



ENEOS REPORT 2023
ESG DATA BOOK

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Editorial Policy

This website was developed to inform stakeholders of specific challenges, approaches and initiatives of the ENEOS Group in terms of environmental, social and governance (ESG).

In the editorial process, we referenced the Global Reporting Initiative (GRI) Standards, a set of international reporting guidelines, and the Environmental Reporting Guidelines (2018 edition) published by Japan's Ministry of the Environment, as well as the assessment items of major ESG rating organizations. Each year, we continue to expand our disclosure of important ESG-related information.

We also publish the [Integrated Report](#) [□], which includes information about our medium- to long-term growth strategy (value creation story). We encourage readers to use the Integrated Report in conjunction with this website.

Scope

This website covers ENEOS Holdings, Inc., ENEOS Corporation, JX Nippon Oil & Gas Exploration Corporation, JX Metals Corporation (hereinafter, "ENEOS Holdings and principal operating companies"), as well as other subsidiaries and affiliated companies, for a total of 761 companies. In cases where the scope is different from the above, the relevant scope is indicated.

Period Covered

This website covers fiscal 2022 (April 1, 2022 to March 31, 2023).
However, some information that pertains to April 2023 and later is also included.

Reporting/Disclosure Date

January 2024
(Previous issue: January 2023, next disclosure: January 2025)

Guidelines Used as Reference

- Global Reporting Initiative (GRI) Sustainability Reporting Standards
[Comparative Table with GRI Standards](#)
- Environmental Reporting Guidelines (2018 edition), Ministry of the Environment, Japan
- Recommendations of the Task Force on Climate-related Financial Disclosures (TCFD)

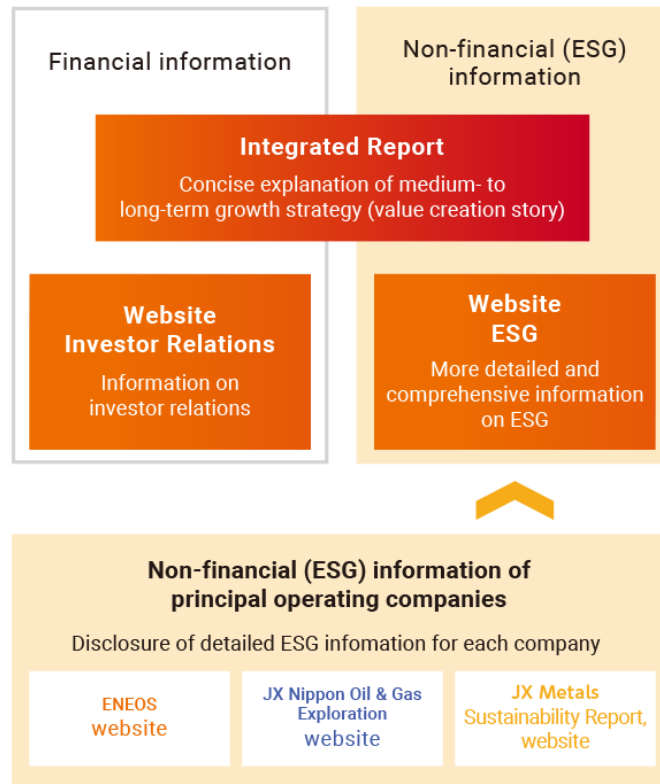
Enhancing Reporting Reliability

Environmental and social information for fiscal 2022 on this ESG Data Book website indicated with has been assured by an independent practitioner to ensure objective and reliable reporting.

Inquiries

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Website (inquiries)
https://ssl.eneos.co.jp/hd/inquiry_en/input [□]

Disclosure Media Framework



ENEOS Group Philosophy

Note: The ENEOS Group Philosophy is also referred to as "the Group Philosophy" in this report.

Mission

**Harnessing the Earth's power
for the common good and for the day-to-day life of each individual,
we will contribute to the development of our communities
and help to ensure a vibrant future
through creation and innovation in energy, resources, and materials.**

Our Five Core Values

**As a member of
the community**

High ethical standards

Based on our core principles of integrity and fairness, we conduct all of our business activities in accordance with our high ethical standards.

Health, safety, and environment

We give the highest priority to health, safety and environmental initiatives, which are vital to the well-being of all living things.

**Supporting
day-to-day life**

Focus on customers

We strive to meet the expectations and evolving needs of our valued customers and of society as a whole through the stable provision of products and services while creating new value as only we can.

**For
a vibrant future**

Taking on challenges

Taking changes in stride, we rise to the challenge of creating new value while seeking innovative solutions for today and tomorrow.

Moving forward

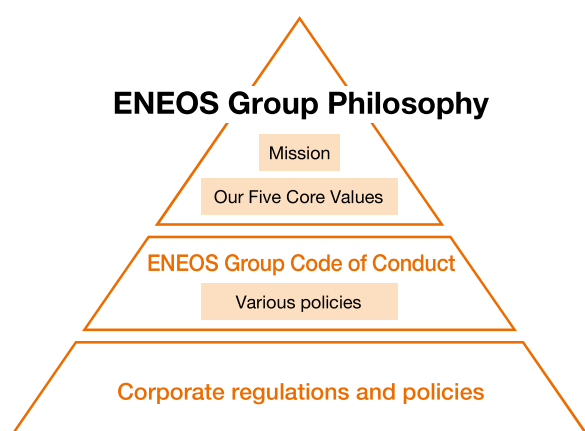
Looking to the future, we continue to grow, both as individuals and as a company, through the personal and professional development of each and every employee.

ENEOS Group Code of Conduct

The ENEOS Group Code of Conduct is also referred to as "the Group Code of Conduct" or "the Code of Conduct" in this report.

1. Positioning of ENEOS Group Code of Conduct

This ENEOS Group Code of Conduct (hereinafter referred to as the "Code of Conduct") is a set of standards that we, as the ENEOS Group directors, officers and employees, apply in order to realize the ENEOS Group Philosophy through our business activities and fulfill our social responsibilities. The Code of Conduct, as the foundation of all of our corporate regulations, shall serve as the cornerstone for making judgments in all of our business dealings.



2. Important Aspects in Living Up to the Code of Conduct

We, as the ENEOS Group directors, officers and employees, shall comply with this Code of Conduct when performing our duties.

When violations of this Code of Conduct are found, they shall not be overlooked, and each one of us must do what we can to deal with such issues.

Executives and supervisors shall fulfill their obligations according to their responsibilities so that all business operations are carried out in accordance with this Code of Conduct.

Ask yourself the following questions if you are in doubt as to what is the correct course of action in performing your day-to-day business operations.

- Is your conduct and the conduct of others around you in compliance with laws and regulations, the Code of Conduct, and high ethical standards?
- Can you unreservedly give an account of your conduct to the people around you, including your family and friends?
- Can you respond with confidence to questions about your conduct from third parties or the authorities, or reports by the media?

3. Applicable Scope of the Code of Conduct

In principle, this Code of Conduct is applicable to all directors, officers and employees who work at ENEOS Holdings, Inc., and its subsidiaries. We also encourage companies that are part of our value chain to comply with this Code of Conduct. These companies include, but are not limited to, suppliers of raw materials, logistics companies, construction companies, and sales companies.

4. Relation to National and Local Laws

We, as the ENEOS Group directors, officers and employees, respect this Code of Conduct, in addition to local laws and customs. National and local laws will take precedence over the Code of Conduct when the provisions of such laws are more rigorous than the Code of Conduct.

ENEOS Group Code of Conduct

1. Compliance
2. Safety and security
3. Environmental conservation
4. Health enhancement
5. Respect for human rights
6. Product and service quality
7. Equitable and fair transactions
8. Appropriate relationships with governments and public administrations
9. Avoidance of conflicts of interest
10. Corporate asset protection and management
11. Information management and disclosure
12. Establishment of a healthy work environment
13. Contribution to the development of civil society
14. Actions for violations and measures to prevent recurrence

WEB The full text of the ENEOS Group Code of Conduct is available on our website.
<https://www.hd.eneos.co.jp/english/company/conduct.html>

ESG Management

Basic Approach

To achieve sustainable growth, we must achieve social recognition of our value by building more credibility with our stakeholders through our response to social needs and the resolution of social issues.

The ENEOS Group has accordingly formulated the Basic Policy for ESG Management.

Basic Policy for ESG Management

- ESG management at the ENEOS Group involves formulating management and business strategies based on risks and business opportunities and creating both economic value (profits) and social value (resolution of social issues) through our business in order to realize the ENEOS Group Philosophy.
- The ENEOS Group is a group of companies that strives to earn the trust of stakeholders through the implementation of ESG management in our business operations.

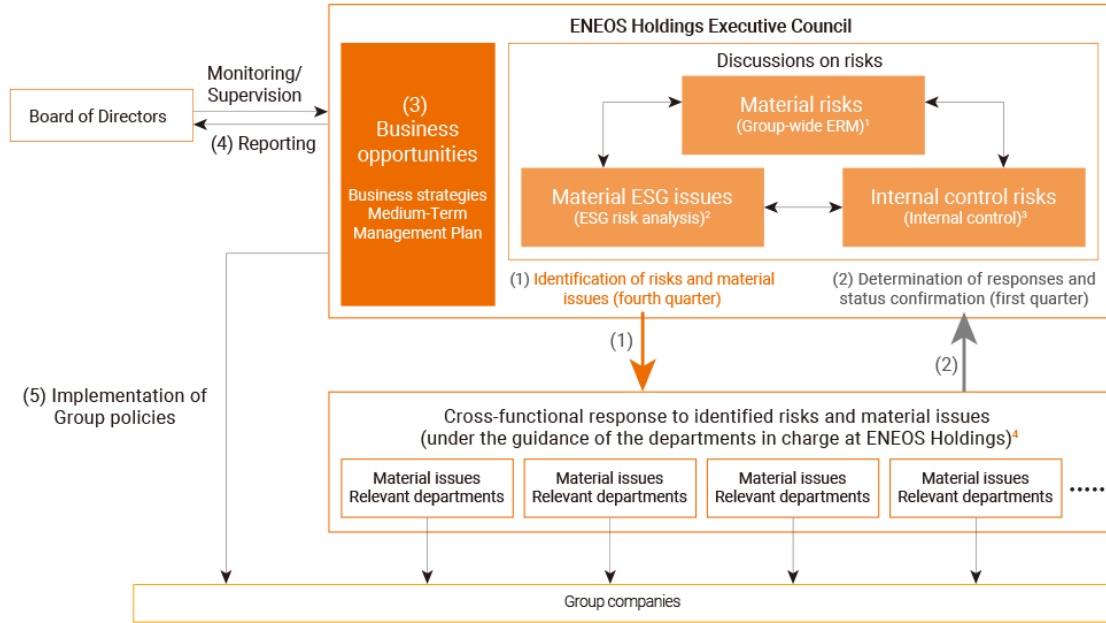
ESG Management Structure

Pursuant to its Basic Policy for ESG Management, the ENEOS Group has established a structure in which the ENEOS Holdings Executive Council, chaired by the president of ENEOS Holdings, analyzes management risks and business opportunities and confirms the status of responses to identified risks and material ESG issues.

