship transport from nearby ports.

### CO<sub>2</sub> Emissions from Product Transport (Japan)



## Calculation of Greenhouse Gas Emissions in the Supply Chain

Meidensha is working to calculate greenhouse gas emissions, including indirect emissions in the upstream and downstream supply chain in addition to those produced in the course of its business activities.

Meidensha is facing the issue of producing a large proportion of its emissions from “use of sold products” (scope 3, category 11) and “purchased goods and services” (scope 3, category 1). We are promoting environmental measures throughout the entire supply chain, including reducing downstream greenhouse emissions through environmentally considerate product design and reducing upstream impact through green procurement.

### Meidensha's Greenhouse Gas Emissions in the Supply Chain (Scope 3)

The Meiden Group calculates our supply chain with reference to the GHG Protocol and the Basic Guidelines on Accounting for Greenhouse Gas Emissions Throughout the Supply Chain, published by the Ministry of the Environment and the Ministry of Economy, Trade and Industry, etc.

In developing the Third Meiden Environmental Vision, which launched in FY2025 and set new medium- to long-term environmental targets, we reviewed Scope 3 calculation methods. We added Categories 9, 10, and 15 into the scope of calculations and partially revised the calculation methods for the other Categories.

Thus, data values disclosed up to FY2023 cannot be compared directly, but going forward we intend to trace these values using this calculation method and revise them as necessary.

Category	Calculation Method	
	Amount of Activity	Basic Unit
1. Purchased goods and services	Purchase amount (materials, consumables, services, etc.)	Ministry of the Environment Basic Unit - DB
2. Capital goods	Amount invested in fixed assets	Ministry of the Environment Basic Unit - DB
3. Fuel and energy related activities not included in Scopes 1 or 2	Amount of energy consumption (electricity, etc.)	Ministry of the Environment Basic Unit - DB AIST-IDEA
4. Upstream transportation and distribution	Transportation cost	Ministry of the Environment Basic Unit - DB
5. Waste generated in operations	Emissions of each type of waste	Ministry of the Environment Basic Unit - DB
6. Business travel	Transportation expenses provided (travel allowance, etc.)	Ministry of the Environment Basic Unit - DB
7. Employee commuting	Transportation expenses provided (travel allowance, etc.)	Ministry of the Environment Basic Unit - DB
8. Upstream leased assets	Rent (Leased items, etc.)	Ministry of the Environment Basic Unit - DB
9. Downstream transportation and distribution	Weight and value of our products	Ministry of the Environment Basic Unit - DB
10. Processing of sold products	Customer energy use	—
11. Use of sold products	Calculated based on the specifications of the Company's products and operating conditions	Ministry of the Environment Basic Unit - DB
12. End-of-life treatment of sold products	Revenue from sold products	Ministry of the Environment Basic Unit - DB AIST-IDEA
13. Downstream leased assets	Energy usage at leased real estate	Ministry of the Environment Basic Unit - DB
14. Franchises	Not applicable as outside of the scope of the Company's business	—
15. Investments	Subsidiary (unconsolidated) energy use	—
Other	Excluded from the scope of calculation as this item is optional	—

(t-CO<sub>2</sub>)

Category	FY2020	FY2021	FY2022	FY2023	FY2024*
1 . Purchased goods and services	790,749	944,989	1,161,608	1,326,731	1,276,559
2 . Capital goods	56,146	31,329	24,862	27,951	34,039
3 . Fuel- and energy-related activities not included in Scopes 1 or 2	1,893	3,425	3,472	3,187	5,128
4 . Upstream transportation and delivery	15,184	16,914	21,694	23,526	21,719
5 . Waste generated in operations	2,004	1,645	1,925	1,692	1,575
6 . Business travel	1,007	2,160	4,770	6,734	7,736
7 . Employee commuting	940	1,182	1,401	1,211	4,986
8 . Upstream leased assets	2,336	2,287	2,756	2,727	2,276
9 . Downstream transportation and distribution	—	—	—	—	2,195
10. Processing of sold products	—	—	—	—	4,470
11. Use of sold products	6,050,000	5,922,573	5,745,708	5,891,693	5,662,768
12. End-of-life treatment of sold products	5,960	6,573	7,025	7,420	804
13. Downstream leased assets	8,047	7,769	7,849	8,223	4,676
14. Franchises	—	—	—	—	—



15. Investments	—	—	—	—	11
Other	—	—	—	—	—
Total	6,934,266	6,940,845	6,983,070	7,301,094	7,028,941

\* Calculation methods were revised for FY2024 results in partial Categories

## Disclosure based on TCFD recommendations

### Attitude

For many years, the Meiden Group has been aware of the major problem of climate change, and has worked to solve this problem through business. With regard to TCFD\*, we endorsed the TCFD recommendations in June 2019, we began considering risks and opportunities according to the TCFD framework in 2020, and we are promoting the incorporation of this in our strategies.



\* TCFD: Task Force on Climate-related Financial Disclosures established by the Financial Stability Board (FSB) .

### Governance/risk management

#### Governance

In response to the issue of climate change as it relates to economic policies and the global situation, Meiden Group has tasked the manager in charge of promoting sustainability, an individual with superb insight honed through experience both within and outside the Group, with general implementation, while the Corporate Policy Planning Group's Sustainability Management Promotion Division uses its expertise on environmental policy and technology to formulate and enact strategies, create countermeasures for each category, and promote monitoring.

Furthermore, the Sustainability Management Strategy Committee and the Sustainability Management Promotion Committee handle all general matters involving sustainability and these two committees explore potential strategies for decarbonization. The manager in charge of promoting sustainability and the Sustainability Management Promotion Division both report on the content of meetings twice annually to the Board of Directors, and the Board oversees the validity of plans and strategies as well as the state of implementation. Alongside these efforts and as a way of managing the progress of environmental activities within the Group, the Meiden Group Environmental Committee, which is chaired by a production manager, meets quarterly to uncover issues within the Company, set environmental goals, devise action

plans, and discuss emergency responses in order to promote and monitor the deployment of concrete policies for environmental management.

Sustainability Management >

## Risk Management

To manage sustainability-related risks, the Sustainability Management Promotion Division, which is charged with promoting sustainability management, operates centrally with relevant departments to extract risks. The details of those risks are incorporated into all the risks managed by the Governance Headquarters, which simultaneously manages a variety of risks, including those related to climate change.

Risk Management >

## Strategy

### Analysis of Climate Change Scenarios

The Sustainability Management Promotion Division analyzes climate change scenarios in conjunction with the Accounting and Financing Group, the Corporate Governance Management Group, the Sales Planning & Administration Group, and other related internal groups. The examination process is divided into four parts, with analysis and evaluations conducted annually. At the same time, major factors that could impact business are identified, and identified risks, opportunities, and evaluations are reflected in our business strategy.

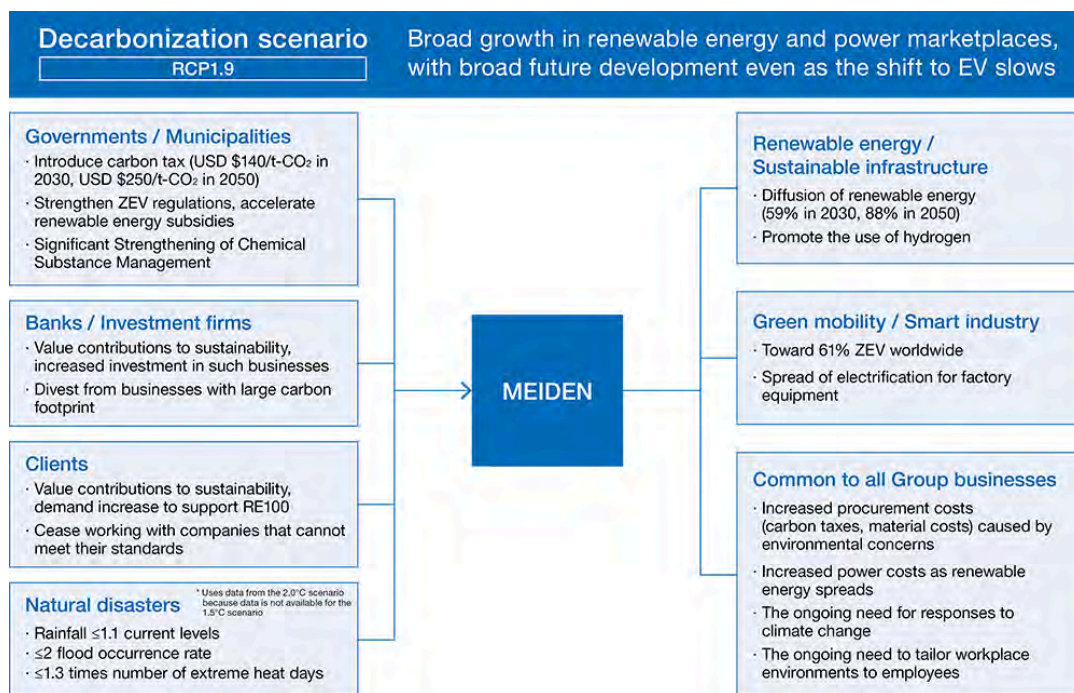


### Step 1: Defining Scenario Types

As recommended by TCFD, we selected multiple warming scenarios, including a scenario of less than 2°C, and conducted analysis accordingly. Based on the two scenarios of decarbonization (RCP1.9) and global warming (RCP4.5 and RCP8.5), we have compiled specific scenarios and global outlooks to accommodate each scenario using management frameworks, such as five forces analysis, based on internationally published data from the IEA, IPCC, etc., as well as numerical data published by Japanese government institutions, etc. We are reconstructing the global outlooks, scenarios, and numerical premises in the medium-to long-term forecasts from the current consolidated fiscal year through to 2050, the final fiscal year of the Meiden Group's long-term environmental targets.

	Temperature range	Relevant scenario	Provider
Decarbonization scenario	Less than 1.5°C	NZE2050	IEA
		RCP1.9	IPCC
Global warming scenario	2.5~4.0°C	STEPS	IEA
		RCP4.5	IPCC
		RCP8.5	IPCC

Selected scenarios and outlooks are as follows.



## Step 2: Factor Analysis of Climate Change-related Risks and Opportunities

We identified risk and opportunity factors associated with climate change based on global outlooks for each scenario, while also referring to the risk and opportunities listed in the TCFD recommendations, then separated them by relevant scope both by business domain and for the Meiden Group as a whole before setting out timelines for specific risks and opportunities and the effects they will generate.

