Special Feature

Environment

Report on environmental conservation

MEC's Measures to Address Climate Change

Initiatives to address climate change

MEC recognizes the urgent need to address climate change issues in order for society and MEC to grow sustainably. Accordingly, in line with the recommendations of the Task Force on Climate-related Financial Disclosures (TCFD) established by the Financial Stability Board (FSB) in 2022, we launched a project (TCFD Review Team) led by the ESG Committee to conduct climate scenario analyses in order to better understand the potential physical and transitional impacts of climate change. Based on the analysis of the project, we announced the endorsement of the TCFD recommendations and disclosed information on February 14, 2023.

Announcement of Support for TCFD Recommendations and Information Disclosure https://www.mec-co.com/en/ir/library/pdf/tekijikaiji/20230214_5404_tekijikaiji_1.pdf

Going forward, in light of recent international trends toward achieving carbon neutrality, we will further strengthen our initiatives to address environmental issues, including responses to climate change, as well as enhance our disclosure and proactively disclose information.

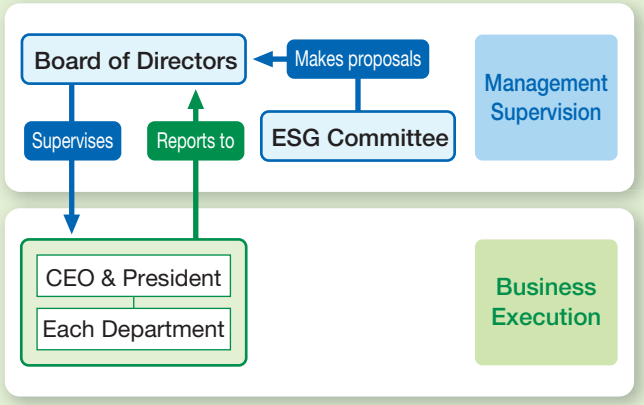
TCFD TASK FORCE ON CLIMATE-RELATED FINANCIAL DISCLOSURES

Announced the endorsement in February 2023

Governance system for climate change

The ESG Committee, chaired by the CEO & President, deliberates and formulates the risks and opportunities of climate change surrounding the Company as well as related proposals, which are then submitted to the Board of Directors.
The Board of Directors supervises the effectiveness of the ESG Committee's recommendations.

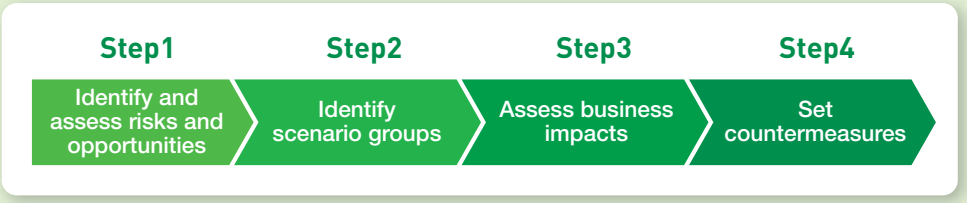
(Governance Structure)



Strategy relating to climate change

We strive to understand the various risks and opportunities arising from environmental issues caused by climate change as well as changes in the business environment and the impact of such changes. Moving forward, it will be necessary to respond to technological changes and stricter regulations resulting from the transition to a low-carbon society. In addition, natural disasters such as typhoons and floods are expected to become more frequent and severe.
In order to appropriately respond to these environments, we have identified risks and opportunities related to climate change, making specific note of particularly important risks and opportunities.

(Impact Assessment Process)



Special Feature

MEC's Measures to Address Climate Change

Risk Management

The Company's TCFD Study Team is identifying "risks and opportunities" related to climate change, working to recognize them in cooperation with related departments. The ESG Committee and other organizations discuss and decide upon measures to deal with key risks identified through the assessment process.

Scenario Analysis Based on Risks and Opportunities

The Paris Agreement calls for efforts to keep the global average temperature increase well below 2°C above pre-industrial levels, and to limit the increase to 1.5°C.
Using references such as the Intergovernmental Panel on Climate Change (IPCC)'s Sixth Assessment Report and the International Energy Agency's World Energy Outlook, we began examining physical and transitional risks associated with business management based on a "scenario based on current policies", "below 2°C scenario", and "1.5°C scenario" around 2030. In the "below 2°C" and "1.5°C" scenarios, where climate change measures are progressing, it is expected that demand for environmentally friendly products will increase and opportunities will be created for new markets, though production and raw material procurement costs will increase due to the introduction of a carbon tax, etc. On the other hand, if climate change measures are not sufficient, the possibility of the effects of more frequent and more severe natural disasters such as floods will increase.