Process for Identifying Risks and Material Issues and Confirming Response Status

1. Comprehensive discussions (held annually in the fourth quarter) (see (1) in diagram below)
The Executive Council comprehensively discusses the following matters to ensure effective discussion and quick decision-making.
 - Material risks identified through the enterprise risk management (ERM) system
 - Material ESG issues identified through ESG risk analysis
 - Internal control risks identified through the internal control system
2. Determination of responses and status confirmation (annually in the first quarter) (see (2) in diagram below)
Under the guidance of the departments in charge at ENEOS Holdings, the relevant departments and principal operating companies work together in a cross-functional manner to develop and implement responses for the identified risks and material issues.
The Executive Council confirms the status of responses for the previous fiscal year and determines the responses for the current fiscal year.
3. Discussion of business opportunities (as needed) (see (3) in diagram below)
The Executive Council discusses business opportunities when it deliberates on the Medium-Term Management Plan and fiscal year business plans, as well as the budgets based on these plans.
4. Reporting to the Board of Directors (as needed) (see (4) in diagram below)
The Board of Directors passes resolutions on management, the Medium-Term Management Plan and budgets, and also performs monitoring and supervision by receiving reports (twice a year, in principle) on risks and material issues determined by the Executive Council and on the status of responses.
5. Sharing with Group companies (as needed) (see (5) in diagram below)
We share and communicate the identified risks and material issues with all Group companies, and each Group company reflects them in their business strategies.

ENEOS Group ESG Management Structure



- 1 For details, see [Enterprise Risk Management \(ERM\)](#).
- 2 For details, see Verifying and Identifying Material ESG Issues.
- 3 For details, see [Internal Control](#).
- 4 Example: Internal Control Department and Legal & Corporate Affairs Department work together to build and operate a comprehensive internal control structure

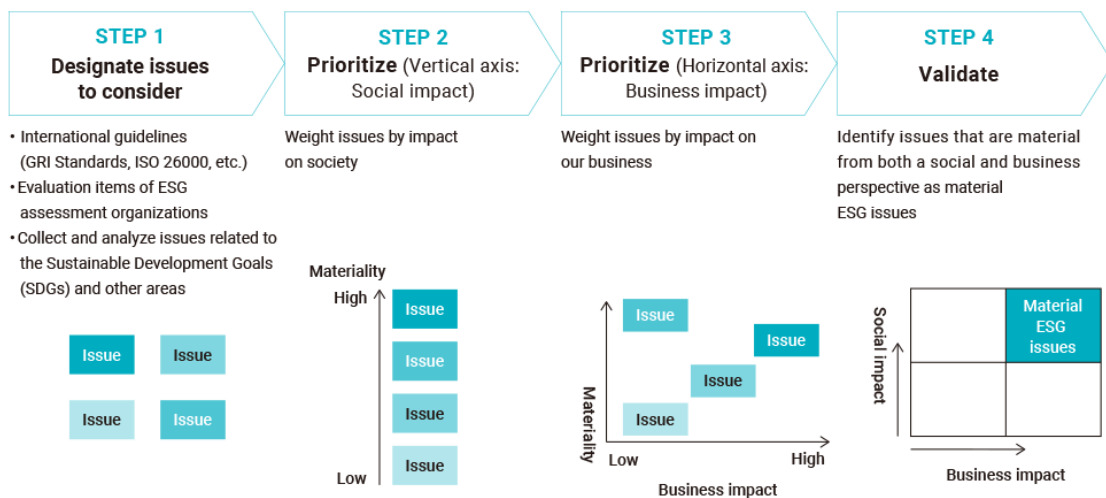
Verifying and Identifying Material ESG Issues

The ENEOS Group identifies material ESG issues every year based on various guidelines as well as the assessment items and weightings of ESG assessment organizations.

For fiscal 2023, we identified nine material ESG issues using resources such as the Sustainability Accounting Standards Board (SASB) guidelines for each business area, prioritizing the degree of impact on society as well as the degree of impact on our business, taking into account our discussions and consideration of our Long-Term Vision and the third Medium-Term Management Plan.

In addition, departments responsible and KPIs are set for each material ESG issue, and the progress of KPIs and the results of measures for material ESG issues are reported to the Executive Council and the Board of Directors.

Identification Procedure for Material ESG Issues



Material ESG Issues Identified for Fiscal 2023

In descending order of assessment score

Category	Material ESG Issues
Environmental	Contribution to the development of a decarbonized society
Social	Ensuring safety / Health enhancement
Governance	Compliance
Social	Diversity and inclusion
Environmental	Contribution to the development of a recycling-oriented society
Social	Compliance with international principles on human rights
Social	Retaining and developing human resources
Governance	Appropriate structuring and operation of corporate governance
Social	Communication with stakeholders (investors, etc.)

Status of Responses to Material ESG Issues

For fiscal 2022, we set 23 specific targets (KPIs) for 15 material ESG issues. Twenty of the targets were achieved and three were not.
 For fiscal 2023, we have identified nine material ESG issues and set 16 targets (KPIs).

Fiscal 2022 Response Status

Evaluation: 😊 Achieved/Steady progress ☹️ Not achieved

Category	Material ESG Issues	Initiative	Target (KPI)	Results/Progress		Applicable companies
Environmental	Contribution to the development of a decarbonized society	Reduction in CO₂ emissions (reduction amount through independent efforts)	Reduction in CO ₂ emissions: Reduce by 4.28 million tons compared to fiscal 2009	😊	Reduced by 4.30 million tons compared to fiscal 2009	ENEOS, JX Nippon Oil & Gas Exploration, JX Metals, NIPPO Corporation, and their principal group companies (Total of 46 companies including overseas companies)
	Contribution to the development of a recycling-oriented society	Reduction in landfill disposal	Waste-to-landfill ratio: Maintain zero emissions (less than 1%)	😊	0.8%	ENEOS, JX Nippon Oil & Gas Exploration, JX Metals, NIPPO Corporation, and their principal group companies (Total of 45 companies including overseas companies)
	Understanding and management of biodiversity risks	Identification of biodiversity risks and examination of responses	Understand risks at manufacturing sites (increase number of sites subject to risk confirmation)	😊	<ul style="list-style-type: none"> Investigated protected areas adjacent to manufacturing sites (20 sites), confirmed no high-risk sites Added overseas sites (7 sites) subject to risk confirmation, investigated the sites and confirmed that there are no protected areas affecting operations 	ENEOS, JX Nippon Oil & Gas Exploration, JX Metals (Total of 3 companies)

Environmental	Understanding and management of water risks	Ensuring prevention of water pollution	Serious environmental incidents: zero Serious legal compliance incidents: zero	😊	Zero	ENEOS, JX Nippon Oil & Gas Exploration, JX Metals (Total of 3 companies)
		Identification of water risks and examination of responses	Understand risks at manufacturing sites (increase number of sites subject to risk confirmation)	😊	<ul style="list-style-type: none"> Investigated water risks at manufacturing sites (20 sites), confirmed no high-risk sites Added overseas sites (7 sites) subject to risk confirmation, investigated the sites and confirmed that there are no water risks affecting operations 	
	Control of air pollutant emissions	Ensuring prevention of air pollution	Serious environmental incidents: zero Serious legal compliance incidents: zero	😊	Zero	
Social	Ensuring safety / Health enhancement	Reduction in occupational injuries	Zero serious occupational injuries (occupational fatalities)	😊	Zero	ENEOS, JX Nippon Oil & Gas Exploration, JX Metals, and their group companies and contractor companies (Total of 57 companies including overseas companies)
			Achieve TRIR* of 1.0 or less *Number of occupational injuries per million working hours (non-lost-time occupational injuries + lost-time occupational injuries and fatalities)	😊	1.0	

Social	Ensuring safety / Health enhancement	Ensuring health of employees	Increase the cancer screening rate for employees (recommendations) Achieve screening rate of 70% or higher for stomach cancer, colorectal cancer, breast cancer, and cervical cancer	😞	Achieved only for colorectal cancer (cancer screening rate (recommendations): 69.8%)	ENEOS Holdings, ENEOS, JX Nippon Oil & Gas Exploration, JX Metals (Total of 4 companies)
	Communication with stakeholders (investors, etc.)	Engagement with external parties	Effective engagement with investors and others	😊	Meetings with investors (overseas IR, meetings for analysts and domestic institutional investors, 157 individual interviews)	ENEOS Holdings
	Compliance with international principles on human rights	Human rights due diligence	Conduct survey of technical intern trainees at suppliers and formulate responses	😊	<ul style="list-style-type: none"> Conducted surveys Formulated responses 	ENEOS Holdings, ENEOS, JX Nippon Oil & Gas Exploration, JX Metals (Total of 4 companies)
		Human rights awareness	Implement human rights training	😞	Some companies have not completed the training because the implementation date was extended to the first half of fiscal 2023 due to revisions to the training content	ENEOS Holdings, ENEOS, JX Nippon Oil & Gas Exploration, JX Metals (Total of 4 companies)
	Retaining and developing human resources	Development of human resources capable of enhancing corporate value	Implement effective training and evaluation based on the human resources development plan	😊	<ul style="list-style-type: none"> Implemented various training programs Evaluated the training content as appropriate and incorporated it into training starting the following fiscal year 	ENEOS Holdings, ENEOS, JX Nippon Oil & Gas Exploration, JX Metals (Total of 4 companies)