### ■ Defined timelines for evaluated climate-change related risks

	Defined period	Related strategic and planning period
Short term	The 3-year period between FY2025 and FY2027	The period pertaining to the environmental strategies, implementation plans, and FY2027 targets listed in Medium-term Management Plan 2027
Medium term	Until FY2030	The period pertaining to the environmental strategies, implementation plans, and FY2030 targets listed in the Third Meiden Environmental Vision
Long term	Until 2050	The period pertaining to the national targets for Japan and the Meiden Group's long-term environmental targets

### ■ Transitory Risk in Meiden Group's Major Focus Areas and Those Common to the Group (Opportunities and Risks Primarily in the Decarbonization Scenario)

Major focus area / Common to Group	Risk / Opportunity factor	Social scenario	Opportunity / Risk for the Company	Period of effect	Target business / product / location
Renewable energy Sustainable infrastructure	Expanded government subsidies Acceleration of technological development Transition to a decentralized society	Expanded renewable energy ratio	(Opportunity) Expanded renewable energy business	Short- to long-term	Wind, hydroelectric, solar generation, energy storage related
	Momentum for GHG emission reductions Power companies shift toward decarbonization	Restrictions on chemical substances such as SF <sub>6</sub>	(Opportunity) Expanded Power T&D business		SF <sub>6</sub> gas-free products, eco-friendly products
Smart industry Green mobility	Momentum for GHG emission reductions Expanded government subsidies	Decarbonization of the transport sector	(Opportunity) Expanded EV-related business		EV business, energy storage related
Common to Group	Change in stakeholder mindset	Increased customer demand for being carbon-free	(Opportunity) Increased demand for eco-friendly products and services	Medium- to long-term	eco-friendly products and services
	Increased regulation	Introduction of a carbon tax	(Risk) Increased procurement and manufacturing costs		All companies
	Expanded renewable energy ratio	Increased cost of industrial electricity	(Risk) Increased power procurement costs		

■ Material Risks common to all Meiden Group companies (Risks Primarily in the Warming Scenario)

Acute / Chronic risk	Risk / Opportunity factor	Social scenario	Risk for the Company	Period of effect	Target business / location
Acute risk	Rise in abnormal weather	Increased flood events	(Risk) Operations suspended, supply chain destroyed, Increased flood response costs	Short- to long-term	Manufacturing sites
Chronic risk	Rise in average temperatures	Worsened labor condition	(Risk) Increased site personnel costs		Manufacturing, maintenance, Construction Business Units

### Step 3: Business Impact Evaluation




We evaluated the impact on business based on the global outlooks for each scenario set out in Step 1 and the opportunities and risks defined in Step 2. During this process, we screened for matters with a particularly large impact on businesses by focusing on the two axes of “impact on operating income” and “likelihood of occurrence in an event” that are the target of the FY2030 milestones set out in the Third Meiden Environmental Vision, and then conducted detailed analyses of these matters. We assessed market order values (values before countermeasure involvement) based on the rate of market growth in each scenario for each large-impact item. These were quantitatively calculated using partial assumptions, and items with unachievable calculations were organized qualitatively.



## ■ Evaluation axes for selection of risks and opportunities (FY2030)

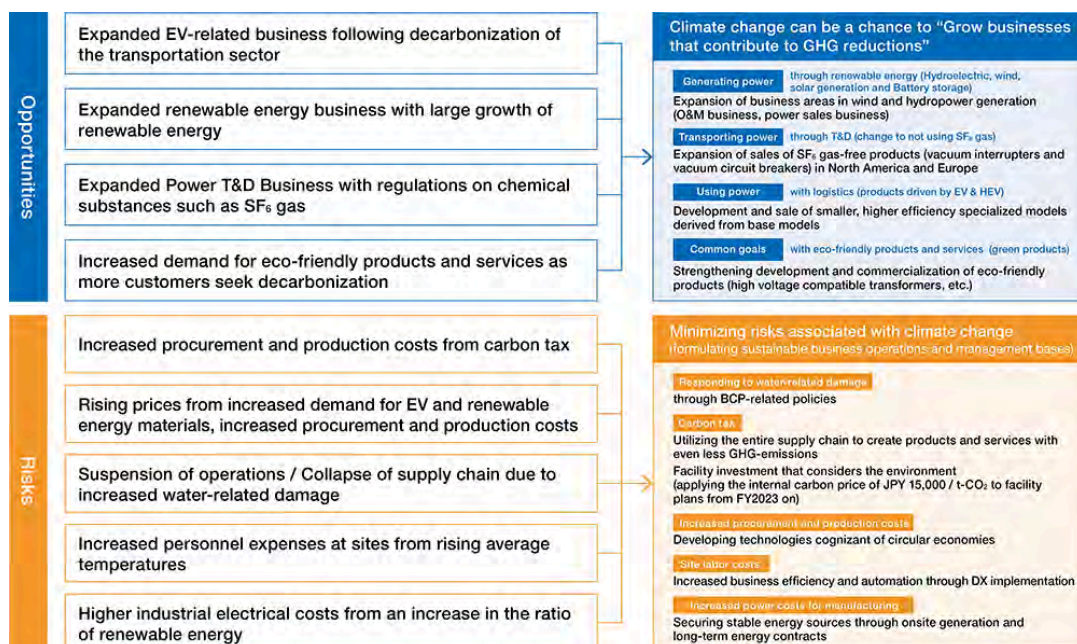
Impact on operating income (estimate)	likelihood of occurrence in an event in FY2030
Very large: ±10 billion yen or more	Large: High probability of occurrence
Large: ±1 billion yen or more	Medium: Occurrence is possible, but cannot be predicted with confidence
Medium: ±0.1 – 1 billion yen	Small: Only occur in the scenarios
Small: ±less than 0.1 billion yen	

	Opportunities and risks for our Company	target business / product / location	Calculation formula	Impact on FY2030 operating income	
				Decarbonization scenario (RCP1.9)	Global warming scenario (RCP4.5, 6.5)
Decarbonization of the transport industry	Expanded EV-related business	EV business/Battery storage-related	Recent average sales × ZEV stock growth ratio	Large	Small
Expanded renewable energy ratio	Expanded renewable energy business	Wind/Hydroelectric/Solar generation/Battery storage-related	Recent sales × growth rate of domestic renewable energy	Small	Small
Restrictions on chemical substances such as SF <sub>6</sub> gas	Expanded Power T&D business	SF <sub>6</sub> gas-free products/ Eco-friendly products	Recent sales of relevant products × VCB market growth rate	Medium	Medium
Increased customer demand for being carbon-free	Increased demand for Eco-friendly products and services	Eco-friendly products and services	* Cannot calculate at this time because Eco-friendly products standards are being revised	—	—
Introduction of a carbon tax	Increased procurement and manufacturing costs	All companies	2030 Scope 1, 2 emissions × carbon tax 2030 Scope 3 Category 1 emissions × carbon tax	10.6 billion	N/A
More water-related disasters	Suspension of operation/Collapse of supply chain Increased costs to respond to water-related disasters	Production sites	Assumed cost of each incident in 2030 using Ministry tools × occurrence rate in each scenario, etc.	Large	Large
Worsening working environments	Increased personnel expenses at sites	Manufacturing/Maintenance/ Construction service business units	Number of site personnel in 2030 × medical and health-care costs	Small	Small
Increased cost of industrial electricity	Increased power procurement costs	All companies	Power usage in 2030 × rising cost of industrial power	Medium	Medium

Rate of occurrence  
 Large   
 Medium   
 Small

## Step 4: Consideration of Response Measures

Based on the market order values calculated in Step 3, we considered strategies to grasp opportunities and measures to mitigate risks according to the Company's situation.



## TOPICS

### Acquired certification in the SuMPO EPD environmental labeling program for our ester oil transformers

As decarbonization-related markets grow and we look ahead to responses to regulations in Japan and abroad, we acquired SuMPO EPD\*<sub>2</sub> certification (formerly Ecoleaf) for our ester oil\*<sub>1</sub> transformers under the Sustainable Management Promotion Organization (SuMPO) environmental labeling program. The Meiden Group is the first in our industry to receive this certification.

The SuMPO EPD label is a certification system that discloses information on a product's environmental burden throughout its entire lifecycle, from sourcing material to manufacturing, distribution, and use, through to disposal and/or recycling. We received this certification for the multifaceted evaluation on the environmental impact of our ester oil transformers that extends beyond visualizations of GHG emission levels in the product lifecycle to include information on factors such as resource circulation and its effect on air and water.

Visualizing GHG emissions will contribute to increasing the accuracy of customer Scope 3 emission calculations while also singling out areas for improvements in decreasing emissions across their entire supply chain. That will help our customers decarbonize while allowing us to respond to stakeholder disclosure requests with highly transparent ESG information.

As the world transitions to a carbon neutral society by 2050, we anticipate that environmentally conscious products will command a more domineering position in the marketplace. Acquisition of this stringent EPD third-party certification will certify this product line's environmental performance from an objective standpoint while simultaneously providing a response to environmental regulations.

Moving forward, the Meiden Group will continue to develop and provide products with even greater environmental consciousness that help create a sustainable society.

\*1: Plant-derived esters, natural esters (plant oil), and synthetic esters

\*2: A type of EPD (Environmental Product Declaration), SuMPO's environmental labeling program, SuMPO EPD (formerly Ecoleaf), is a type III Environmental declaration that conforms with ISO 14025.

## TOPICS

### Expanding Our SF<sub>6</sub> Gas-Free Switchgear Business

Expanding the SF<sub>6</sub> gas-free switchgear business that can contribute to a decarbonized society is one climate-change related opportunity for the Meiden Group.

A vital component in power infrastructure, switchgears have traditionally relied on SF<sub>6</sub> gas to interrupt and isolate currents. However, SF<sub>6</sub> gas has 20,000 times the global warming effect of CO<sub>2</sub>, so the Meiden Group has developed eco-friendly switchgears that eliminate SF<sub>6</sub> gas completely by using vacuum interrupters to interrupt current, and dry air for the isolating gas. In 2007, we released a 72-kV-class tank type vacuum circuit breaker (dry air isolation) to markets around the globe, and then in 2020, developed the world's first 145-kV-class model to meet high-voltage requirements. That same year, we also founded Meiden America Switchgear, Inc. (hereafter Meiden America Switchgear), the first North American base to handle SF<sub>6</sub> gas-free switchgear, which is thriving in the current business environment and represents one area of continued growth.

Looking toward the future, we anticipate that the introduction of the EU's restrictions on SF<sub>6</sub> gas in 2026 and other similar measures will vastly increase the demand for decarbonizing power equipment in the power industry. The Meiden Group cannot let such a wonderful opportunity pass as we grow out business to become the world's leading vacuum circuit breaker manufacturer.

Particularly since it pertains to the Medium-term Management Plan 2027, we will continue to introduce our evolving line of eco-friendly switchgears to global markets, while increasing the production capacity of Meiden America Switchgear. As we do so, we will also develop switchgear products that can provide even higher voltages and larger capacities as initiatives for the future, in preparation for our expanded presence in European markets following the enactment of SF<sub>6</sub> gas regulations.

Moving forward, Meiden Group will continue to develop and release eco-friendly products and services like these in order to capitalize on business growth opportunities that accompany environmental changes.

## Metrics and Targets

In November 2021, the Meiden Group pledged to reach RE100 by 2040 and carbon neutrality by 2050 as our long-term targets. In FY2021, we also released the Second Meiden Environmental Vision with upwardly revised GHG emission reduction targets for scopes 1, 2, and 3 by FY2030 as medium-term targets. We then formulated the Third Meiden Environmental Vision with new targets that correspond to the 1.5°C scenario as part of Medium-term Management Plan 2027 that began in FY2025 and also set targets for FY2027, the final year of the Medium-term Management Plan, as short-term targets. To date, our Scope 3 reduction targets have been applied to reduction targets for Category 11 "use of sold products," the category with the highest emission levels, but the Third Meiden Environmental Vision set new reduction targets for all categories. Additionally, these targets were certified by the SBT (Science Based Targets) initiative in March 2025.