List of Risks

Transition	Technology	• Increased production costs • Delayed development for environmentally friendly products • Increased investment costs for development of environmentally friendly products
	Policies/ Regulations	• Increase in material prices due to the introduction/expansion of carbon pricing (low financial impact) • Difficulty in procuring raw materials and restrictions/prohibitions regarding production and sales of raw materials/products in accordance with laws and regulations in each country
	Market	• Decreased demand for commodities that use large amounts of water
	Reputation	• Deterioration of corporate brand and reputation due to stricter evaluation standards and delays in responding to expansion of disclosure requirements
Physical	Acute	• Increased frequency/severity of abnormal weather/natural disasters
	Chronic	• Instability regarding supply of water, electricity, raw materials, and natural resources

Risks/Opportunities and Response

Risk		Key Risks	Key Opportunities	Company Response
Transition	Technology	• Delayed development for environmentally friendly products	• Increase in sales of environmentally friendly products • Increased profits from sales of environmentally friendly products	• Early collection of market needs • Preemptive development of environmentally friendly products
	Policies/ Regulations	• Difficulty in procuring raw materials and restrictions/prohibitions regarding production and sales of raw materials/products in accordance with laws and regulations in each country		
	Market	• Decreased demand for commodities that use large amounts of water	• Increase in profitability by entering into and expanding new markets with low carbon (carbon neutral) products	
Physical	Acute Increased frequency/ severity of abnormal weather/ natural disasters	• Illnesses • Production stoppages due to damage to the supply chain (Supply uncertainty, supply liability) • Decline in operating capacity at business sites (Supply liability) • Instability of supply of natural resources	• Increased credibility through a stable supply of products/services	• Maintain and strengthen alternative production systems • Enhance SCM • Develop/strengthen BCPs (Flexible work systems, etc.)

Metrics and Targets

Based on Vision for 2030 "Create new value with visionary technology and tackle the challenges of achieving a sustainable society in collaboration with customers", the MEC Group has identified six material issues that management will address in order to contribute to the creation of a prosperous and enriching society and environment by creating interfacial value through business activities.
Moving forward, we plan to link climate change assessment indicators and their material issues in detail, and disclose the collection, results, and target values of greenhouse gas emissions, etc.
In addition, we calculated and disclosed Scope 1 (fuels) and Scope 2 (electricity and heat) GHG Protocols as CO_2 emissions related to our Company in our Sustainability Report 2022.

Report on environmental conservation

Relationship between business activities and the environment

The Company develops, manufactures, and sells chemicals for manufacturing electronic substrates. Recognizing that our business activities consume energy and resources, we will work to reduce the environmental burden.
In addition to complying with environmental laws and regulations related to business activities, we provide products that take into consideration energy conservation measures, waste reduction, proper management of chemical substances, and product life cycle. The aim is to make effective use of resources, prevent pollution, and conserve the environment.

Offices in Japan

Office name	INPUT						
	Electricity consumption	City gas usage	Gasoline usage (company owned car)	Kerosene (heating of manufacturing sites)	Light oil (snowplow)	Water usage	Volume of PRTR target
Amagasaki HQ. (Amagasaki Factory)	1,075 thousand kWh	—	427 L	—	—	7,593 m³	132 t
Nagaoka Factory	660 thousand kWh	1,179 m³	286 L	18.0 kL	1.30 kL	24,717 m³	82.9 t
Nishinomiya Factory	37.6 thousand kWh	3 m³	—	—	—	639 m³	0 t
Amagasaki HQ. (R&D Center)	900 thousand kWh	—	831 L	—	—	6,501 m³	23.7 t (Including Higashi-hatsushima R&D Center)
Higashi-hatsushima R&D Center	447 thousand kWh	—	26 L	—	—	933 m³	Included in Amagasaki HQ. (R&D Center)
Amagasaki HQ. (Head Office)	525 thousand kWh	—	1,209 L	—	—	Included in Amagasaki HQ. (Amagasaki Factory, R&D Center)	—
Tokyo Sales Office	21.2 thousand kWh	—	4,143 L	—	—	—	—