Social	Diversity and inclusion	Advancement of women in the workplace	Maintain rate of women among newly hired university graduates at 25% or higher	😞	21.9%	ENEOS Holdings, ENEOS, JX Nippon Oil & Gas Exploration, JX Metals (Total of 4 companies)
		Advancement of employees with disabilities	Maintain employment rate of people with disabilities at 2.3% or higher	😊	2.44%	
	Work-life management	Workstyle reforms	Maintain annual paid leave days taken at 80% or higher	😊	88.8%	ENEOS Holdings, ENEOS, JX Nippon Oil & Gas Exploration, JX Metals (Total of 4 companies)
		Utilization of work-life balance support systems / programs	Maintain 100% rate of return to work after childcare leave	😊	100%	
Governance	Appropriate structuring and operation of corporate governance	Evaluation of the effectiveness of the Board of Directors	Implement improvement measures based on the fiscal 2021 evaluation of the effectiveness of the Board of Directors	😊	Implemented	ENEOS Holdings
	Compliance	Legal compliance inspections	Conduct legal compliance inspections	😊	Implemented (no major issues)	ENEOS Holdings, ENEOS, JX Nippon Oil & Gas Exploration, JX Metals, NIPPO Corporation, and their principal group companies (Total of 48 companies including overseas subsidiaries)
		Implement training on important laws and regulations	Strengthen management of personal information and provide legal training according to business needs	😊	Implemented	

Governance	Compliance	Operation of whistleblower systems	Revise and appropriately apply rules based on the amended Whistleblower Protection Act	😊	Implemented	ENEOS Holdings, ENEOS, JX Nippon Oil & Gas Exploration, JX Metals, NIPPO Corporation, and their principal group companies (Total of 122 companies including overseas subsidiaries)
	Social responsibility in the supply chain	Implementation of CSR procurement surveys	Conduct CSR procurement surveys at overseas sites in addition to domestic sites, where surveys have already been conducted	😊	Implemented	Principal overseas group companies of ENEOS, JX Nippon Oil & Gas Exploration, JX Metals (Total of 10 companies)
	Effective risk management	Implementation of Group-wide risk management	Steady execution of the risk management process	😊	Implemented	ENEOS Holdings, ENEOS, JX Nippon Oil & Gas Exploration, JX Metals (Total of 4 companies)

Fiscal 2023 Material ESG Issues and Targets (KPIs)

Category	Material ESG Issues	Initiative	Target (KPI)	Achievement (fiscal year)	Applicable companies
Environmental	Contribution to the development of a decarbonized society	Reduction in CO₂ emissions (reduction amount through independent efforts)	Reduction in CO ₂ emissions: Reduce emissions to 30 million tons or less	2023	ENEOS, JX Nippon Oil & Gas Exploration, JX Metals, NIPPO Corporation, and their principal group companies (Total of 87 companies including overseas companies)
	Contribution to the development of a recycling-oriented society	Reduction in landfill disposal	(Ongoing) Waste-to-landfill ratio: Maintain zero emissions (less than 1%)	2023	ENEOS, JX Nippon Oil & Gas Exploration, JX Metals, NIPPO Corporation, and their principal group companies (Total of 64 companies including overseas companies)
Social	Ensuring safety / Health enhancement	Reduction in occupational injuries	(Ongoing) Zero serious occupational injuries (occupational fatalities)	2023	ENEOS, JX Nippon Oil & Gas Exploration, JX Metals, and their group companies and contractor companies (Total of 59 companies including overseas companies)
			(Ongoing) TRIR* of 1.0 or less *Number of occupational injuries per million working hours (non-lost-time occupational injuries + lost-time occupational injuries and fatalities)	2023	ENEOS Holdings, ENEOS, JX Nippon Oil & Gas Exploration, JX Metals (Total of 4 companies)
		Ensuring health of employees	Percentage of employees maintaining an appropriate weight Employees with BMI under 25.0: Maintain at 70% or higher	2023	ENEOS Holdings, ENEOS, JX Nippon Oil & Gas Exploration, JX Metals (Total of 4 companies)
			Reduce the percentage of cigarette smokers Percentage of smokers: Reduce by at least 1.0% from the previous year	2023	ENEOS Holdings, ENEOS, JX Nippon Oil & Gas Exploration, JX Metals (Total of 4 companies)
	Communication with stakeholders (investors, etc.)	Engagement with external parties	(Ongoing) Effective engagement with investors (total of 250 cases)	2023	ENEOS Holdings

Social	Compliance with international principles on human rights	Human rights due diligence	Human rights due diligence	2023	ENEOS Holdings, ENEOS, JX Nippon Oil & Gas Exploration, JX Metals (Total of 4 companies)
		Human rights awareness	(Ongoing) Implement human rights training		
	Retaining and developing human resources	Development of human resources capable of enhancing corporate value	(Ongoing) Implement effective training and evaluation	2023	ENEOS Holdings, ENEOS, JX Nippon Oil & Gas Exploration, JX Metals (Total of 4 companies)
		Advancement of women in the workplace	(Ongoing) Rate of women among newly hired university graduates of 25% or higher		
Diversity and inclusion	Advancement of employees with disabilities	(Ongoing) Maintain employment rate of people with disabilities at 2.3% or higher	2023	ENEOS Holdings, ENEOS, JX Nippon Oil & Gas Exploration, JX Metals (Total of 4 companies)	
Governance	Appropriate structuring and operation of corporate governance	Evaluation of the effectiveness of the Board of Directors and strengthening of compliance	Implement evaluations of the effectiveness of the Board of Directors	2023	ENEOS Holdings
			Provide compliance training for officers	2023	ENEOS Holdings, ENEOS, JX Nippon Oil & Gas Exploration, JX Metals (Total of 4 companies)
	Compliance	Legal compliance inspections	(Ongoing) Conduct legal compliance inspections	2023	ENEOS Holdings, ENEOS, JX Nippon Oil & Gas Exploration, JX Metals, NIPPO Corporation, and their principal group companies (Total of 48 companies including overseas subsidiaries)
			(Ongoing) Provide legal training related to business needs and internal issues	2023	
			Operation of whistleblower systems	<ul style="list-style-type: none"> Respond appropriately to whistleblowing Explore and implement outsourcing support to enable efficient response to whistleblowing 	

Major Initiatives

Discussions by the Board of Directors

In fiscal 2022 and fiscal 2023, the following ESG-related matters were reported to the Board of Directors.

FY2022	FY2023 1H
<ol style="list-style-type: none"> Fiscal 2021 performance results and fiscal 2023 action plans Responses to specific issues <ul style="list-style-type: none"> Carbon Neutrality Plan TCFD recommendations Business and human rights 	<ol style="list-style-type: none"> Fiscal 2022 performance results and fiscal 2023 action plans Responses to specific issues <ul style="list-style-type: none"> Business and human rights

Raising Awareness of the Group Philosophy and Code of Conduct

The ENEOS Group believes that understanding and implementation of the ENEOS Group Philosophy and the ENEOS Group Code of Conduct by all officers and employees plays an important role in the fulfillment of our social responsibilities. Therefore, we have implemented various measures to enable all officers and employees to reference the Group Philosophy and the Code of Conduct at any time in order to maintain their awareness.

In fiscal 2023, we held town hall meetings and established many other venues for dialogue between the management team and employees in order to raise greater awareness internally about the Commitment to Realizing the Group Philosophy, the Long-Term Vision, and the third Medium-Term Management Plan, announced in May 2023.

Measures to Raise Awareness of the Group Philosophy and Code of Conduct

Purpose	Measures
Ensure awareness	Distribution of Group Philosophy cards and Code of Conduct handbooks
	Posters
	Digital signage in company workplaces
	Translation of Group Philosophy into 10 languages (English, Chinese [Simplified/Traditional], Korean, Spanish, Portuguese, German, Vietnamese, Thai, Indonesian) and distribution
Promote understanding	Dissemination of information through the Group employee magazine and intranet
	Training on Group Philosophy and Code of Conduct for newly hired employees and newly appointed managers
Monitoring	Confirmation (annual) using internal control and legal compliance inspections targeting all officers and employees



Code of Conduct handbook



Group Philosophy card

Stakeholder Engagement

The ENEOS Group conducts its business activities through its relationships with stakeholders, including shareholders, investors, customers, business partners and employees. We actively engage in dialogue with stakeholders and work to ensure that our business activities meet their expectations and requirements. The Group also solicits the views of outside experts and stakeholders regarding specific ESG-related themes and responds accordingly. To date, we have carried out engagement with outside experts and stakeholders as indicated in the table below entitled Engagement with Stakeholders. Separate from this engagement, we held a briefing on the ENEOS Group Carbon Neutrality Plan for investors in July 2023, and we also conduct periodic engagement with Climate Action 100+, a climate change action initiative of institutional investors.

We will continue our engagement with outside experts and stakeholders in our contribution to the resolution of social issues.