## GHG emission reduction targets (each target and achievement as compared to FY2019 values)

vs FY2019	FY2024		FY2025	FY2027	FY2030
	Plan	Actual	Plan	Plan	Plan
Emissions from business activities (Scope 1+2)	6% reduction	15% reduction	30% reduction	40% reduction	50% reduction
Other companies' emissions related to business activities (Scope 3)	6% reduction (Category 11)	11% reduction (Category 11)	20% reduction (all categories)		30% reduction (all categories)

Meiden Group's medium- to long-term environmental targets >

## The carbon neutral transition plan

Emissions category	GHG reduction measures	FY2024	FY2025	FY2026	FY2027	FY2028-2030
Emissions from business activities (Scope 1, 2)	Replacing SF <sub>6</sub> gas (replacement with dry air, etc.)	Electric testing SF <sub>6</sub> gas-free (drying)				
	Capex	Toprunner transformers (power receiving and transforming equipment)				
		Update older equipment (Use LED lighting, update air conditioning)				
		Improved energy efficiency (heat pumps)				
		Factory energy management systems				
	Electric boilers, Non-CO <sub>2</sub> boilers					
Renewable energy procurement (non-fossil fuel certificate, power menu, etc.)	Procure renewable energy and partially use solar at Tokyo, Numazu, Ota, and Kofu					
	Procure renewable energy at Nagoya					
	Affiliated companies within Japan					
	Use solar energy in the USA and Vietnam	Procure renewable energy and partially use solar at overseas factory sites			Affiliated overseas companies	
Switching company-owned cars to electric vehicles	Gradually acquire EVs/hybrids	Entire fleet EVs/hybrids			Freight, etc.	
Emissions from other companies involved in business activities (Scope 3)	Supplier support	Supply chain engagement (Scope 3 calculation assistance)				
	Eco-friendly product design	Compact, high-efficiency SF <sub>6</sub> gas-free				
		Three elements of green products (reduce GHGs, promote the 3Rs, and eliminate hazardous substances)				
		Promote LCA activities				

Meiden Group is taking the following actions to become carbon neutral by 2050.

### 1) Reducing emissions from business activities (Scope 1+2)

Steady progress with replacing SF<sub>6</sub> gas with dry air, capital investments, procurement of renewable energy, and switching company-owned cars to electric vehicles

Among our strategic facility investments such as switching from gas to electric power and making lighting, A/C equipment, and manufacturing equipment with more efficient fixtures, we are introducing internal carbon pricing (ICP) as a metric for determining investment within the Company. To accelerate our efforts to decarbonize in FY2023, we revised our price of carbon from 3,000 yen/t-CO<sub>2</sub> to 15,000 yen/t-CO<sub>2</sub>.

We also experienced power shortages last year and so redoubled our commitment to reducing energy consumption. We now have power-saving initiatives in place at all our offices and factories.

In addition to these efforts toward reducing the amount of energy we use, we also promote procuring renewable energy at multiple bases inside the Group, from Company factories through to the offices of Group affiliates.

### 2) Reducing other companies' emissions related to business activities (Scope 3)

Meiden Group's Scope 3 derives from approximately 18% purchased goods and services (Category 1) and 81% use of sold products (Category 11). We have proposed supplier support (Scope 3 calculation assistance) and eco-friendly product design (eliminating the use of SF<sub>6</sub> gas, downsizing products and making them more efficient) as plans to reduce emissions.

Promotion of Strategic Environmental Management >

## Future Path

Although we have identified the growth opportunities and risks facing the Meiden Group through analysis of scenarios based on the TCFD recommendations, in most instances, calculation of impact is merely a rough estimate, and further precision is needed. Furthermore, we are promoting response to climate-related metric categories across multiple industries in the TCFD recommendations, which require new disclosure. We have also incorporated some sustainability-related indicators into the evaluation standards for determining director compensation (except Audit and Supervisory Committee Members and outside directors) and are currently exploring integrating environmental indicators into future incentive packages in order to increase the effectiveness of advancing sustainability management.

# Prevention of Pollution and Effective Utilization of Resources

## Policy

### Commitment to Waste and Pollution Prevention

The Meiden Group is working to reduce the environmental impact of our domestic and overseas business activities, as well as reduce and properly manage hazardous substances, promote recycling of waste materials, and conserve water resources as stipulated in the President's Environmental Policy.

Furthermore, we will take steps to maintain a recycling rate of roughly 90% in line with the target in our voluntary action plan for the electrical and electronics industry.

Promotion of Strategic Environmental Management >

## Initiatives

### Targets for Measures to Combat Waste and Pollution

The Meiden Group set targets to reduce the environmental impact of our products, services, and business activities, namely reducing the total volume of waste (1% YoY),<sup>\*1</sup> maintaining a recycling rate of roughly 90%,<sup>\*2</sup> and reaching a final disposal rate of 1% or less.<sup>\*2</sup> Going forward, we will continue striving to promote recycling by promoting environmentally friendly design, product parts, and materials as well as the 3Rs of business-related waste.

<sup>\*1</sup> All domestic locations (except in construction divisions)

<sup>\*2</sup> Major production sites (domestic): Numazu Works, Ota Works, Nagoya Works, Plant Construction & Engineering Business Group, KOFU MEIDENSHA ELECTRIC MFG. CO., LTD., MEIDEN CHEMICAL CO., LTD., MEIDEN HOKUTO CORPORATION, MEIDEN ENGINEERING CORPORATION, MEIDEN PLANT SYSTEMS CORPORATION, EAML Engineering, Co., Ltd.

## Strategies, Initiatives, and Results Data

### Targets and Initiatives for Reduction of Raw Material Usage

As a manufacturer that uses resources to provide our products and services, it is essential that we use those resources effectively.

At the Meiden Group, we practice eco-friendly procurement and work to mitigate the environmental impact of our domestic and overseas business activities and to design products that conserve and reuse resources.

## Raw Material Input (Japan)

(t)

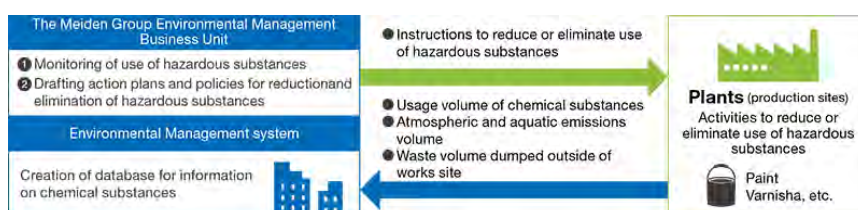
Raw Material	FY2020	FY2021	FY2022	FY2023	FY2024
Iron	5,140	5,356	4,820	4,103	4,516
Copper	2,334	2,176	2,120	2,019	1,868
Plastic	781	789	864	805	746
Aluminum	226	223	266	217	311
Total	8,481	8,544	8,070	7,144	7,441

## Tightening Management of Chemical Substances

We are working to conduct risk assessment of chemical substances used at production sites, etc., to improve the workplace environment, and reduce or substitute hazardous chemical substances with a substantial risk.

In order to prevent workplace accidents, health impairment, and fire or environmental pollution due to leakage or spillage of chemical substances, we routinely conduct patrols of sites where chemical substances are used to alert workers, and take corrective measures where the management status of chemical substances is found to be inappropriate.

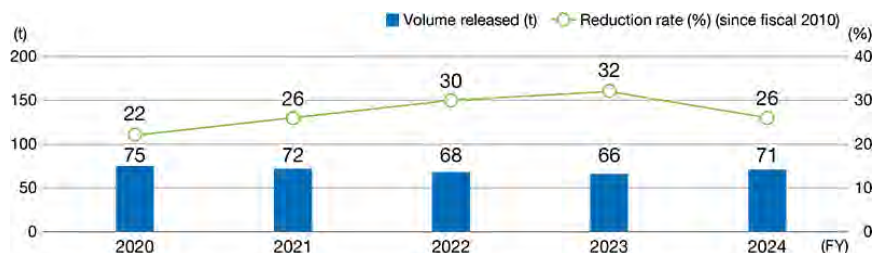
### Tightening Management of Chemical Substances



## Reduction of Volume of Volatile Organic Compounds (VOC) Released

In FY2024, our reduction rate fell due to increased production, but we continued our replacement with low-VOC solvents, and released 71.2 tons of VOC, an increase of only 5 tons versus the previous fiscal year. Going forward, we will promote reduction of VOCs released through adoption of styrene-free varnishes, substitution with low VOC paint and solvents, introduction of airless spraying, and more.

## Volume of VOCs Released and Reduction Rate (Japan)



\* In accordance with the four electrical and electronic industry associations' voluntary "No Relative Worsening of Results for FY2010" initiative, the year of comparison was changed from FY2000 to FY2010 for the reduction rate.

## Promotion of Disposal and Processing of Devices that Include PCBs

In accordance with the Act on Special Measures concerning Promotion of Proper Treatment of PCB Wastes (PCB Special Measures Act), we are gradually disposing of devices that contain PCBs (polychlorinated biphenyls) such as transformers and condensers that were manufactured in the past and stored for nearly to 40 years.

In FY2024, we disposed of no waste containing high concentrations of PCBs<sup>\*1</sup> and treated 15.0 tons of waste containing trace amounts<sup>\*2</sup>.

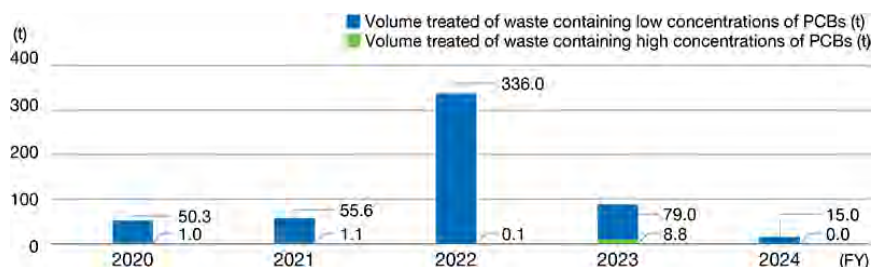
Since we began processing PCB waste in FY2007, through FY2024 we have disposed of approximately 114 tons of waste containing high concentrations of PCBs and treated about 828 tons of waste containing trace amounts.

Going forward, we will continue to work to comply with laws and treat PCB waste by the treatment deadline.

\*1 Waste containing high concentrations of PCBs: Waste with a PCB concentration in excess 0.5% (=5,000 mg/kg (=ppm))

\*2 Waste containing trace amounts of PCBs: Waste with a PCB concentration equal to or less than 0.00005% (=0.5 mg/kg)

## Volume Treated of Harmful Waste (Waste Containing PCBs)



## Promoting the 3Rs for Waste (Reduce, Reuse, and Recycle)

Meidensha is working to recycle waste generated at production sites and offices.

In FY2024, although there was an increase in the amount of metal waste generated following the retirement of a model in the EV business, advancement of the 3Rs at other production sites was able to control the amount of discharge and so the total amount of waste generated fell slightly compared to the previous fiscal year. Going forward, we will continue to work to reduce the amount of waste generated and improve the recycling rate by continuing to promote the 3Rs.