Office name	OUTPUT					
	Production volume	Amount of CO_2 emissions	Amount of wastewater	COD	Industrial waste emissions	Of which amount of final waste disposal
Amagasaki HQ. (Amagasaki Factory)	2,901 t	377 t-CO_2	5,475 m³	0.115 t	Included in Amagasaki HQ. (R&D Center)	Included in Amagasaki HQ. (R&D Center)
Nagaoka Factory	18,331 t	353 t-CO_2	11,201 m³	0.830 t	166 t	5.82 t
Nishinomiya Factory	0 t	13.2 t-CO_2	482 m³	—	118 t	31.9 t
Amagasaki HQ. (R&D Center)	—	317 t-CO_2	4,176 m³	0.088 t	238 t*	48.6 t*
Higashi-hatsushima R&D Center	—	157 t-CO_2	933 m³	0.006 t	21.1 t	8.27 t
Amagasaki HQ. (Head Office)	—	187 t-CO_2	Included in Amagasaki HQ. (Amagasaki Factory, R&D Center)	—	—	—
Tokyo Sales Office	—	18.9 t-CO_2	—	—	2.00 t	0.06 t

Although the Nishinomiya Factory ceased operating at the end of December 2021, various inputs and outputs continue to be generated in FY2022 in preparation for the closure.

* Calculated for the entire Amagasaki HQ.

Global base

MEC FINE CHEMICAL (ZHUHAI) LTD.

INPUT	
Electricity consumption	260 thousand kWh
Gasoline usage	13,705 L
Water usage	11,689 m³

OUTPUT	
Production volume	5,732 t
Amount of CO_2 emissions	102 t-CO_2
Amount of wastewater	3,173 m³
Industrial waste emissions	84.1 t

MEC CHINA SPECIALTY PRODUCTS (SUZHOU) COMPANY LTD.

INPUT	
Electricity consumption	431 thousand kWh
Gasoline usage	18,990 L
Water usage	11,397 m³

OUTPUT	
Production volume	6,377 t
Amount of CO_2 emissions	211 t-CO_2
Amount of wastewater	1,744 m³
Industrial waste emissions	162 t

MEC TAIWAN COMPANY LTD.

INPUT	
Electricity consumption	436 thousand kWh
Gasoline usage	10,554 L
Water usage (Excluding groundwater)	2,930 m³

OUTPUT	
Production volume	9,242 t
Amount of CO_2 emissions	246 t-CO_2
Amount of wastewater	8,637 m³
Industrial waste emissions	60.1 t

MEC EUROPE NV.

INPUT	
Electricity consumption	73.7 thousand kWh
City gas usage	37,000 m³
Gasoline usage	21,355 L
Water usage (For manufacturing)	2,700 m³

OUTPUT	
Production volume	2,483 t
Amount of CO_2 emissions	149 t-CO_2
Amount of wastewater	500 m³
Industrial waste emissions	22.8 t

MEC SPECIALTY CHEMICAL (THAILAND) CO., LTD.

INPUT	
Electricity consumption	361 thousand kWh
Gasoline usage	8,663 L
Light oil	23,509 L
Water usage	6,466 m³

OUTPUT	
Production volume	960 t
Amount of CO_2 emissions	241 t-CO_2
Amount of wastewater	Not measured
Industrial waste emissions	26.6 t

Electricity consumption, water usage and discharge status in Japan

Electricity consumption

The Nishinomiya Factory ceased operating at the end of 2021, so in FY2022, there were two factories in operation, namely the Amagasaki Factory and the Nagaoka Factory.
We believe that the increase in electricity consumption is necessary to improve the working environment. However, in order to reduce the environmental burden as much as possible, we generate electricity with solar panels on the roof of the Amagasaki Headquarters.
In FY2023, the Amagasaki Headquarters began purchasing renewable energy.

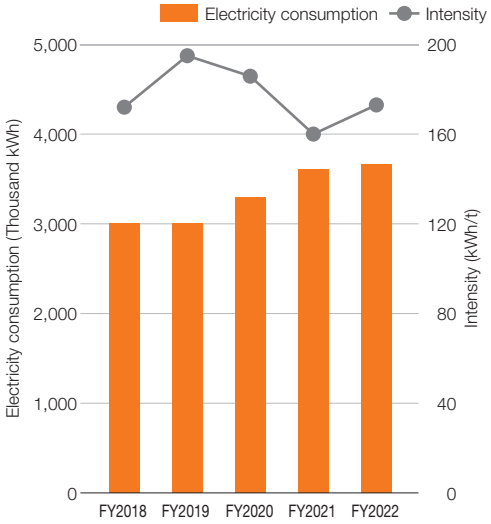
CO_2 emission

We have calculated the GHG protocol Scope 1 (fuel) and Scope 2 (electricity and heat) as CO_2 emissions. Scope 2 (electrical) accounts for 95%. For Scope 3, we will set the purpose and scope of calculation and carry out calculation and disclosure in stages.