ENEOS Group Stakeholders

Stakeholders	Activities	Main means of communication	Main contacts
Shareholders and Investors	ENEOS Holdings is committed to the prompt, proper, and fair disclosure of information to shareholders and investors in accordance with its Disclosure Policy.	<ul style="list-style-type: none"> • General meetings of shareholders, briefings on financial results, briefings for individual investors, and ESG briefings • Disclosure of information through the Integrated Report, the ESG Data Book, shareholder reports, and our websites 	<ul style="list-style-type: none"> • Contact on the ENEOS Holdings website https://ssl.eneos.co.jp/hd/inquiry_en/inpu • Contacts in the ENEOS Holdings investor relations division (phone, email, meetings, etc.)
Customers	The Group is committed to developing and delivering products and services that fulfill customer needs and expectations and earn customer trust and satisfaction.	<ul style="list-style-type: none"> • Communications through marketing activities • Provision of safe, reliable, and valuable products and services • Disclosure of information on websites • Inquiry channels through phone and websites 	<ul style="list-style-type: none"> • Contact on the ENEOS Holdings website https://ssl.eneos.co.jp/hd/inquiry_en/inpu • Contacts in Group company sales divisions (phone, email, meetings, etc.) • ENEOS Customer Service Center (toll-free)
Business Partners	The Group makes purchasing information available to business partners on its websites, actively provides business opportunities, and strives to ensure fair business opportunities.	<ul style="list-style-type: none"> • Communications through procurement activities • Use of websites • CSR procurement surveys (two-year cycle) 	<ul style="list-style-type: none"> • Contact on the ENEOS Holdings website https://ssl.eneos.co.jp/hd/inquiry_en/inpu • Contacts in Group company procurement divisions (phone, email, meetings, etc.) • Human rights consultation contact points for suppliers
NPOs/NGOs	The Group has built cooperative relationships with NPOs and NGOs and actively undertakes environmental preservation and social contribution activities.	<ul style="list-style-type: none"> • Collaboration on biodiversity preservation activities • Collaboration on child-rearing support activities • Verification from third-party perspective in human rights due diligence (every other year) 	<ul style="list-style-type: none"> • Contact on the ENEOS Holdings website https://ssl.eneos.co.jp/hd/inquiry_en/inpu
Local Communities/ Global Society	The Group strives to engage in responsible corporate activities by responding to the needs and expectations of and engaging in active communication with the local communities in the areas where it conducts its business operations, as well as international society.	<ul style="list-style-type: none"> • Information sessions for members of local communities, participation in and sponsorship of events • Volunteer activities • Establishment of support systems for oil-, gas-, and copper-producing countries • Involvement in international initiatives 	<ul style="list-style-type: none"> • Contact on the ENEOS Holdings website https://ssl.eneos.co.jp/hd/inquiry_en/inpu • Contacts in business offices in areas where we conduct business operations (phone, email, meetings, etc.)

<p>Employees</p>	<p>The Group considers employees to be critical stakeholders in its operations and has established various systems to ensure that each employee can work with peace of mind and to his or her full potential.</p>	<ul style="list-style-type: none"> ● Periodic dialogue between labor unions and management ● Dissemination of information through the Group employee magazine and the company intranet ● Periodic implementation of awareness surveys ● Implementation of classification-leveled training ● Solicitation of opinions, recommendations and requests for the company (annually) ● Surveys on various measures (as needed) 	<ul style="list-style-type: none"> ● Whistleblower systems (hotlines) Note: May also be used by employees of contractors ● Periodic interviews with supervisors ● Through labor unions
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Engagement with Stakeholders

Fiscal year	Event	Speaker	Theme	For
FY2021	Reporting session on human rights due diligence	Ms. Ito and Ms. Sato of NGO Human Rights Now	Business and human rights	Related departments
FY2021	ENEOS Environment and Safety Forum	Dr. Adachi Naoki, CEO, Response Ability, Inc.	"Era of climate change and biodiversity: The roles of companies determined in the Convention on Biological Diversity adopted at COP15"	Officers and employees
FY2022	ENEOS Environment and Safety Forum	Director & CEO Senoh Ken, The Industry-Academia Collaboration Initiative Nonprofit Organization	"Circular economy created by business, business created by a circular economy: What is the essence of a circular economy?"	Officers and employees

Participation in Initiatives and Organizations

Endorsement of the UN Global Compact (UNGC)

Four Group companies (ENEOS Holdings, ENEOS, JX Nippon Oil & Gas Exploration, and JX Metals) participate in the UN Global Compact, supporting the compact's 10 principles in the four categories of human rights, labor standards, the environment, and anti-corruption.



The Ten Principles of the UN Global Compact

Human Rights	Businesses should support and respect the protection of internationally proclaimed human rights; and	Principle 1
	make sure that they are not complicit in human rights abuses.	Principle 2
Labour	Businesses should uphold the freedom of association and the effective recognition of the right to collective bargaining;	Principle 3
	the elimination of all forms of forced and compulsory labour;	Principle 4
	the effective abolition of child labour; and	Principle 5
	the elimination of discrimination in respect of employment and occupation.	Principle 6
Environment	Businesses should support a precautionary approach to environmental challenges;	Principle 7
	undertake initiatives to promote greater environmental responsibility; and	Principle 8
	encourage the development and diffusion of environmentally friendly technologies.	Principle 9
Anti-Corruption	Businesses should work against corruption in all its forms, including extortion and bribery.	Principle 10

Endorsement of Task Force on Climate-related Financial Disclosures (TCFD) Recommendations

In May 2019, we signed the TCFD recommendations, and we disclose information on climate change in accordance with the TCFD recommendations to the greatest extent possible. In addition, we have participated in the TCFD Consortium since its inception as a venue for discussing effective approaches to information disclosure.



Initiatives and Organizations We Participate In

The ENEOS Group endorses and participates in a number of other initiatives and organizations in addition to the UNGC and TCFD.

- Challenge Zero



- GX League



- IPIECA—a global oil and gas industry association for advancing environmental and social performance



- CDP



- Council for Better Corporate Citizenship (CBCC)



- Japan Business Initiative for Biodiversity (JBIB)



- Business for Nature Call to Action

- Extractive Industries Transparency Initiative (EITI)

- Human Capital Management Consortium

Communication with Industry Organizations

	Organization name	Position held by Group Executive, etc.
ENEOS	Petroleum Association of Japan	Vice-President
	Japan Petrochemical Industry Association	Director
	Japan Chemical Industry Association	Policy Coordinating Committee member, Labor Committee member, Technical Affairs Committee member
	Renewable Energy Association for Sustainable Power supply (REASP)	Director
	Japan Hydrogen Association	Vice Chairman
JX Nippon Oil & Gas Exploration	Japan Petroleum Development Association	Vice Chairman
	Japan Natural Gas Association	Director
JX Metals	Japan Mining Industry Association (JMIA)	Managing Director
	The Sulphuric Acid Association of Japan	Vice Chairman
	Japan Copper and Brass Association (JCBA)	Chairman
	Japan Society of Newer Metals	Vice Chairman
	Japan Catalyst Recovering Association	Chairman

Selection for Inclusion in ESG-Related Investment Indexes

(As of September 2023)

- FTSE4Good Index Series
- FTSE Blossom Japan Index
- FTSE Blossom Japan Sector Relative Index
- MSCI Japan ESG Select Leaders Index
- MSCI Japan Empowering Women Index (WIN)
- Morningstar Japan ex-REIT Gender Diversity Tilt Index
- S&P/JPX Carbon Efficient Index
- SOMPO Sustainability Index



FTSE4Good



FTSE Blossom
Japan



FTSE Blossom
Japan Sector
Relative Index



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Environmental

Corporate activities are contingent upon a healthy global environment. Recognizing that preservation of the global environment is an important issue shared by all humankind, the ENEOS Group has included environmental conservation as a standard in its Group Code of Conduct and as part of its efforts to contribute to the development of a sustainable society through its business activities.

For environmental data, please refer to the [Data](#) page.

<p>Environmental Management →</p> <p>Basic approach, structure and other information</p>	<p>Prevention of Global Warming →</p> <p>Basic approach and initiatives</p>
<p>The 3Rs (Reduce, Reuse, Recycle) →</p> <p>Basic approach and initiatives</p>	<p>Management of Chemical Substances →</p> <p>Basic approach and initiatives</p>
<p>Prevention of Environmental Pollution →</p> <p>Basic approach and initiatives</p>	<p>Biodiversity →</p> <p>Basic approach and initiatives</p>
<p>Our Response to Climate Change Risks and Opportunities (TCFD) →</p>	

Environmental Management

Basic Approach

As part of its responsibilities as a corporate group involved in the supply of energy and materials, the ENEOS Group maintains a proper understanding of the impact of its business activities on climate change risks and natural capital. Environmental conservation has been included as a standard in the ENEOS Group Code of Conduct, and the Group has also established a Long-Term Vision and a Carbon Neutrality Plan, and is implementing initiatives for the development of a sustainable society.

In May 2019, ENEOS Holdings signed a statement of support for the recommendations of the Task Force on Climate-related Financial Disclosures (TCFD), and we are working to enhance and expand our disclosures concerning climate change. For details, see [Our Response to Climate Change Risks and Opportunities \(TCFD\)](#).

ENEOS Group Code of Conduct (excerpt)

3. Environmental conservation

- (1) We recognize that we are stewards of the environment and its limited resources. We strive to conserve biodiversity and natural capital, including, but not limited to, water, soil, and the atmosphere, and contribute to the development of a sustainable society.
- (2) We strive to promote renewable energy and energy conservation in order to contribute to the development of a decarbonized society.
- (3) We strive to contribute to the establishment of a circular economy by reducing, reusing and recycling, while using resources effectively and efficiently.
- (4) We strive to take actions to promote sustainable production and consumption for the benefit of society while taking the same actions throughout our value chain, including, but not limited to, resource development, procurement, production, distribution and sales.

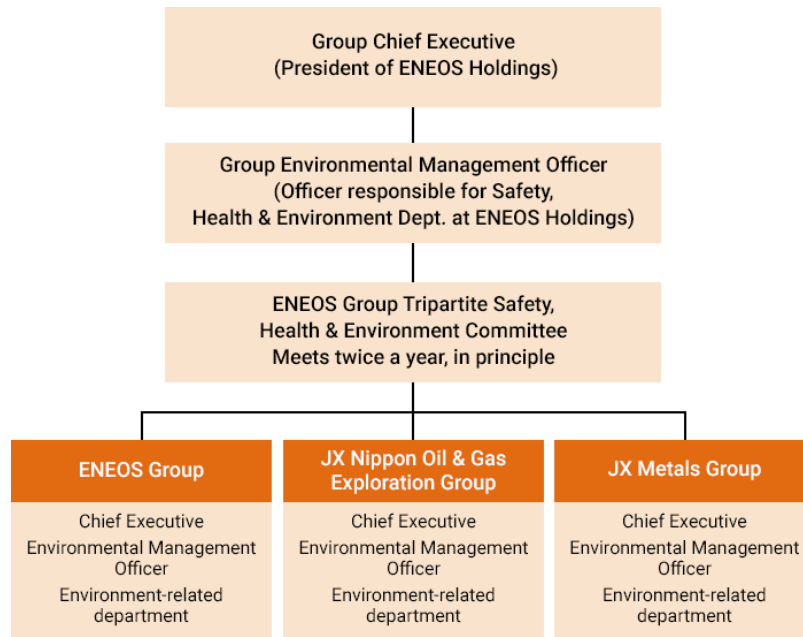
Structure

In order to facilitate environmental management based on the Group Code of Conduct, the Group has established an environmental management system (EMS) headed by the president of ENEOS Holdings as Group chief executive. Under this system, we regularly confirm the status of achievement of environmental targets and compliance with environmental laws and regulations, and report the status to the ENEOS Holdings Executive Council and the Board of Directors, ensuring that environmental management performance is monitored and supervised by both organizations.