### Trends in Generation of Waste, etc., and Recycling Rate (Japan)



\* Construction sludge, etc., is excluded from the amount of waste, etc., generated.

\* Since FY2019, we have revised aggregation methods to improve the precision of recycling rate calculation.

### Breakdown of Waste Generated in FY2024 (Japan)



## Collaboration with Other Companies to Reduce Waste and Resource Use

### Recycling Epoxy Resin Molded Components

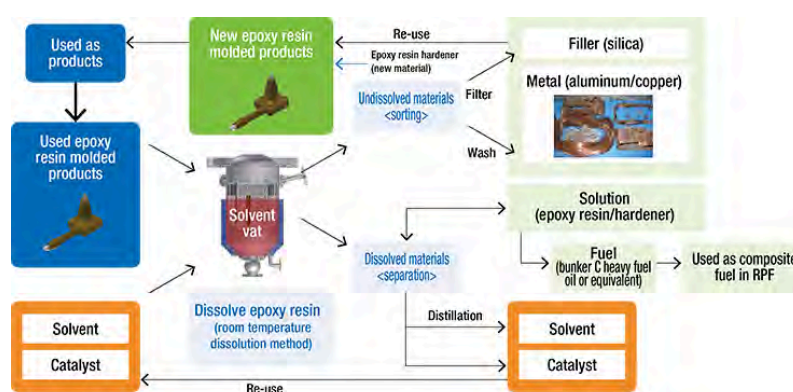
Meiden Chemical Co., Ltd., which is a group company involved with manufacture and sale of electrical insulators has realized the recycling of used epoxy resin molded components as raw materials by using a



method of depolymerization under ordinary pressure, which separates the metal from the resin. Epoxy resin molded components are generally disposed of in landfill as they are considered difficult to recycle; however, Meiden Chemical Co., Ltd. has licensed the patented room temperature dissolution method from Showa Denko Materials Co., Ltd. (formerly Hitachi Chemical Co., Ltd.), which enables it to recycle 95% of existing components, as well as control cost than sending them to landfill. During recycling, we conduct lifecycle assessment (LCA) according to data obtained at the testing plant, which quantitatively assesses environmental impact if recycled and if not recycled.

In addition to insulating molded components, Meiden Chemical Co., Ltd. is working to roll out insulating material products as major flagships with features such as long-life resin for impregnation and environmentally friendly low-odor varnish.

Meiden Chemical Co., Ltd. is currently engaging in research such as extraction of rare metals by dissolving insulating varnish from superconducting coils and recycling of fiber-reinforced plastic to produce resources again.



Flow chart of dissolution recycling of epoxy resin molded components



Dissolution plant exterior

## "Bottle to Bottle," a Horizontal Recycling Initiative for PET Bottles

In October 2023, we launched the "Bottle to Bottle" initiative in collaboration with Coca-Cola Bottlers Japan Inc., Asahi Soft Drinks Co., Ltd., and National Vending Co., Ltd. to recycle used PET bottles from our head office and R&D Center into new PET bottles, and introduced the initiative to Numazu works in June 2024. The initiative is the first in Japan for which Coca-Cola Bottlers Japan and Asahi Soft Drinks are collaborating with an electronics manufacturer on horizontal PET bottle recycling.

Bottle to Bottle is a recycling system in which used PET bottles are collected, recycled, and reused repeatedly as PET bottles.

Used PET bottles from our head office and R&D Center are still collected by cleaning companies and beverage manufacturers and recycled into various products, but we have never been able to determine what they were ultimately recycled into. Under this new scheme, 100% will be recycled into beverage product containers in the future.

This should enable us to recycle more than 9 tons of used PET bottles annually, leading to a roughly 60% reduction of CO<sub>2</sub> emissions compared with the same amount of PET bottles manufactured using new fossil-based raw materials.

We will continue to promote recycling activities within the Meiden Group.



An eco-station



A Coca-Cola Bottlers Japan vending machine with wrapping featuring a message to recycle, installed for this initiative



(Waste sorting box installed at Numazu Works in FY2024)





## Water Resources

### Policy

The Meiden Group will work on implementing measures to promote water resource conservation activities by utilizing water resources efficiently and respond to water risk that impacts business activities, as a step toward conservation of the global environment and realization of a sustainable society.

We will contribute to the solution of a range of social issues relating to the conservation of water resources through our businesses.

### Plan and Targets

The Meiden Group includes “promotion of water reuse” and “water safety” as part of the medium- to long-term “Environmental Vision.” We will work to preserve water resources through water conservation and effective utilization of rainwater; take steps to respond to water risks such as water shortages, flood, and contamination; and improve sanitation. In FY2024 we established water withdrawal reduction targets for four major factories in Japan (Numazu, Ota, Nagoya, Kofu) and developed initiatives to reduce water withdrawal.

Japan water withdrawal reduction targets (Four major bases of operation)

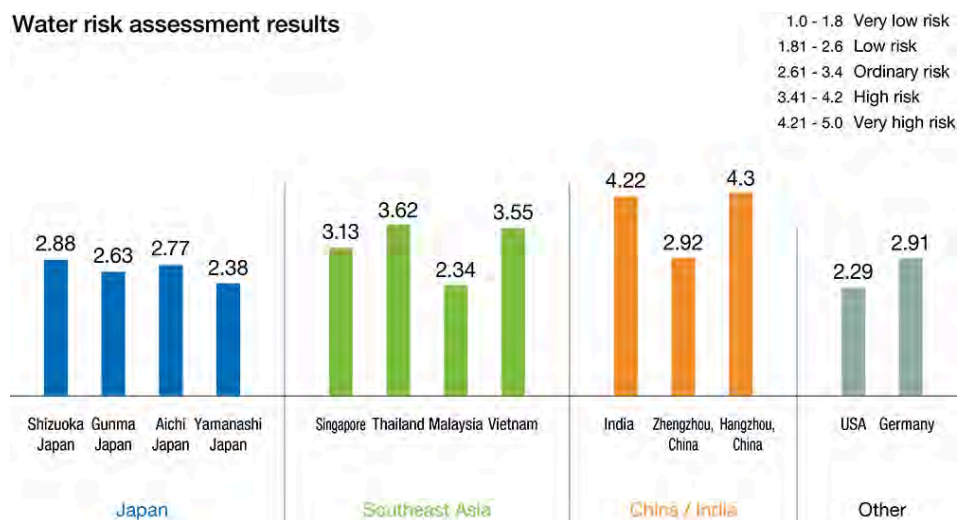
	FY2023	FY2024	FY2025	FY2026	FY2027
Target	—	1% reduction compared to FY2023	3% reduction compared to FY2023	5% reduction compared to FY2023	7% reduction compared to FY2023
Results (1000 m <sup>3</sup> )	1,676	1,682	—	—	—
Compared to FY2023	—	+0.4%	—	—	—

### Risk Assessments

## Water Risk Assessments

The Meiden Group conducts evaluation of water risk for initiatives to conserve water and comply with effluent standards. Using the Water Risk Filter, a water risk assessment tool distributed by the World Wide Fund for Nature, we assessed 14 production sites in 9 countries. We found that although domestic sites were within ordinary risk levels, more than half of overseas sites were located in high-risk areas. In particular, risks related to water quantity and quality assurance were found to be high. Some sites in India (Andhra Pradesh) and China (Zhengzhou) were found to be located in very high-risk areas. For these, we will take the optimal measures for each site based on assessment results.

## Water Risk Assessment Results for Regions Where Production Bases are Located (as of May 2025)



### Percentage of Production Sites and Volume of Water Withdrawn by Level of Water Risk (FY2024)

	Number of sites	Percentage of sales	Volume withdrawn (1,000 m <sup>3</sup> )	Percentage of volume withdrawn
Very high risk (4.21~5.0)	2	3.0%	48	2.7%
High risk (3.41~4.2)	2	3.4%	18	1.0%
Ordinary risk (2.61~3.4)	7	81.5%	1,706	95.2%
Low risk (1.81~2.6)	4	12.0%	20	1.1%
Very low risk (1.0~1.8)	0	0%	0	0%

Achievements • Data

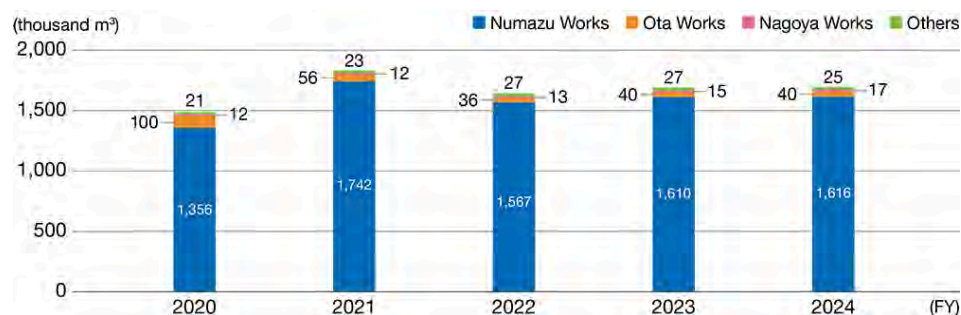
### Trends in water withdrawal

#### Water Withdrawals, by Source (Japan)

	FY2019	FY2020	FY2021	FY2022	FY2023	FY2024
Groundwater (1,000 m <sup>3</sup> )	1,626	1,344	1,728	1,552	1,595	1,608
Industrial water (1,000 m <sup>3</sup> )	70	87	43	22	27	26
Tap water (1,000 m <sup>3</sup> )	62	59	62	69	70	65
Recycled water	0	0	0	0	0	0
Total (1,000 m <sup>3</sup> )	1,758	1,490	1,833	1,643	1,692	1,698

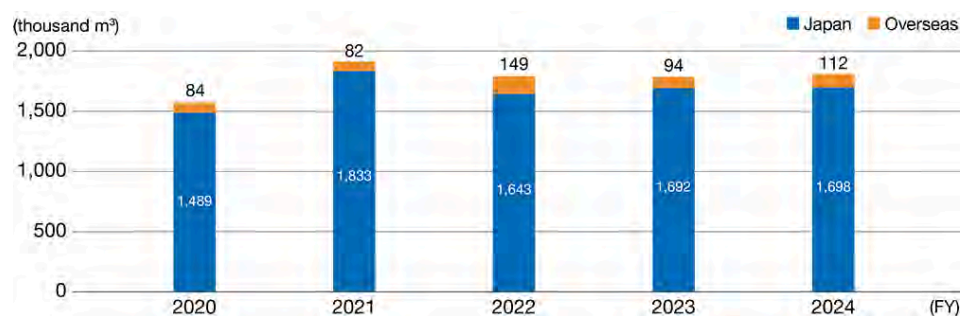
\* Measurement points were changed in fiscal 2021 in order to increase accuracy, there is no continuity with those in fiscal 2020 and before.