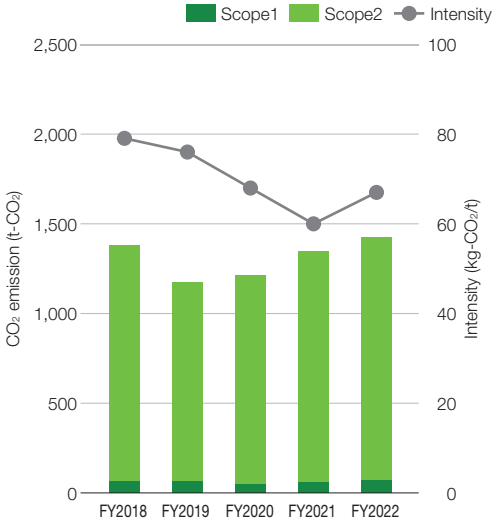
Water usage and amount of wastewater

Because water is a key ingredient in MEC's products, the amount of water used changes according to changes in the volume of products manufactured.
We understand the amount of water used and are aware that we use a large amount not only in our raw materials but also in our manufacturing facilities, container cleaning, and substrate processing lines in our R&D activities. For this reason, we are working to reduce the number of times equipment is cleaned, to introduce automatic container-cleaning equipment, and to reduce wasteful use in substrate processing line work.
Water used in manufacturing and R&D operations is treated in wastewater treatment facilities so that it does not exceed the standards, and wastewater treated in line with the regulated standards is discharged into the sewerage system. In fiscal 2022, there were no wastewater discharges that exceeded the standard values.

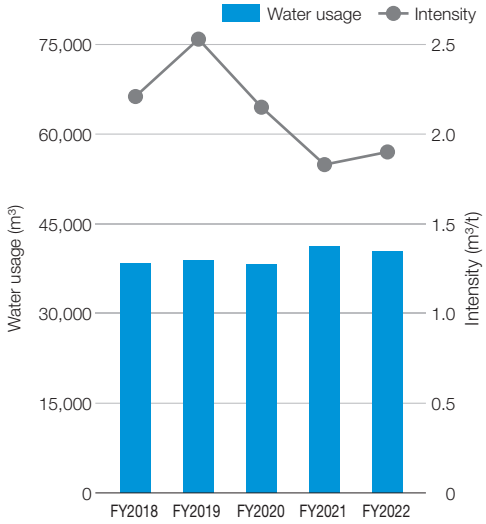
Electricity consumption



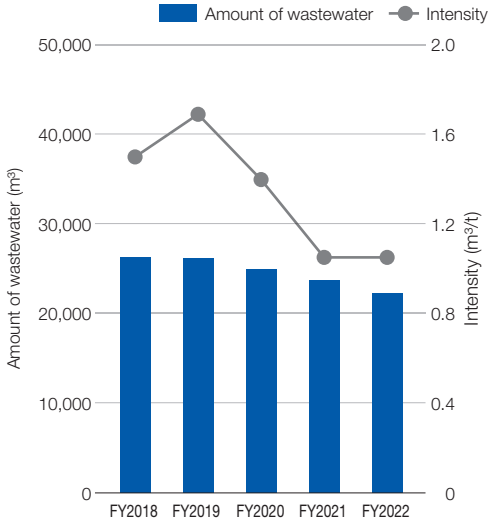
CO_2 emission



Water usage



Amount of wastewater



Electricity consumption

FY2021	FY2022	
3,616 thousand kWh	3,665 thousand kWh	49 thousand kWh ↑ 1.4% ↑

Solar power generation (Amagasaki Headquarters)

FY2021	FY2022	
188 thousand kWh	193 thousand kWh	5 thousand kWh ↑

Water usage

FY2021	FY2022	
41,194 m³	40,382 m³	812 m³ ↓ 2.0% ↓

Amount of wastewater

FY2021	FY2022	
23,712 m³	22,267 m³	1,445 m³ ↓ 6.1% ↓

Material Flow in Business Activities | Offices in Japan

INPUT

Energy

- Electricity consumption 3,665 thousand kWh
- City gas usage 1,182 m³
- Gasoline usage 6.92 kL
- Kerosene 1.30 kL
- Light oil 18.0 kL

Resource

- Water usage 40,382 m³
- Volume of raw materials inputted (estimate) 10,116 t

Number of containers purchased

- 20-liter poly can 118 thousand units
- 200-liter poly drum 30.3 thousand units
- 1,000-liter plastic container 4.05 thousand units

Chemical substances

- The volume of PRTR target 238 t

Reuse (Collection of containers from customers)

- 20-liter poly can 66.7 thousand units
- 200-liter poly drum 4.95 thousand units
- 1,000-liter plastic container 6.91 thousand units

2022

Design Research and development

Raw material procurement

Production
Production volume: 21,232 t

Transport

Customers

OUTPUT

CO_2 emission

Amount of CO_2 emitted
1,422 t-CO_2

Scope1 (of which)
66.8 t-CO_2

Scope2 (of which)
1,355 t-CO_2

Wastewater

Amount of wastewater discharged
22,267 m³

COD
1.04 t

Waste

Amount of industrial waste discharged
545 t

Of which amount of final waste disposal
94.6 t

Reuse of plastic containers

In order to make effective use of our limited resources without waste, we collect and reuse plastic containers after using MEC's products that are no longer needed at our customers. We screen the collected containers to see if they can be reused. Reusable containers are cleaned and reused by the Company and contractors.