In addition, 89 of the 138 business sites that have adopted the EMS have obtained ISO 14001 certification, a set of international standards for environmental management, for a certification rate of 64%.

We have established the ENEOS Group Tripartite Safety, Health & Environment Committee, chaired by the officer responsible for the Safety, Health & Environment Department at ENEOS Holdings. The committee meets, in principle, twice annually, where it deliberates on environmental targets, plans and performance of ENEOS Holdings and the Group's principal operating companies and shares information on the status of activities in an effort to improve Group-wide environmental issues.

ENEOS Group Environmental Management System (EMS)



Plan and Targets

Second Medium-Term Environmental Management Plan

In May 2020, we announced our intention to achieve carbon neutrality in our own emissions by fiscal 2040. As a milestone for this target, we formulated the second Medium-Term Environmental Management Plan (FY2020–FY2022). This plan focuses on three themes: “I. Contribution to a low-carbon society;” “II. Contribution to a recycling-oriented society” and “III. Contribution to environmental protection.” The plan sets out detailed initiatives for each of these themes.

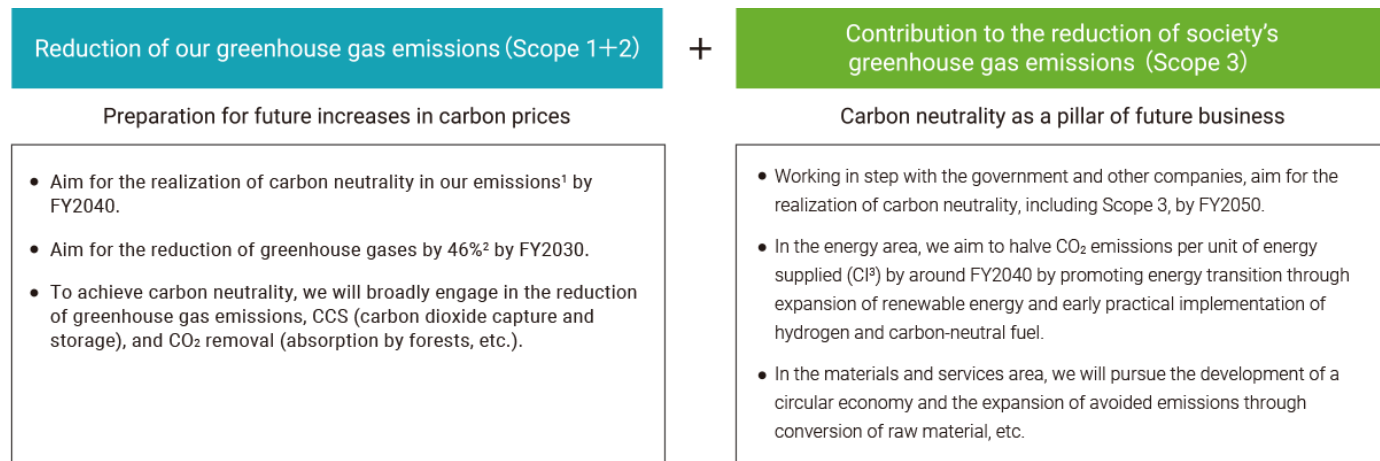
Medium-Term Environmental Targets (Fiscal 2020 to Fiscal 2022)

Key themes	Basic initiatives	Concrete measures aimed at fiscal 2022
Contribution to a decarbonized society Total CO ₂ reduction target of 4.28 million tons in fiscal 2022	<ul style="list-style-type: none"> Pursuit of energy conservation measures in business activities CO₂ recovery in business activities (Scope 1 and Scope 2) 	<ul style="list-style-type: none"> Reduce CO₂ emissions by 2.16 million tons compared to fiscal 2009 by pursuing energy conservation CCS/CCUS initiatives
	<ul style="list-style-type: none"> Reduction of CO₂ emissions in the supply chain (Scope 3) 	<ul style="list-style-type: none"> Reduce CO₂ emissions of customers by 1.2 million tons compared to fiscal 2009 by promoting sale and development of environmentally friendly products [□] *
	<ul style="list-style-type: none"> Develop businesses in hydrogen and renewable energy 	<ul style="list-style-type: none"> Develop hydrogen station business Develop renewable energy business; total reduction of 920,000 tons from biomass, solar power, wind power and other forms of renewable energy
Contribution to a recycling-oriented society	<ul style="list-style-type: none"> Pursuit of the “3Rs” (reduce, reuse, recycle) 	<ul style="list-style-type: none"> Maintain zero emissions (waste-to-landfill ratio of less than 1%) Develop recycling business (plastic waste, rare metals, etc.)
Contribution to environmental protection	<ul style="list-style-type: none"> Initiatives for reducing the environmental burden 	<ul style="list-style-type: none"> Control emissions of hazardous substances Reduce hazards by enacting voluntary standards on management of chemical substances Soil pollution surveys and countermeasures Protect the environment through high-efficiency lighting Effective use of water resources
	<ul style="list-style-type: none"> Biodiversity initiatives 	<ul style="list-style-type: none"> Effective measures to preserve biodiversity in manufacturing sites Forest conservation activities in Japan and overseas
	<ul style="list-style-type: none"> Group initiatives 	<ul style="list-style-type: none"> Strengthen the environmental management structure Carry out environmental education for Group employees

* Available in Japanese only

Carbon Neutrality Plan

In May 2020, the Group announced its intention to achieve carbon neutrality in its own emissions by fiscal 2040, and in May 2022 released its Carbon Neutrality Plan, taking into account domestic and international trends. The following year, in conjunction with the formulation of our third Medium-Term Management Plan (FY2023–FY2025), we formulated a new Carbon Neutrality Plan, which we announced in May 2023. The new plan consists of two pillars; namely, reduction of our greenhouse gas emissions and contribution to the reduction of society’s greenhouse gas emissions.



		Carbon Neutrality Plan (Published in May 2023)	Carbon Neutrality Plan (Published in May 2022)
Scope 1+2		Greenhouse gas emissions target is revised in line with GX-ETS calculation standard.	Emissions on the premise of Act on Promotion of Global Warming Countermeasures
Target setting	FY2030	Reduction of greenhouse gas emissions by 46% ²	Reduction of greenhouse gas emissions by 46% ²
	FY2040	Net zero greenhouse gas emissions (Carbon neutrality)	Net zero greenhouse gas emissions (Carbon neutrality)
Scope 3: Avoided emissions		Determine the specific and quantitative goals for the efforts and establish the intermediate targets (Promote energy transition/circular economy and expand products which contribute to avoided emissions)	No quantitative targets
Target setting	FY2040	Reduction of halve CO ₂ emissions per energy supply (CI ³)	—
	FY2050	Aim for the realization of carbon neutrality in step with the government and other businesses	Aim for the realization of carbon neutrality in step with the government and other businesses

1 Scope 1+2

2 Compared to the base year FY2013

3 Carbon Intensity

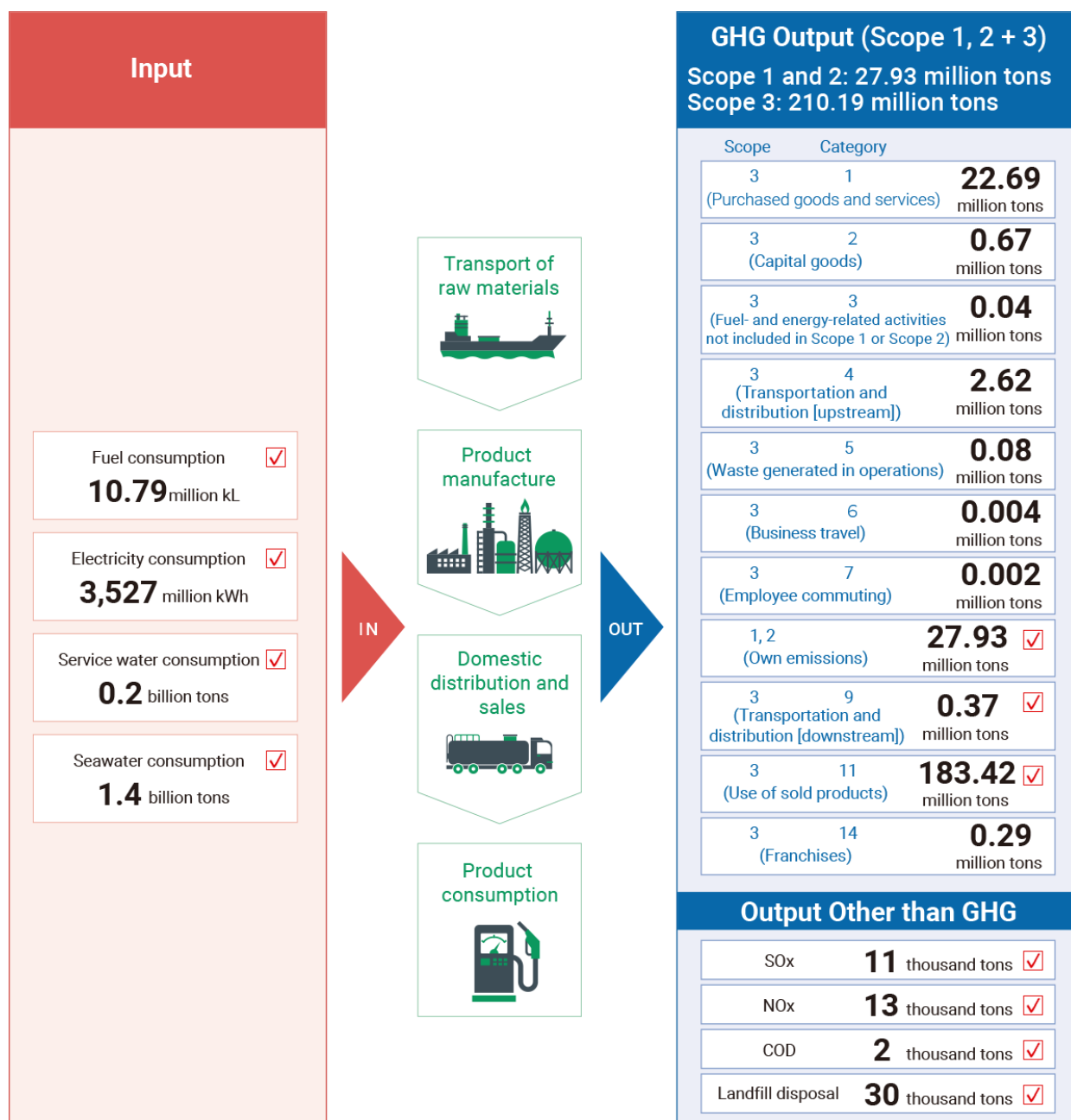
Note:

For details of the ENEOS Group Carbon Neutrality Plan, see [our corporate website \(Management Policy–Long-Term Vision and Medium-Term Management Plan\)](#) and [Integrated Report 2023—Carbon Neutrality Plan \(P31-34\)](#).