## Water Withdrawals, by Production Site (Japan)



## Water Withdrawals, by Region (Japan / Overseas) (Consolidated Group)

\* Overseas values are reference values



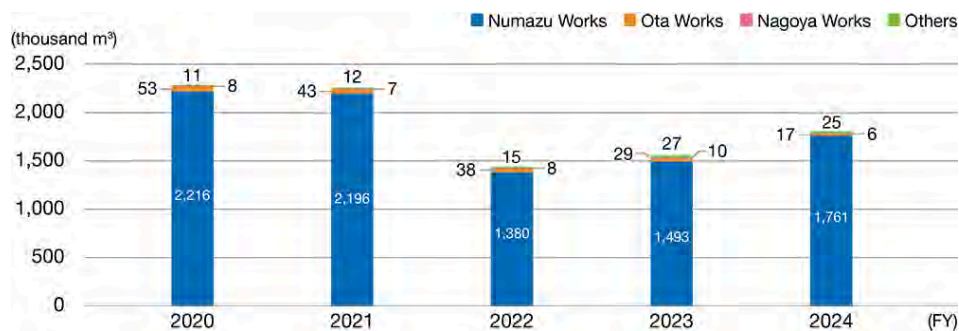
## Trends in Effluent Volume (Japan)

We ensure legal compliance by establishing and applying at each site and subsidiary voluntary standards that are stricter than legal restrictions.

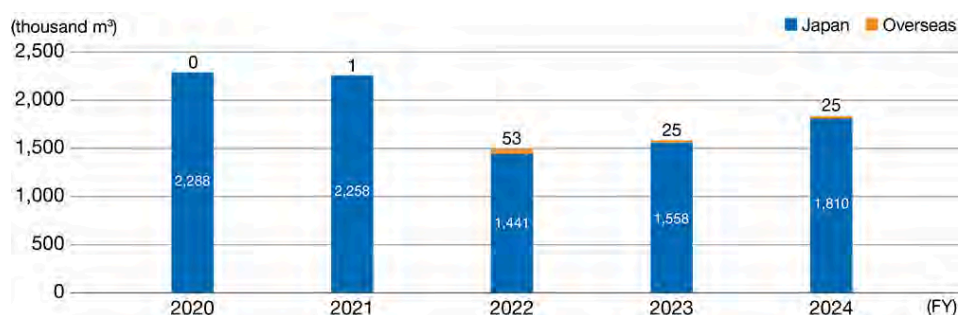
## Effluent Volume, by Discharge Location (Japan)

Discharge location	FY2019	FY2020	FY2021	FY2022	FY2023	FY2024
Fresh surface water (1,000 m³) Direct discharge to rivers, lakes, and marshes	2,189	2,273	2,242	1,421	1,527	1,781
Brackish surface water/seawater (1,000 m³) Direct discharge to low-salinity water (brackish water) resulting from mix of seawater and freshwater, and to seawater	0	0	0	0	0	0
Groundwater (1000 m³) Direct discharge underground	0	0	0	0	0	0
Third-party discharge locations (1000 m³) Discharged by sewage and industrial waste disposal companies	10	15	16	20	32	29
Total (1,000 m³)	2,199	2,288	2,258	1,441	1,559	1,810

#### Volume Discharged, by Production Site (Japan)



#### Effluent Volume, by Regions (Japan / Overseas) (Consolidated Group)



\* Overseas values are reference values

\* Discharge data for overseas productions sites has been collected since FY2022

#### Trend in Water Quality Data (Japan)

	FY2019	FY2020	FY2021	FY2022	FY2023	FY2024
BOD	4,843 kg	6,424 kg	6,408 kg	4,474 kg	5,344 kg	5,241 kg

#### Third-Party Verification

Every year, the Meiden Group asks a third party to verify environmental data for the amount of water we withdraw and discharge.

On August 29, 2024, the Japan Audit and Certification Organization for Environment and Quality (JACO) completed their third party verification for FY2023, finding that in Japan, we withdrew 1,692,000 m<sup>3</sup> of water and discharged 1,559 m<sup>3</sup> of effluent.

Third-Party Verification >

## Toward Conservation and Effective Utilization of Water Resources

### Rebuilding water infrastructure facilities at production sites

More than 125 years have passed since the Meiden Group's founding, and the infrastructure facilities at our Japanese production sites have aged noticeably.

This is particularly true of the water infrastructure, which we are rebuilding as a special priority for BCP reasons.

At Numazu Works, one of our main production sites in Japan, we began construction of a new large integrated water-purification tank in 2024, which is scheduled to go into operation in April 2026. We also plan to bring water supply pipes above ground starting in 2026. We are also currently reviewing constructing new integrated purification tanks in 2026 for Nagoya Works, another major Japanese production site. Ota Works is likewise aging and updates will be planned and implemented for this site as well.

#### [Overview of Project to Rebuild Water Infrastructure]

- (1) Remove individual purification tanks to comply with Japan's Private Sewerage System Act and improve the quality of effluent
- (2) Use exposed aboveground piping by implementing the integrated plant construction method for buried water supply pipes (leak countermeasures)
- (3) Strengthen water quality controls and improve the system for calculating the amount of treated effluent by separating processed effluent system and rainwater

## Initiatives to Conserve Water Resources through Our Business

In addition to design, construction, and execution of water treatment plants, the Meiden Group provides total support through to operation and maintenance as a general water treatment manufacturer, based on our record of involvement with construction and development of water and sewerage systems in Japan. We are contributing to the solution of a range of issues relating to the conservation of water resources through or water infrastructure systems business, which is one of our core businesses.

### Order Taken for Tuas Water Reclamation Plant

#### Will Provide Ceramic Flatsheet Membranes with World's Largest Treatment Capacity of 97,500 m<sup>3</sup>/Day

MEIDEN SINGAPORE PTE. LTD. (MEIDEN SINGAPORE) has received an order from Singapore enterprise Koh Brothers Building & Civil Engineering Contractor (Pte.) Ltd. for ceramic flatsheet membranes for an industrial effluent MBR\* facility at the Tuas Water Reclamation Plant of the Singapore Public Utilities Board (PUB). This project is a new water reclamation plant to be built in western Singapore, scheduled for completion in 2025.

MEIDEN SINGAPORE will supply ceramic flatsheet membranes with a treatment capacity of 97,500 m<sup>3</sup>/day to the plant. The Meidensha ceramic flatsheet membranes to be delivered can help to save

energy and will offer high durability, excellent chemical resistance, and long life.

- \* MBR: Abbreviation of membrane bioreactor, a technology that separates activated sewage. It uses membranes instead of conventional settling tanks to separate treated water and activated sludge from each other, thereby cleaning sewage and industrial effluent.

Under a 2010 memorandum of understanding (MOU) with PUB for the joint development of water treatment technology, we have been conducting a demonstration study on industrial effluent treatment at the Jurong Water Reclamation Plant. In 2014, a 4,550 m<sup>3</sup>/day demonstration plant began operating at the Jurong site. Highly concentrated industrial effluent that had previously been difficult to reclaim was successfully reused. PUB made note of the achievements, which led to the recent order for ceramic flatsheet membranes for the Tuas Water Reclamation Plant.

Tuas Water Reclamation Plant



©2021 PUB, Singapore's National Water Agency

### Order Taken for Ceramic Flatsheet Membranes for Singapore Public Utilities Board Chestnut Avenue Waterworks; World's Greatest Treatment Capacity at 291,200 m<sup>3</sup>/Day

Overseas subsidiary Meiden Singapore Pte. Ltd. (Meiden Singapore) has taken an order from a Singaporean company to supply ceramic flatsheet membranes for the Chestnut Avenue Waterworks of the Singapore Public Utilities Board (PUB). The order is for ceramic flatsheet membranes with a treatment capacity of 291,200 m<sup>3</sup>/day. The project is to replace the existing water purification system, which uses organic membranes, and is to be completed in 2026.

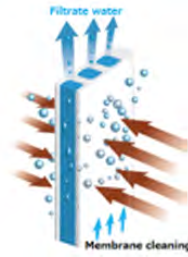
Meidensha ceramic flatsheet membranes to be supplied for the project will be housed in existing water tanks. This takes advantage of the characteristics of immersed-type membranes and minimizes installation costs. In addition, ceramic flat-sheet membranes offer excellent product durability, longevity, and energy efficiency. This makes them a highly economical choice, as they offer, for example, lower running costs (maintenance and membrane replacement costs) compared to the existing organic membranes.

Singapore, where water supply stability is a national concern, is a core base for Meidensha's ceramic flat-sheet membrane business. As such, Meidensha has conducted demonstration research at various water treatment plants in Singapore. In addition to our continued assistance in securing water resources and a stable supply of water, Meidensha also seeks to contribute to the Global Hydrohub initiative of Singapore's government.

## ■ About Ceramic Flatsheet Membranes



Appearance of ceramic flatsheet membrane



Cross-section diagram showing sewage filtration with ceramic flatsheet membrane

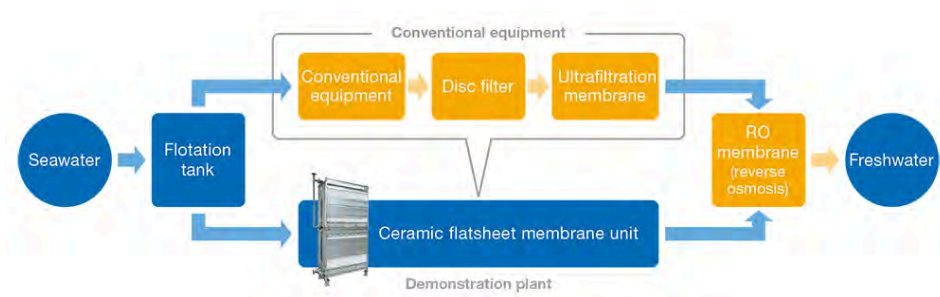
- Ceramic flatsheet membranes contain countless pores invisible to the human eye. The pores filter out impurities as sewage passes through.
- The 6-mm-thick ceramic flatsheet membrane has a hollow structure and collects clean filtered water through a collecting tube on the inner side.

## Singapore Public Utilities Board Construction of a pretreatment demonstration plant using ceramic flatsheet membranes at the Tuas Desalination Plant

Overseas subsidiary Meiden Singapore Pte. Ltd. is constructing a pretreatment demonstration plant using ceramic flatsheet membranes at the Singapore Public Utilities Board's (hereafter PUB) Tuas Desalination Plant.

Along with the implementation of energy reduction measures, this demonstration is expected to minimize equipment space compared to conventional facilities.

The Tuas Desalination Plant uses reverse osmosis membranes for desalinization. This demonstration plant makes use of ceramic flatsheet membranes in the impurity removal phase of the pretreatment process and is installed using existing pressurized-flotation equipment inside the Tuas Desalination Plant. (Processing capacity: approximately 32,000 m<sup>3</sup>/day)



## Water Resource Conservation R&D

Along with climate change, limited water resources is a global issue. The Meiden Group seeks to help solve water issues around the world so that water can be used sustainably. This is why we are developing



our water infrastructure and ceramic flatsheet membrane businesses and actively investing in research and development.