Proper disposal of wastes

The amount of industrial waste discharged in fiscal 2022 was 545 tons, an increase of 209 tons (up 62%) from fiscal 2021. Of this amount, specially controlled industrial waste amounted to 269 tons, an increase of 117 tons (up 77%) from fiscal 2021. The final amount of disposed industrial waste was 94.6 tons.

In response to the closure of the Nishinomiya Factory, which finished operating at the end of December 2021, the amount of industrial waste discharged increased by approximately 100 tons, and it also increased by another 100 tons due to cleaning for the renewal of wastewater treatment facilities at our factories and the disposal of unnecessary chemical solutions, resulting in a total increase of 209 tons. The Nishinomiya Factory will continue to discharge industrial waste in FY2023 (January through May), but this is expected to decrease significantly.

We will continue working to reduce the amount of industrial waste generated and to reduce the amount of final disposal by thoroughly segregating the generated industrial waste.

*The amount of industrial waste, including the recovery rate of plastic containers, is disclosed in the ESG Data section of our website.
Environmental accounting data is also available on the same page.

https://www.mec-co.com/en/sustainability/esg-data/

Proper management of chemical substances

Management and Response Regarding Chemical Substance Control Information in Each Country

Because our Company's products and raw materials are chemical substances, they are subject to various domestic and international regulations.
In Japan, there are various related regulations such as the Law Concerning the Evaluation of Chemical Substances and Regulation of Their Manufacture, etc., the Industrial Safety and Health Law, and the Fire Service Law. When exporting or importing, for example, if exporting to or from the EU, it is necessary to comply with REACH Regulation*1, and if exporting to or from the U.S., it is necessary to comply with TSCA*2. As the requirements of the regulations are revised according to the situation, we use the database of laws and regulations to collect and respond in a timely manner to prevent violations.

*1 Abbreviation for Registration, Evaluation, Authorization and Restriction of Chemicals and legislation on control of chemicals within the European Union
*2 Abbreviation for the Toxic Substances Control Act, which regulates the production and import of hazardous chemicals in the United States

Management of chemical substances in products

We work hard so as to prevent unintentional contamination of products with substances that should not be included in them (prohibited substances) based on laws and regulations, industry standards, and requests from customers.
We will continue to promote appropriate management of chemical substances contained in products with the cooperation of our suppliers as well as within the Company.

Policy on chemical substances contained in products

1. Prevent environmental pollution, reduce environmental load, reduce waste, and promote recycling
2. Promote the development and improvement of environmentally friendly (less harmful) products
3. Comply with environmental laws and regulations and other requirements
4. Collect and disclose the latest information, and thoroughly ensure safety management

Basic idea of raw material procurement -Promotion of CSR procurement-

When purchasing raw materials, we select suppliers based on clear criteria such as quality, cost, delivery time, and technical capabilities. We also attach great importance to the environmental conservation efforts of our suppliers.
When purchasing raw materials, we confirm the dangers and hazards while also complying with laws and regulations and protecting the environment.
In order to provide better products to our customers, we regularly evaluate the performance of our suppliers every year. We asked major suppliers to confirm whether the requirements received from us were appropriate and point out what we should improve. We will continue to work on the areas pointed out as requiring improvement and build stronger trust with our suppliers.

Number of performance evaluations in FY2022
10 cases
(FY2021: 9 cases)

Safety handling of products

We are developing products that take into account the need to eliminate highly toxic and dangerous substances from the design stage as much as possible. In order to ensure the safe use of our products, we provide necessary information in accordance with regulations, such as labeling and safety data sheets (SDS). We also provide detailed explanations in technical materials and others. Internally, we familiarize our employees with the dangers and hazards of our products and educate them about safe handling.

Survey measures for chemical substances contained in products

Because our Company products are subject to chemical substance-related regulations, each year we receive 300 to 500 replies to chemical substance surveys we have conducted on our customers to ensure that the chemical substances contained in our products do not violate applicable regulations.
In fiscal 2022, we received approximately 300 surveys and responded appropriately.