Overview of the ENEOS Group's Environmental Impact

For information about , see the [Editorial Policy](#).

Input-Output of the ENEOS Group (Results from Fiscal 2022)



Notes:

Fuel consumption, electricity consumption, and GHG emissions are calculated based on the Act on Promotion of Global Warming Countermeasures. From FY2022, fuel consumption and GHG emissions are calculated taking into account electricity sold and heat sold. GHG emissions from the consumption of electricity are calculated using emission factors by operator.

Scope 3 emissions are calculated based on the Basic Guidelines on Accounting for Greenhouse Gas Emissions Throughout the Supply Chain ver. 2.5. Data covers ENEOS.

GHG emissions associated with "Category 11: use of sold products" are calculated based on the latest petroleum product sales volumes.

Major Initiatives

External Engagement Activities for a Decarbonized Society

The entire world must work together to achieve the Paris Agreement and the 1.5°C target, and government and policy will play an extremely large role in this. As such, the Company is involved with and contributes to the formulation of policy recommendations by actively participating in government initiatives, as well as economic organizations and trade associations and their activities.

Organizations with a particularly strong relationship with the Company and influence over climate change policy are government bodies the Ministry of Economy, Trade and Industry (METI) and Ministry of the Environment (MOE), and trade associations the Japan Business Federation (Keidanren) and the Petroleum Association of Japan (PAJ). Through collaboration and advocacy with these government bodies and trade associations, we are working to ensure that policy, technological innovation, the orientation of society and customer needs are aligned toward the achievement of carbon neutrality by 2050.

External Engagement Initiatives, Activities and Results

Government	Stance	Achieve a decarbonized society and net-zero greenhouse gas emissions by 2050	
	Our initiatives	<ul style="list-style-type: none"> ● Involvement in and contribution to policy recommendations for the oil refining and marketing business, the electricity and gas business, the hydrogen business, the CCS business, the SAF business, and the synthetic fuels business in alignment with the government target of carbon neutrality by 2050 ● As Keidanren Vice Chair of the Board of Councillors and PAJ Vice President, participate in deliberations of various councils, including those where energy and climate change issues are discussed, and proactively make policy recommendations ● As member of the GX (Green Transformation) Implementation Council, chaired by the Prime Minister and deputy chaired by the Minister in charge of the promotion of GX implementation and Chief Cabinet Secretary, participate in the examination of measures necessary for the implementation of GX 	
	Our activities and results	METI	<ul style="list-style-type: none"> ● Based on the government's long-term CCS roadmap, pursued public-private initiatives for starting CCS businesses by 2030, and our project was selected for JOGMEC research funding (West Japan CCS business) ● Participation in the Hydrogen and Fuel Cell Strategy Council, the Public-Private Council to Promote the Introduction of Sustainable Aviation Fuel (SAF), the Public-Private Council to Promote the Introduction of Synthetic Fuels (e-fuels), and the Carbon Recycling Roadmap Study Group ● Our projects (hydrogen business, etc.) selected for the Green Innovation Fund administered by the New Energy and Industrial Technology Development Organization (NEDO) ● Participation in the GX League*, where we actively made recommendations on ETS system design
MOE		<ul style="list-style-type: none"> ● Commercialization of oil production from waste plastics with the support of the program on the promotion of advanced resource recycling equipment installation for building of a decarbonized society (operations to begin in fiscal 2023) 	
Keidanren	Stance	Unwavering commitment to work with the government toward carbon neutrality by 2050	
	Our initiatives	<ul style="list-style-type: none"> ● Take the lead in the implementation of policies related to energy and the environment and get involved in and contribute to the formulation of policy recommendations 	
	Our activities and results	<ul style="list-style-type: none"> ● Participation in Challenge Zero, an initiative of Keidanren and the Japanese government to promote innovation for the achievement of a decarbonized society ● Stated support for voluntary emissions trading 	

PAJ	Stance	Contribute to the realization of carbon neutrality in society as a whole by aiming to achieve net-zero (carbon-neutral) CO ₂ emissions (Scope 1+2) associated with business activities and taking on the challenge of reducing CO ₂ emissions from our products (Scope 3) to net zero (carbon neutral) by 2050
	Our initiatives	<ul style="list-style-type: none"> ● As the largest company in the petroleum industry in Japan, take the lead in the implementation of policies related to the petroleum and energy industries as a whole, and get involved in and contribute to the formulation of policy recommendations ● As Vice President, lead petroleum industry discussions on climate change and disseminate information externally through monthly board meetings ● As Chair of the Carbon Neutrality Promotion Expert Committee, lead discussions on carbon neutrality in the petroleum industry
	Our activities and results	<ul style="list-style-type: none"> ● Stated support for voluntary emissions trading

* A framework based on the basic concept of the Ministry of Economy, Trade and Industry. With an eye toward achieving carbon neutrality and social transformation by 2050, the GX League is a venue where companies that are taking on the challenge of GX and aim to achieve sustainable growth in society both in the present and future collaborate with government and academia.

Environmental Education

With the aim of raising environmental awareness even further, the Group distributes environmental newsletters, holds e-learning sessions and provides regular classification-leveled education, training and drills for all employees to instill awareness of the Group's basic environmental policies and various laws and regulations, and also to ensure basic knowledge of the environment.

Environmental Audits

All business sites that have obtained ISO 14001 certification are subject to regular internal audits based on the requirements of the standard in order to confirm and evaluate the effectiveness and conformance of their EMS activities. They also undergo an annual review by a third-party certification body to maintain their certification.

Preventing Environmental Accidents

As in fiscal 2021, there were no environmental accidents at our manufacturing sites in fiscal 2022.

Prevention of Global Warming

Basic Approach

The ENEOS Group is reducing CO₂ emissions across the entire supply chain in order to contribute to the development of a decarbonized society. To reduce our greenhouse gas emissions, we are focusing on energy conservation in our business activities. We are also helping to reduce the overall greenhouse gas emissions of society through the expansion of our renewable energy business, early practical implementation of hydrogen and carbon-neutral fuels, and development and sales of environmentally friendly products that have a lower environmental impact. For our company-wide initiatives to address climate change and TCFD-related information, see [Our Response to Climate Change Risks and Opportunities \(TCFD\)](#).

Structure

For information on our structure, see [Environmental Management](#).

Material Issues, Plans and Results

Fiscal 2022 Targets, Results and Progress

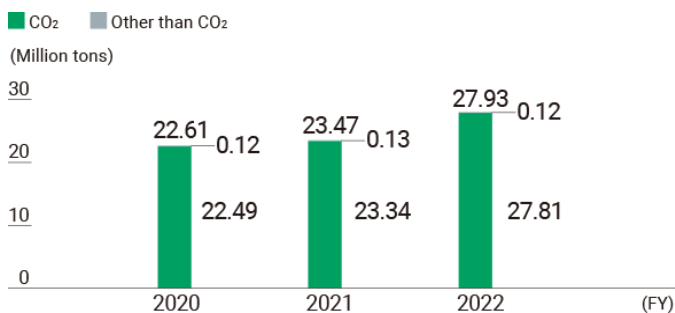
Evaluation: 😊 Achieved/Steady progress ☹️ Not achieved

Material ESG Issue	Initiative	Target (KPI)	Results/Progress	
Contribution to the development of a decarbonized society	Reduction in CO ₂ emissions (Reduction amount through independent efforts)	Reduction in CO ₂ emissions: Reduce by 4.28 million tons compared to fiscal 2009	😊	Reduced by 4.30 million tons compared to fiscal 2009

Results

For information about , see the [Editorial Policy](#).

Changes in Total GHG Emissions (Scope 1+2)

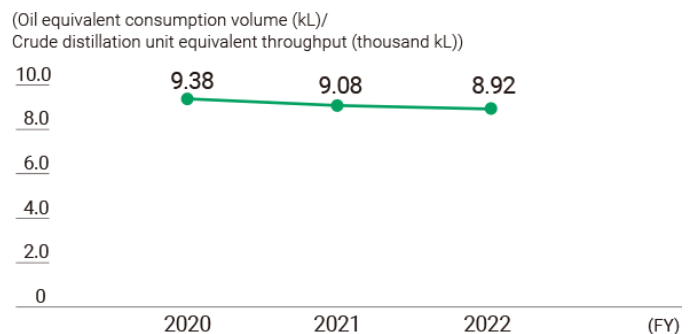


Notes:

Calculated in accordance with the Act on Promotion of Global Warming Countermeasures. From fiscal 2022, calculations take into account electricity sold and heat sold.

For detailed data, see [Data](#).

Energy Consumption Intensity for Oil Refining



Note:

Covers the oil refining sites of the ENEOS Group.