#### Amount Invested in Water Infrastructure and Ceramic Flatsheet Membrane Business R&D

	Unit	FY2021	FY2022	FY2023	FY2024
Amount invested in water infrastructure and ceramic flatsheet membrane business R&D	Million yen	1,026	1,075	1,035	1,153

#### MLIT B-DASH Project Completed a full-scale demonstration project that uses artificial intelligence (AI) to control wastewater processing plant operations

Meidensha has been selected for the "B-DASH Project" led by the Ministry of Land, Infrastructure, Transport and Tourism, and is conducting a demonstration project that utilizes AI for wastewater treatment plant operation support technology. The MLIT's National Institute for Land and Infrastructure Management (hereafter NILIM) contracted us to install AI-logic equipment to determine operation policies, lake conditions, and more, as well as AI-logic systems that centralize management of the various data from monitoring system equipment, the results of water quality analysis, and more in the Hiroshima Seibu Water Reclamation Center and the Funabashi Takase Sewage Treatment Plant. By applying AI to the operation management techniques of skilled technicians, the AI's operational decisions for dissolved oxygen (DO) settings and polyaluminum chloride (PAC) injection settings matched more than 80% of those made by skilled technicians. Implementing AI operation diagnoses resulted in stable water processing volumes in line with the previous year. Also, in July 2025 the NILIM created guidelines for this technology and the government intends to expand it throughout Japan as innovative technology.

#### Development of TELEMOT MT2 Remote Monitoring Equipment

In 2005, we launched the TELEMOT Series as remote monitoring equipment for public infrastructure and have so far sold approximately 3,400 units as of last year. Last year we developed the TELEMOT MT2 as the successor of the TELEMOT MT and released it to market.

Both generations in the TELEMOT Series are highly compatible. As remote monitoring terminals using the cloud and remote monitoring equipment, regular updates to TELEMOT allow the series to be used from cloud and monitoring systems for many years to come.

TELEMOT MT2 also works in the most modern communication environments and can be deployed in large- and medium-scale facilities that could previously not incorporate conventional equipment, thanks to employing the most advanced telecommunication methods, vastly expanding input and output signal points, and implementing communication equipment with ADC Series (PLC).

#### Acquired technical certification for water purification facilities using new style ceramic flatsheet membrane units

We manufacture ceramic flatsheet membrane units geared for domestic and overseas water purification, wastewater processing, and effluent treatment that can be used in a wide array of fields, and in recent



years have developed a new type of unit.

By directly connecting the ceramic flatsheet element with the water collection pipe for the membrane-filtered water, these units eliminate the hose used in conventional units, which allows for reductions in equipment floorspace and ongoing management costs.

We conducted a demonstration membrane filtration project using our new unit with actual river water as the water source and achieved stable operations with excellent membrane-filtered water quality, and so on March 18 2024 received technical certification for water filtration equipment from the Japan Water Research Center.

## Partnerships with Outside Parties

The Meiden Group, in cooperation with its stakeholders in Japan and overseas, will pursue manufacturing that contributes to resolving issues such as Sustainable Development Goal 6 (CLEAN WATER AND SANITATION) and Goal 14 (LIFE BELOW WATER), realizes sustainable value creation, and works to resolve social issues.

### Participation in Initiatives

#### CDP (Water Security)

Through our participation in initiatives, Meidensha is promoting water resource conservation activities through the efficient use of water resources and measures against water risks that affect business activities.

CDP Water Security is an international NGO that operates a global disclosure system for corporate water risks. Meidensha has been participating by responding to the organization's questionnaire since 2017.

We received a "B" rating from CDP Water Security in 2024.

### Recognition from Other Organizations

In October 2024, Meidensha received the Water Cycle Active Business certification from the Cabinet Secretariat's Office of Water Cycle Policy as recognition of being a business that actively contributes to the water cycle.

This certification system began in 2024 as a way to further encourage businesses to contribute to the water cycle and help increase recipients' corporate value. Moving forward, we will continue to act as a business with a wide-ranging impact on the water cycle.



# Biodiversity

## Policy

### Policy on the Conservation of Biodiversity

The Meiden Group relies on the blessings of nature, which has biodiversity at its core, while its activities also have an effect on the natural environment. The Meiden Group aims to minimize this impact, create new symbiotic relationships, and contribute to the creation of a sustainable society.

The Meiden Group understands that the conservation of biodiversity is a major issue to be faced in order to achieve a sustainable society, hence reflects its ethos on biodiversity conservation in the Meiden Group's "Basic Environmental Philosophy," "Environmental Policies," and "Environmental Vision."

Furthermore, we have drafted guidelines on the conservation of biodiversity in order to clearly state the relationship between our business activities and preserving biodiversity and we are applying them in our business activities.

### Meiden Group Biodiversity Guidelines

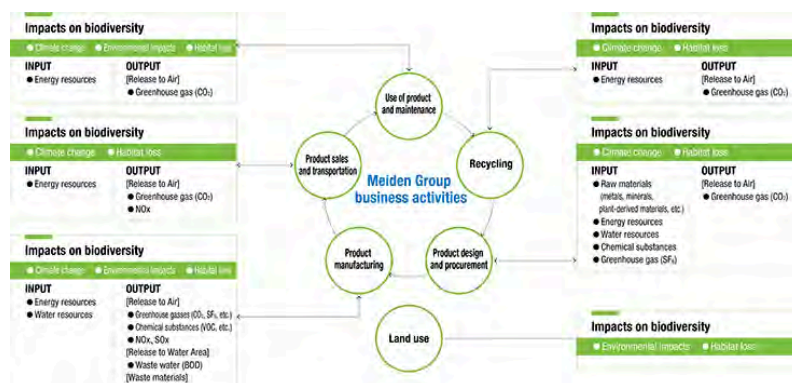
#### Basic Policy

We understand that our business activities benefit from the blessings of nature and at the same time, give various environmental impacts. We will deepen our people's understanding of the importance of "Conserving Biodiversity" and contribute to realizing a sustainable society through our products and innovative technologies.

#### Action Guidelines

- ① We will contribute to conserving biodiversity through the development and supply of environmentally conscious products and innovative related technologies and thus promote our water processing business and renewable energy-related business and reduction of the use of hazardous chemical substances in our products.
- ② We will clarify how our business activities interrelate with biodiversity and we will help to conserve biodiversity by reducing the environmental impacts of our business activities.
- ③ We will comply with applicable laws, regulations, and international rules relating to biodiversity.
- ④ We will deepen our people's understanding of "Conserving Biodiversity" and we will take voluntary related initiatives at home and abroad.
- ⑤ We will undertake activities in cooperation with our stakeholders such as local communities, non-profit organizations (NPOs), non-governmental organizations (NGOs), governments, etc., and we will promote environmental communication with such activities' information.

## Map of Relationships Between Business Activities and Biodiversity



\* This map is based on the Business & Biodiversity Interrelationship Map® of the Japan Business Initiative for Biodiversity (JBIB).

## Information Disclosure Based on Taskforce on Nature-related Financial Disclosures (TNFD)

In recent years, the loss of biodiversity accompanying climate change has been recognized as a risk with significant impact on business operations.

The Meiden Group, in order to move “toward the realization of a society in harmony with nature,” has set the conservation of natural resources as a critical business issue and considers the understanding of how business activities depend upon and influence nature as a prerequisite for continued growth.

As one aspect of that understanding, we systematically evaluate our relationship with natural resources using the LEAP approach\* (Locate, Evaluate, Assess, Prepare) recommended by the TNFD (Taskforce on Nature-related Financial Disclosures).

In the future, we will extend these evaluations further and disclose the financial impacts regarding natural resources in accordance with TNFD guidelines.

Through these actions, the Meiden Group aims to mitigate risks and extract opportunities related to the environment, strengthen the mutual trust we share with our stakeholders, and drive continuous corporate value.

\* LEAP approach: A comprehensive approach for evaluating environment-related issues such as direct links with nature, dependencies on nature, impact, risks, opportunities, and more.

### Initiatives

The Meiden Group is actively conducting protection and conservation activities in conjunction with local residents for nearby creatures, etc., on Meiden property and elsewhere, at each location.

## A Head Office Building That is Considerate of Biodiversity

The ThinkPark Tower head office building in Osaki, Shinagawa City, Tokyo, is surrounded by the ThinkPark Forest on a block that is approximately 40% greenery. It is an oasis in the city and provides a relaxing

space for employees and the local community.

Also, the Kazenomichi Path, which was designed so that the prevailing wind blows from the Meguro River and Tokyo Bay, provides relief from the heat island effect. ThinkPark Forest has been certified as an “urban oasis” by the Social and Environmental Green Evaluation System (SEGES)\*.

\* A certification system for evaluation of green initiatives.

SEGES (Only Japanese)



ThinkPark Tower



ThinkPark Forest

## Initiatives at Each Site for the Conservation of Biodiversity

At each site of the Meiden Group, we are working to conserve biodiversity on the grounds of each site and nearby.

### Head Office Area

#### Osaki-no-Mori Nature Observation Events

We provide elementary school students near our head office with opportunities to interact with nature as they search for cicadas living in the area.



#### Participation in Ohana Ippai Osaki Activities

At head office and a group company (Meiden Engineering Corporation), we prepared soil in flower beds near Osaki Station, which are managed by Osaki Machi Unei Kyougikai, along with co-sponsors. Going forward, we will continue to actively participate in activities that leave abundant nature for future generations.



## Numazu Works

The Numazu Works is blessed with the bounty of nature such as a green zone (area = approximately 65,000 m<sup>2</sup>) and groundwater. We are conducting activities to use these natural resources in a sustainable manner and contribute to the community.

### Maintaining Biotores

Atrocalopteryx atrata dragonflies, which are seen near healthy waterside environments, have established themselves at the biotope in Numazu Works. We maintain a biotope that appeals to insects and other varieties of dragonflies.



### Cleanup at Senbonhama Beach

In November 2024, we carried out a cleanup at Senbonhama Beach in Numazu city as a joint effort with nearby companies.



## Ota Works

### Received the METI Minister's Award

Ota Works received METI's Minister's Award in the National Award for Greenery Factory program\* (Factory Greening Award Program).



- \* The National Award for Greenery Factory program is a program offered by METI and the Japan Greenery Research and Development Center that presents awards to factories that have made significant improvements to the environment both inside the factory and its surrounding area, with the goal of encouraging factories to add plant life to their environments.



### Kanayama Red Pine Grove Conservation Activities

The red pine grove in Kanayama is the most well-known natural landscape in Ota City. Kanayama Castle was created using the natural contours of Kanayama and it is a precious historic site that is listed in the top 100 castles in Japan. The Ota works is registered as part of the “red pine managing owner system” and we work to conserve the red pine grove by participating in activities such as weeding.



### The Biodiversity Working Group, the Four Electrical and Electronic Industry Associations

Meidensha has participated in the Biodiversity Working Group, a group consist of four electrical and electronic industry associations, since its inception in FY2011. As a member of the industry, we are promoting our biodiversity initiatives through the activities of the working group and enhancing our own efforts.