Breakdown of GHG Emissions Other Than CO₂ (Fiscal 2022)

Items	Unit	Emissions
Total GHG emissions other than CO ₂	Tons	116,656
1. CH ₄ (methane)	Tons	30,320
2. N ₂ O (nitrous oxide)	Tons	85,929
3. HFCs (hydrofluorocarbons)	Tons	223
4. PFCs (perfluorinated compounds)	Tons	0
5. SF ₆ (sulfur hexafluoride)	Tons	184
6. NF ₃ (nitrogen trifluoride)	Tons	0

The main greenhouse gases other than CO₂ are CH₄, produced during crude oil and gas production, and N₂O, which is emitted from heating furnaces during the oil refining process.

We will continue working to lower these and other GHG emissions.

Initiatives under the Second Medium-Term Environmental Management Plan (Fiscal 2020 to Fiscal 2022)

Target

Reduction in CO₂ emissions along the entire supply chain

Medium-term target (FY2022): Reduction of 4.28 million tons compared to FY2009*

* The reduction target for fiscal 2022 represents a reduction of approximately 15% compared to fiscal 2009. Our CO₂ reduction targets do not include elements resulting from decreased demand.

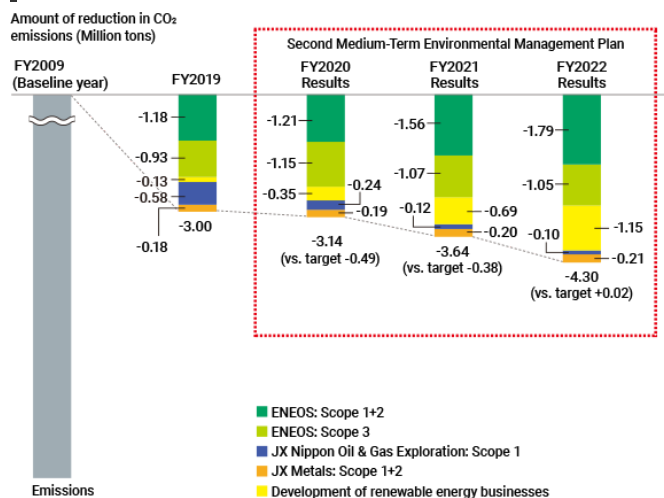
Results

Fiscal 2022 Results

Results of reduction in CO ₂ emissions (compared to FY2009)	
(1) Reduction in CO ₂ emissions at Group production sites	2.10 million tons
Energy conservation	2.10 million tons
CO ₂ -EOR*	0 million tons
(2) Reduction in CO ₂ emissions other than at Group production sites	2.20 million tons

* CO₂-EOR (enhanced oil recovery) is a technology for the improved recovery of oil through the injection of CO₂. This technology simultaneously increases production of crude oil and reduces emissions of CO₂ into the atmosphere by transporting the CO₂, captured out of the processed flue gas from a coal-fired power plant, to an oil field, and injecting and storing the CO₂ into legacy fields.

Reduction in CO₂ Emissions



* Scope 1+2 emissions

Carbon Neutrality Plan

Target

GHG Emissions Targets (Scope 1+2)

Applicable companies	Items	FY2023	FY2024	FY2025
ENEOS	GHG emissions	28.54 million tons or less	28.15 million tons or less	29.66 million tons or less
	Reduction in emissions from refineries, etc.	-0.35 million tons	-0.50 million tons	-0.51 million tons
	CCS	Selection of potential storage sites	Determination of storage sites	Detailed design
	Forest absorption Credits created	0.12 million tons created	0.23 million tons created	0.54 million tons created
JX Nippon Oil & Gas Exploration	GHG emissions	0.67 million tons or less	0.63 million tons or less	0.62 million tons or less
	Methane emissions	1,650 tons or less	1,000 tons or less	350 tons or less
	CCUS	0.52 million tons or more	1.12 million tons or more	1.12 million tons or more
JX Metals	GHG emissions	0.79 million tons or less	0.72 million tons or less	0.72 million tons or less
Group total (Reduction compared to 2013)		30.00 million tons or less (-5.93 million tons)	29.50 million tons or less (-6.43 million tons)	31.00 million tons or less (-4.93 million tons)

To reach these targets, we are focusing our efforts in three main areas.

- 1) Curbing Group greenhouse gas emissions by improving the energy efficiency of our manufacturing and business operations through energy saving, fuel conversion, and the use of renewable energy.
- 2) Using carbon dioxide capture and storage (CCS) for emissions remaining after the above measures are carried out, and storing the captured CO₂ underground.
- 3) Any remaining greenhouse gas emissions after the above two measures will be removed through forest absorption and other natural absorption methods.

Major Initiatives

Energy Conservation at Production Sites

The Group's refineries and plants are pursuing energy conservation through measures such as increasing the number and efficiency of heat exchangers and introducing higher efficiency rotary equipment.

The Group's GHG emissions (Scope 1+2)* in fiscal 2022 totaled 27.93 million tons, an increase over the previous fiscal year. This was due to the restart of operations of facilities that had been shut down due to malfunction, in addition to a recovery in demand, which had been impacted by the COVID-19 pandemic.

Meanwhile, our crude oil refining energy consumption intensity improved by 0.16 points from the previous fiscal year to 8.92 (oil equivalent consumption volume (kL)/crude distillation unit equivalent throughput (thousand kL)) with the recovery of operations.

In fiscal 2022, the Group invested around 0.61 billion yen in facilities for energy conservation. Going forward, we remain committed to pursuing greater energy conservation by introducing energy-saving technologies and optimizing operations at our refineries and smelters.

* Scope 1 and Scope 2 as defined in the GHG Protocol

Introduction of CO₂-Free Electricity at Principal Metals Business Sites

As approximately 60% of the JX Metals Group's total CO₂ emissions come from electricity, in fiscal 2020 it began introducing CO₂-free electricity*. In fiscal 2022, the JX Metals Group completed the switch to CO₂-free electricity at its major sites in Japan, with the exception of some sites that have contractual restrictions. It is also steadily moving ahead with the switch at its overseas sites.

* Electricity derived from effectively non-fossil power sources that do not use fossil fuels and do not emit CO₂, and have an adjusted CO₂ emission factor of 0.00 t-CO₂/kWh. In addition to power generation from renewable energy such as hydro power, wind power, and solar power, nuclear power generation may also be included.

Initiatives in Research and Development

The Group is moving forward with research in the following fields in order to realize energy transitions.

In fiscal 2022, the ENEOS Group spent a total of around 29.4 billion yen on research and development.

- Technical development for the manufacture, storage, transport, and supply of CO₂-free hydrogen derived from renewable energy
- Technical development for the manufacture of synthetic fuels from CO₂-free hydrogen and CO₂
- Technical development for the manufacture of hydrogen and the optimization of storage battery operation plans, which contribute to the effective use of renewable energy
- Technical development and feasibility study on biofuels
- Technical development on recycling of plastic resources and used tires
- Rationalization and streamlining of oil refining processes
- Development of environmentally friendly products (fuel-efficient automotive lubricants, etc.)

Initiatives of ENEOS Lab with Waseda University as a Joint Research Base

In November 2019, ENEOS concluded an agreement with Waseda University on comprehensive collaboration activities to promote innovation toward achieving a sustainable society. Through multi-disciplinary open innovation, we are exploring technologies that will contribute to the realization of a carbon-neutral society. The ENEOS Lab, established at Waseda University as a hub for joint research, is conducting innovative research on CO₂ reduction related to hydrogen, battery materials and robotics.

Development of Manufacturing Technologies for Synthetic Fuels Derived from Renewable Energy

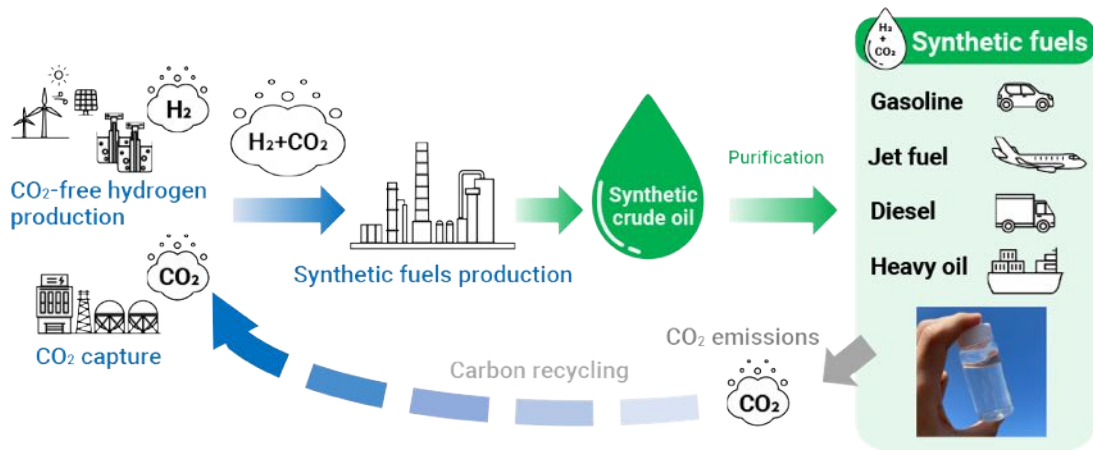
ENEOS is working on the development of manufacturing technology for synthetic fuels that can replace fossil fuels such as jet fuel, gasoline, and diesel to achieve carbon neutrality in a wide range of fields, such as aircraft and vehicle mobility and raw materials for chemicals and lubricants.

Synthetic fuels are carbon-neutral fuels produced using CO₂-free hydrogen derived from renewable energy and CO₂, which means that they can reduce CO₂ emissions throughout the product lifecycle. In addition, as their properties are equal to those of conventional fossil fuels, these synthetic fuels can be acceptable in existing vehicles, refinery facilities, and distribution routes, meaning they will play a vital role in realizing energy transitions.

ENEOS aims to establish manufacturing technologies for synthetic fuels early and their social implementation with the support of the Green Innovation (GI) Fund*, which was adopted in April 2022.

* A fund administered by the Japanese government that provides support to companies working to address management issues to help reach Japan's goal for carbon neutrality by 2050. The fund offers financial assistance over a 10-year period in areas ranging from R&D and demonstration projects to social implementation, covering 14 fields in energy-related industries, including the hydrogen and ammonia fuel industries; transportation and manufacturing-related industries; and household and office-related industries.