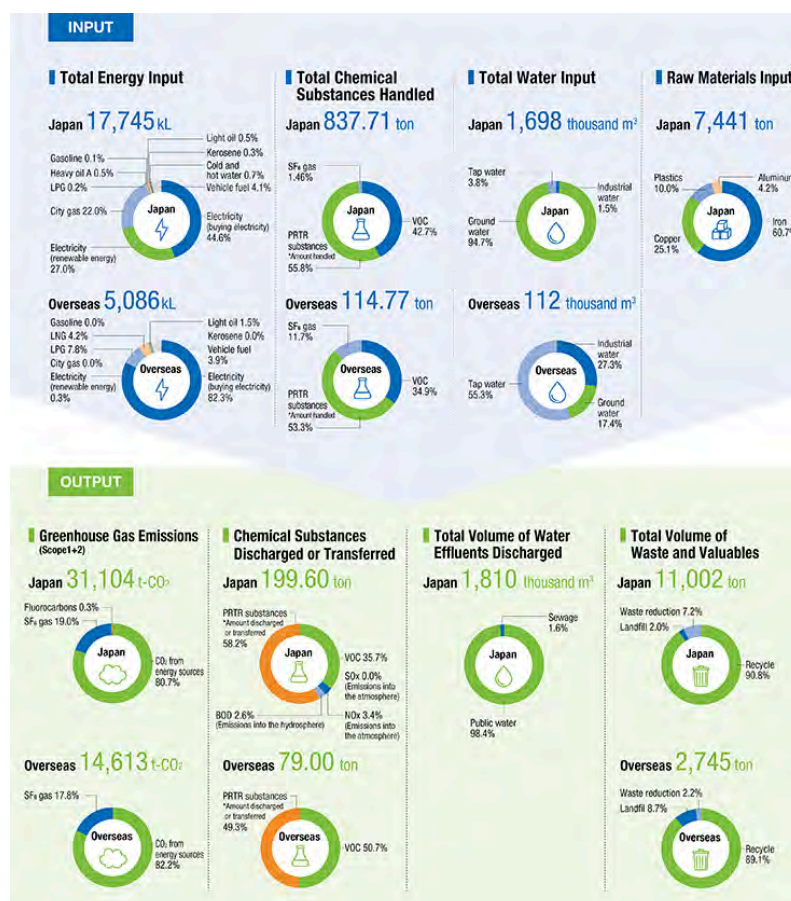
[Click here to view information on the Electronic Industry Associations Biodiversity Working Group.](#)

## Overview of Environmental Impacts by Our Business Activities

The Meiden Group finds out the overview of environmental impacts by our business activities and uses this information to plan specific activities.

### Overview of Environmental Impacts by Our Business Activities (FY2024)

Our rate of use of major resources (INPUT) and our environmental impacts from our business activities (OUTPUT) are shown below.



## Environmental Impact Data (FY2024) From the Four Main Manufacturing Sites (Domestic Manufacturing Sites)

### Numazu Works

#### Message From the Environmental Manager

The Numazu Works is the main factory of the Meiden Group and conducts development, design, and manufacture of supervisory control equipment, power conversion equipment, power transformers and distribution panels, motor control equipment(inverters), electronic products, and surge arresters, development of software for integrated control devices and standalone, and on-site installation, and after-sales service for products.

At Numazu Works, in addition to promoting efficient energy use through capital investments and improvements to equipment operation, we began procuring electricity from CO<sub>2</sub>-free sources in July 2023 and are working towards the goal of 100% CO<sub>2</sub>-free energy by FY2027. Additionally, to avoid the risk of wastewater discharge, we began a complete upgrade of our wastewater system in FY2022 and are targeting FY2026 for completion of the plant's wastewater system.

Numazu Works, Environmental Manager, Masanori Fukumoto

#### Environmental Impact Data (FY2024)

##### Numazu Works

INPUT			OUTPUT		
<b>Energy</b>			<b>Greenhouse gases</b>		
Total energy input	9,282	kL	Greenhouse gases (Scope 1)	10,593	t-CO <sub>2</sub>
>Electricity	6,699	kL	>CO <sub>2</sub> attributable to energy use	4,645	t-CO <sub>2</sub>
>>Electricity from renewable energy	1,883	kL	>SF <sub>6</sub> gas	5,922	t-CO <sub>2</sub>
>City gas	2,487	kL	>CFCs	25.9	t-CO <sub>2</sub>
>LPG	12	kL	Greenhouse gases (Scope 2)	9,313	t-CO <sub>2</sub>
>Heavy oil A	20	kL	>CO <sub>2</sub> attributable to energy use	9,313	t-CO <sub>2</sub>
>Gasoline	16	kL	Reduction benefit from internal carbon pricing	234	t-CO <sub>2</sub>
>Light oil	0.04	kL	<b>Chemicals</b>		
>Kerosene	2.1	kL	VOC (Emissions to air)	15.0	ton
Cold and hot water	0	kL	SOx (Emissions to air)	22.8	Kg
Vehicle fuel	47	kL	NOx (Emissions to air)	4,477	Kg
Equipment subject to internal carbon pricing	215	Millions of yen	BOD (Emissions to air)	5,082	kgBOD
<b>Chemicals</b>			Amount of PRTR substances* released or transferred	61.5	ton
SF <sub>6</sub> gas	12,220.5	kg	<b>Water</b>		
VOC	47.4	ton	Effluent amount	1,761.3	thousand m <sup>3</sup>
Amount of PRTR substances* handled	77.8	ton	>Drained to sewer	5.9	thousand m <sup>3</sup>
<b>Water</b>			>Drained to public waters	1,755	thousand m <sup>3</sup>
Water input volume	1,615.7	thousand m <sup>3</sup>	<b>Waste</b>		
>Tap water	23.3	thousand m <sup>3</sup>	Waste emissions volume	3,396.6	ton
>Industrial water	0	thousand m <sup>3</sup>	>Recycling volume	2,878.0	ton
>Groundwater	1,592	thousand m <sup>3</sup>	>Final disposal volume	21.9	ton
			>Volume reduction volume	496.7	ton



## Ota Works

### Message From the Environmental Manager

The Ota Works conducts development and manufacture of large electric generators, power generation equipment, dynamometer systems, and control equipment, etc.

In addition to previous environmental activities, this year, we procured CO<sub>2</sub>-free electricity and achieved zero greenhouse gas emissions from electricity consumption. We will continue working to reduce our environmental impact and achieve the SDGs.

Ota Works, Environmental Manager, Manabu Fujikawa

### Environmental Impact Data (FY2024)

Ota Works					
INPUT			OUTPUT		
<b>Energy</b>			<b>Greenhouse gases</b>		
Total energy input	1,931	kL	Greenhouse gases (Scope 1)	1,031	t-CO <sub>2</sub>
>Electricity	1,437	kL	>CO <sub>2</sub> attributable to energy use	1,005	t-CO <sub>2</sub>
>>Electricity from renewable energy	1,437	kL	>SF <sub>6</sub> gas	0	t-CO <sub>2</sub>
>City gas	344	kL	>CFCs	26.2	t-CO <sub>2</sub>
>LPG	7	kL	Greenhouse gases (Scope 2)	0	t-CO <sub>2</sub>
>Heavy oil A	20	kL	>CO <sub>2</sub> attributable to energy use	0	t-CO <sub>2</sub>
>Gasoline	1	kL	Reduction benefit from internal carbon pricing	0	t-CO <sub>2</sub>
>Light oil	68	kL	<b>Chemicals</b>		
>Kerosene	34	kL	VOC (Emissions to air)	11.6	ton
Cold and hot water	0	kL	SOx (Emissions to air)	28	Kg
Vehicle fuel	21	kL	NOx (Emissions to air)	421	Kg
Equipment subject to internal carbon pricing	0	Millions of yen	BOD (Emissions to air)	53	kgBOD
<b>Chemicals</b>			Amount of PRTR substances* released or transferred	18.7	ton
SF <sub>6</sub> gas	0	kg	<b>Water</b>		
VOC	21.9	ton	Effluent amount	17.1	thousand m <sup>3</sup>
Amount of PRTR substances* handled	23.0	ton	>Drained to sewer	0	thousand m <sup>3</sup>
<b>Water</b>			>Drained to public waters	17.1	thousand m <sup>3</sup>
Water input volume	39.7	thousand m <sup>3</sup>	<b>Waste</b>		
>Tap water	13.9	thousand m <sup>3</sup>	Waste emissions volume	568.3	ton
>Industrial water	25.9	thousand m <sup>3</sup>	>Recycling volume	501.2	ton
>Groundwater	0	thousand m <sup>3</sup>	>Final disposal volume	4.0	ton
			>Volume reduction volume	63.1	ton

## Nagoya Works

### Message From the Environmental Manager

Nagoya Works develops and manufactures logistics and transportation products, ceramic flatsheet membranes used in water treatment, and other such products, and has also been manufacturing integrated motor/inverter equipment for EVs since FY2020. In FY2024, we began developing and manufacturing ceramic inserts for use primarily in public works projects, and also began research and development into areas involving high-concentration ozone gas as well as the application and development of ceramic flatsheet membranes.

In FY2024, production of integrated motors for EVs and ceramic flatsheet membranes decreased, resulting in lower emissions of greenhouse gases, but we built on that by operating equipment efficiently and are aiming for further improvements in emissions per unit of production.

And, in FY2025, we will switch all on-site equipment to CO<sub>2</sub>-free energy.

As the rate of decarbonization increases and technology for the electrification, computerization, and artificial intelligence of vehicles evolves rapidly, Nagoya Works will continue to focus on using electrification to contribute to society.

Nagoya Works, Environmental Manager, Tomohisa Asakura

### Environmental Impact Data (FY2024)

Nagoya Works					
INPUT			OUTPUT		
<b>Energy</b>			<b>Greenhouse gases</b>		
Total energy input	2,043	kL	Greenhouse gases (Scope 1)	1,353	t-CO <sub>2</sub>
>Electricity	1299.0	kL	>CO <sub>2</sub> attributable to energy use	1,347	t-CO <sub>2</sub>
>>Electricity from renewable energy	0.0	kL	>SF <sub>6</sub> gas	0	t-CO <sub>2</sub>
>City gas	736.4	kL	>CFCs	6.8	t-CO <sub>2</sub>
>LPG	0.1	kL	Greenhouse gases (Scope 2)	2,453	t-CO <sub>2</sub>
>Heavy oil A	0.0	kL	>CO <sub>2</sub> attributable to energy use	2,453	t-CO <sub>2</sub>
>Gasoline	0.0	kL	Reduction benefit from internal carbon pricing	0	t-CO <sub>2</sub>
>Light oil	0.0	kL	<b>Chemicals</b>		
>Kerosene	1.7	kL	VOC (Emissions to air)	0.2	ton
Cold and hot water	0.0	kL	SOx (Emissions to air)	0	Kg
Vehicle fuel	5.1	kL	NOx (Emissions to air)	1,819	Kg
Equipment subject to internal carbon pricing	0	Millions of yen	BOD (Emissions to air)	106	kgBOD
<b>Chemicals</b>			Amount of PRTR substances* released or transferred	5.6	ton
SF <sub>6</sub> gas	0	kg	<b>Water</b>		
VOC	0.2	ton	Effluent amount	6.3	thousand m <sup>3</sup>
Amount of PRTR substances* handled	9.9	ton	>Drained to sewer	0	thousand m <sup>3</sup>
<b>Water</b>			>Drained to public waters	6.3	thousand m <sup>3</sup>
Water input volume	17.4	thousand m <sup>3</sup>	<b>Waste</b>		
>Tap water	4.9	thousand m <sup>3</sup>	Waste emissions volume	451.1	ton
>Industrial water	0	thousand m <sup>3</sup>	>Recycling volume	410.7	ton
>Groundwater	12.6	thousand m <sup>3</sup>	>Final disposal volume	13.6	ton
			>Volume reduction volume	26,822	ton

## KOFU MEIDENSHA ELECTRIC MFG. CO., LTD.

### Message From the Environmental Manager

Since its foundation in 1943, KOFU MEIDENSHA ELECTRIC MFG. CO., LTD. has been manufacturing small and medium-capacity industrial motors and forklift motors, and has been manufacturing EV motors since 2009.

In FY2024, we advanced material recycling by sorting plastic waste (burnable waste) from the waste generated in the manufacturing process, reduced our environmental burden from waste generation, and reduced costs in processing. Each worksite strives to eliminate wasteful energy practices and improve emissions per unit of production. Also, in FY2024, we procured 44% of the energy we used from CO<sub>2</sub>-free energy as we work to reduce greenhouse gas emissions. In FY2025, we will switch all on-site equipment to CO<sub>2</sub>-free energy.

KOFU MEIDENSHA, Environmental Manager, Oda Shigehiro

### Environmental Impact Data (FY2024)

#### KOFU MEIDENSHA ELECTRIC MFG. CO., LTD.

INPUT			OUTPUT		
<b>Energy</b>			<b>Greenhouse gases</b>		
Total energy input	1,689	kL	Greenhouse gases (Scope 1)	608	t-CO <sub>2</sub>
>Electricity	1,359	kL	>CO <sub>2</sub> attributable to energy use	590	t-CO <sub>2</sub>
>>Electricity from renewable energy	545	kL	>SF <sub>6</sub> gas	0	t-CO <sub>2</sub>
>City gas	323	kL	>CFCs	17.8	t-CO <sub>2</sub>
>LPG	0.3	kL	Greenhouse gases (Scope 2)	1,573	t-CO <sub>2</sub>
>Heavy oil A	0	kL	>CO <sub>2</sub> attributable to energy use	1,573	t-CO <sub>2</sub>
>Gasoline	0	kL	Reduction benefit from internal carbon pricing	0	t-CO <sub>2</sub>
>Light oil	0	kL	<b>Chemicals</b>		
>Kerosene	0	kL	VOC (Emissions to air)	15.0	ton
Cold and hot water	0	kL	SOx (Emissions to air)	0	Kg
Vehicle fuel	7.1	kL	NOx (Emissions to air)	0	Kg
Equipment subject to internal carbon pricing	0	Millions of yen	BOD (Emissions to air)	0	kgBOD
<b>Chemicals</b>			Amount of PRTR substances* released or transferred	14.4	ton
SF <sub>6</sub> gas	0	kg	<b>Water</b>		
VOC	47.4	ton	Effluent amount	9.5	thousand m <sup>3</sup>
Amount of PRTR substances* handled	44.7	ton	>Drained to sewer	9.5	thousand m <sup>3</sup>
<b>Water</b>			>Drained to public waters	0	thousand m <sup>3</sup>
Water input volume	9.5	thousand m <sup>3</sup>	<b>Waste</b>		
>Tap water	6.9	thousand m <sup>3</sup>	Waste emissions volume	911.9	ton
>Industrial water	0	thousand m <sup>3</sup>	>Recycling volume	900.0	ton
>Groundwater	2.6	thousand m <sup>3</sup>	>Final disposal volume	0.104	ton
			>Volume reduction volume	11.842	ton

## Promotion of Environmental Communication

### Policy

The Meiden Group engages in dialogue with all our stakeholders to improve reliability in our environmental activities and contribute to achieving a sustainable society. We also proactively disclose transparent information about our environmental policies, initiatives, and results.

### Initiatives

## Promotion of Environmental Communication

The Meiden Group creates ongoing relationships of trust in order to remain a company that is needed by society.

We release unambiguous information concerning our environmental conservation activities and the state of our environmental impact through our website and in reports. We utilize the opinions and needs expressed by our stakeholders to fulfill the Meiden Group's environmental activities and environmental training.

Environmental Communication Organization Chart



## Initiatives

### Participation and registration of technology in the WIPO GREEN International Platform for Environmental Technology

Meidensha has participated as a partner business in WIPO GREEN since March 2022. The international platform is operated by the World Intellectual Property Organization (WIPO) of the United Nations to promote the use and diffusion of environmental technologies.

We have also registered certain of our environmental technologies and related patents in the WIPO GREEN database. These include an ecotank-type vacuum circuit breaker that does not use greenhouse gases, a ceramic flat-sheet membrane for water treatment devices that contributes to the effective use of water resources, and a charging and discharging device for battery testing that improves accuracy and efficiency in battery research and evaluation.

We will continue to register Meidensha's environmental technologies and disseminate them widely around the world through WIPO GREEN. This will give more people the opportunity to use them and help achieve a sustainable society by, for example, decarbonizing society and adapting to climate change.

#### [About WIPO GREEN]

Established by WIPO in 2013, WIPO GREEN is an online platform that promotes the transfer of environmental technologies by connecting providers of such technologies with those who wish to use them. The platform maintains a registry of environmental technologies and needs for such technologies around the world.

#### [WIPO GREEN Partners]

WIPO GREEN Partners are members of the WIPO GREEN Advisory Board that work with WIPO to guide the activities of the WIPO GREEN platform. They include public and private organizations who support, advise, and otherwise work on behalf of WIPO GREEN.



#### WIPO GREEN database List of our registered technologies (as of September, 2025)

Registered technology (product)	Month & year registered	Patents
Ecotank-type vacuum circuit breaker	February 2022	5
Ceramic flat-sheet membrane for water treatment devices	December 2022	4
Charging and discharging device for battery testing	February 2024	5
Cubicle-type dry air insulated switchgear (Eco C-GIS)	September 2024	2
Inverters for battery energy storage system with virtual synchronous generator functions (VSG-PCS)	January 2025	5
Pure ozonated water generator	July 2025	3

March 28, 2022

Meidensha Begins Participation as a Partner Business in WIPO GREEN Environmental Technologies Platform



February 29, 2024

Meidensha's Charging and Discharging Device for Battery Testing Newly Registered to WIPO GREEN Environmental Technologies Platform



August 4, 2025

Meidensha's pure ozonized water generator registered to WIPO GREEN.



Cooperation with WIPO GREEN | Ministry of Economy, Trade and Industry, Japan Patent Office (Only Japanese)



## Ota Works (Gunma) received METI's Minister's Award in the National Award for Greenery Factory program

Ota Works in Ohta City, Gunma Prefecture, one of Meidensha's major production hubs, received the METI's Minister's Award under the 2024 National Award for Greenery Factory program (Factory Greening Award Program).



### About the National Award for Greenery Factory program

Sponsored by the Ministry of Economy, Trade and Industry (METI) and the Japan Greenery Research and Development Center, the program commends factories that have made significant improvements to the environment inside and outside their sites with the aim of promoting the greening of factories. Awards are given in stages based on advances in green initiatives, starting with the Japan Greenery Research and Development Center's Chairperson's Award, followed by the Director-General's Award of a Regional Bureau of Economy, Trade and Industry, and culminating in the METI Minister's Award.

In recognition of the efforts listed below, Ota Works received the Development Center's Chairperson's Award in FY2010 and then the Director-General's Award of the Kanto Bureau of Economy, Trade and Industry in FY2013 before receiving the most prestigious award.

- Embracing the concept of a "Green Factory," Ota Works plants many trees around the site perimeter and also grows plants that flower in different seasons on its premises.
- Meiden Universal Service Ltd., a Meiden special subsidiary committed to hiring intellectually disabled persons, manages the greenery work, including maintenance, while also contributing to society through employment.
- Ota Works actively reduces its CO<sup>2</sup> emissions by procuring CO<sup>2</sup>-free electricity. In addition to participating in clean-up activities around the site and trimming undergrowth on local mountains, they provide environmental education, leveraging their expertise for the betterment of the local community.





Meiden Universal Service employees



Ota Works promotes greenery

As a member of the local community, Meidensha is committed to reducing the environmental impact associated with our business activities. At the same time, we take measures to ensure the safety and health of our employees, thereby creating a pleasant working environment.



## Foster Environmental Awareness

### Policy

The Meiden Group believes that increasing each person's environmental awareness leads to environmental contributions to society.

### Initiatives

## Foster Environmental Awareness

Our employee education curriculum for each employee level, such as new employees, new managers, and candidates for executive roles, includes regular education sessions on environmental initiatives such as sustainability management and environmentally conscious design.

Furthermore, we promote environmental activities at each site, conduct internal auditor education, etc., for personnel that are involved with work that impacts the environment, and conduct specialist education as necessary.

### Environmental Education (e-learning) for All Meiden Group Staff

FY2024's theme was "Considering Chemicals from an Environmental Perspective" to reflect the strengthening of regulations on chemical substances and the growing prevalence of news stories on environmental pollutants. 79.6% of Meiden Group employees took the online course, with separate educational sessions conducted for those who were unable to take the course.

### Promoting Acquisition of Certification Test for Environmental Specialists (Eco Test)® Certification

We promote acquisition of Eco Test ® certification (Certification Test for Environmental Specialists) provided by the Tokyo Chamber of Commerce and Industry, and provide sample questions, etc. through e-learning portals. The pass rate in Meidensha alone for the November test in FY2024 was 81.8% and as of March 2025 we have 973 Eco Test certification holders (excluding loaned employees). We offer support for testing fees and other assistance as part of our promotion for acquiring certification.

\* Eco Test® is a registered trademark of the Tokyo Chamber of Commerce and Industry.

## Specialist Education

We conduct chemical substance management, internal auditor, and other specialist education as necessary at each site for employees that promote environmental activities or whose work impacts the environment. In FY2024 we continued to offer our training for achieving carbon neutrality with suppliers. In addition, we gave training on ISO 14001 (a standard on environmental management systems) for staff at branch offices and divisions of the Head Office.

## Education Concerning Environmental Laws

We also teach employees about environmental laws and regulations as part of compliance education. FY2024 sessions covered environmental regulations, example violations and the reasons behind them, and compliance with environmental laws. We provide periodic explanations of actual violations at other companies as well as incidents that have occurred within our own Group. Analyzing these cases and discussing plans to prevent similar occurrences within our companies fosters compliance mindsets. Studying real-life examples helps strengthen internal risk management systems and acts as an opportunity to reiterate the importance of compliance.

## Sustainability Management Seminars for Management-Level Employees

Since FY2017, we have been inviting outside experts to hold sustainability management seminars for management. Topics have included the SDGs, ESG investment, TCFD, and SBTs. Meidensha promotes sustainability management by deepening our understanding of social trends and the environmental initiatives that corporations need to take.

### Results Data

## Environmental Education Results (FY2024)

Content	Times conducted	Number of participants	Outline
Environmental education (e-learning)	1	6,855	<ul style="list-style-type: none"><li>Considering Chemicals from an Environmental Perspective at the Meiden Group</li></ul>
Specialist education	23	—	<ul style="list-style-type: none"><li>Carbon neutrality education for suppliers</li><li>Chemical substance management training</li><li>Group-wide internal environmental auditor training</li><li>ISO 14001 training</li></ul>
Education concerning environmental laws	Shared by video	7,393	<ul style="list-style-type: none"><li>Laws relating to the environment</li><li>Examples and causes of contraventions</li><li>Compliance with environmental laws</li></ul>