Synthetic Fuels Production Process



Supporting Research on Hydrogen Energy Supply through the ENEOS Hydrogen Trust Fund

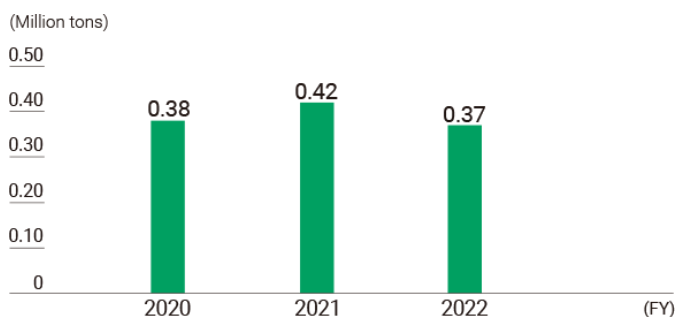
ENEOS established the ENEOS Hydrogen Trust Fund in March 2006 in order to help speed up the realization of a hydrogen society. The fund is Japan's first public trust specializing in supporting research on the supply of hydrogen energy. The fund is large enough that a stable supply of research grants worth 50 million yen (up to 10 million yen per project) can be provided for around 30 years to support innovative and pioneering basic research into hydrogen energy supply systems. As of June 2023, the fund's assets total around 700 million yen, which will make it possible to provide stable grants for approximately 13 years going forward.

Initiatives in Procurement and Logistics

With regard to marine transportation, which primarily involves the transport of crude oil to Japan, ENEOS is making active efforts to use oil tankers with superior delivery efficiency and fuel efficiency, and to improve fuel consumption by optimizing transportation routes and controlling navigation schedules and speeds.

Regarding land transportation, in addition to consolidating oil depots and improving the distribution efficiency of tank trucks, we are working to reduce fuel consumption through efforts such as insisting that drivers turn off their engines when stopped.

CO₂ Emissions from Domestic Transport



Note:
Scope: ENEOS

Distribution Stage Initiatives

ENEOS is actively implementing power-saving measures at its service stations nationwide through efforts such as the installation of solar panels and the adoption of LED lighting.

Consumption Stage Initiatives

The Group's CO₂ emissions from the use of sold products* in fiscal 2022 totaled 183.42 million tons.

ENEOS is working to reduce CO₂ emissions at the consumption stage through the development and sale of environmentally friendly products, which contribute to a lower environmental impact. We have specified standards and procedures for certification of our environmentally friendly products and services and manage these appropriately.

* Scope 3 as defined in the GHG Protocol

Main environmentally friendly products

- Fuel-efficient lubricants
- Specialized fluids for electric vehicles and hybrid vehicles
- Natural gas and LNG
- Liquid crystal polymers
- Electricity generation using renewable energy

For more information on our environmentally friendly products, see [ENEOS's environmentally friendly products](#) (available in Japanese only).

Sales of Carbon-Neutral Natural Gas and LNG

In fiscal 2021, ENEOS began selling carbon-neutral natural gas and LNG due to the use of CO₂ credits* from overseas forest protection projects, and has been supplying these products to utility gas providers since then.

ENEOS's carbon-neutral natural gas and LNG utilize CO₂ credits generated from forest protection projects in Indonesia and other countries to offset the CO₂ generated in processes from natural gas extraction to combustion, reducing its carbon footprint to net zero. In addition to reducing greenhouse gas emissions on a global scale, ENEOS is also contributing to the creation of local employment and the protection of biodiversity.

* CO₂ credits attested by a highly reliable verification institution for CO₂ reduction effects generated by environmental conservation projects.

Working with Business Partners (CSR Procurement)

We implement CSR procurement, in which we take into account social impacts, such as effects on the environment, when purchasing materials and other goods and services.

For details, see [Supply Chain Management](#).

Visualizing CO₂ to Reduce Greenhouse Gas Emissions

We are working toward the visualization of greenhouse gas emissions in order to reduce these emissions in the Group and in society.

In fiscal 2023, we will introduce a CO₂ visualization system that will enable us to manage our CO₂ emissions. In March 2023, ENEOS, WasteBox Co., Ltd., and NTT DATA Corporation launched a joint study for construction of the system. The system is being designed to provide the following functions to enable us to more accurately calculate the carbon footprints (CFP)¹ of ENEOS petroleum products and manage the greenhouse gas emissions of more than 100 sites.

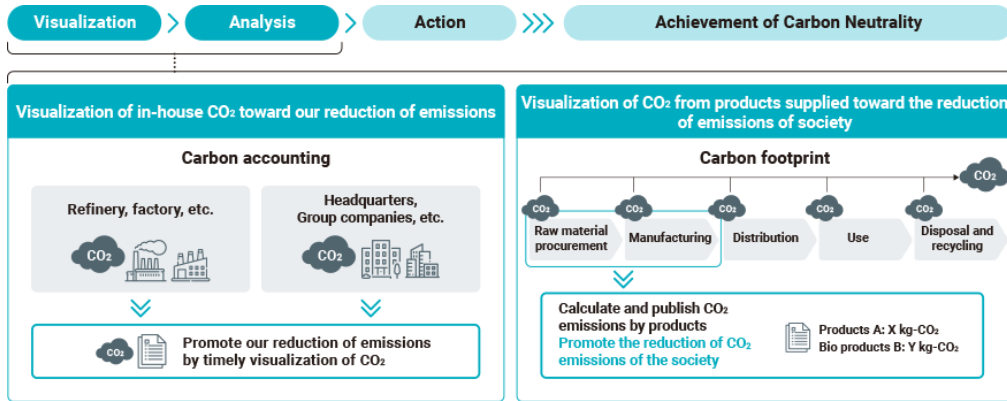
- 1) Streamlining statutory reporting of greenhouse gases by improving efficiency of work processes for aggregation of entity-level greenhouse gas emissions
- 2) Managing the implementation of carbon neutrality plans through monthly forecasting and result management
- 3) Streamlining per-product CFP calculations and discussions on reduction of per-product CFP

The development of this system aims to achieve unified monitoring and management of carbon information on a per-product basis, analyze the impact that decarbonization initiatives in manufacturing has on CFP and visualize CFP at the new product planning stages, and create business opportunities by highlighting the environmental value of low-carbon products.

Once the system is in operation, we will provide our customers with CFP data for ENEOS petroleum products, beginning with some lubricants, petrochemical products, and functional materials and then expanding to cover other products. Our CFP data will be "cradle to gate²," meaning it will cover all greenhouse gas emissions from raw materials procurement to product shipment. We will use the life cycle assessment (LCA) method³ to calculate emissions associated with material procurement and product manufacturing.

- 1 Carbon footprint of products (CFP) is a system for converting greenhouse gas emissions throughout the life cycle of a product or service, from the procurement of raw materials to manufacturing and beyond, to CO₂.
- 2 Refers to the process from raw materials procurement to production within the life cycle stages, comprising raw materials procurement, manufacturing, distribution, sales, use and maintenance, disposal and recycling.
- 3 LCA (life cycle assessment) methodology involves quantitatively evaluating the environmental effects of product manufacturing throughout the entire life cycle from procurement of raw materials to manufacturing, transport, use, and disposal.

ENEOS Group CO₂ Visualization



Businesses Helping to Address Climate Change

Advancement of Renewable Energy Power Generation Business

The Group has been advancing this business with the target of expanding the total capacity of our renewable power generation portfolio in Japan and overseas to over one million kW by the end of fiscal 2022. We achieved this target by acquiring shares in Japan Renewable Energy (JRE) in January 2022. In addition, with the integration of ENEOS's renewable energy business with JRE in April 2023, we expect to further strengthen the growth of our renewable energy business. Our renewable energy power generation capacity stands at approximately 1.26 million kW (as of June 2023, including projects under construction).

JRE is one of Japan's leading energy suppliers, with a high level of business development capability. Combining this with the Group's expertise in the energy business, we will further develop and speed up the business to become Japan's leading supplier of renewable energy and contribute to the realization of the 3E+S (energy security, economical efficiency and environment plus safety) of energy in a decarbonized society.

For information on our renewable energy power plants, see the [ENEOS website](#) □ .



Murooran Biomass Power Plant



Binary cycle power generation (Shimoda Hot Springs)



Kudamatsu Mega Solar Power Plant

Planned Power Generation Projects

	Power generation project	Generation capacity*	Planned start of operation
Japan	JRE Miyagi Kami Wind Farm	42 MW	March 2024
	Hirado Wind Power Plant	9 MW	March 2024
	Oita Beppu Bay Wind Power Plant	9 MW	June 2024
	Niigata 1 Solar Power Plant	18 MW	December 2024

* 100% of generation capacity

Generation Capacity by Energy Source (As of June 2023)

Thermal ¹ (9 sites)	Oil, etc. (7 sites)	912MW
	LNG (CCGT ²) (2 sites)	598MW
Solar (81 sites)		664MW
Hydro (1 site)		5MW
Wind (9 sites)		126MW
Geothermal (1 site)		0.1MW
Biomass (2 sites)		91MW
Total		2,396MW

- 1 Thermal capacity does not include refinery in-house power generation.
- 2 Gas-fired thermal power plant with combined cycle gas turbines (CCGT)

Renewable Energy Power Generation (Fiscal 2022)

Solar	666,106MWh
Hydro	24,629MWh
Wind	202,515MWh
Geothermal	36MWh
Biomass	604,436MWh
Total	1,497,722MWh

Note:

The GHG emission factor for ENEOS's electric power business in fiscal 2022 was 0.000452 t-CO₂/kWh (after adjustment) as published by the Ministry of the Environment and the Ministry of Economy, Trade and Industry in the Fiscal 2021 Results on January 24, 2023 and Partial Revisions on May 26, 2022.

Establishment of a Hydrogen Supply Chain

Hydrogen is a clean energy source that does not emit CO₂ during use. Because it enables the use of renewable energy during the manufacturing process and can be rendered CO₂-free (green hydrogen), hydrogen is considered a key form of clean energy for the achievement of carbon neutrality.

As of September 30, 2023, there are around 8,000 fuel cell vehicles (FCVs) in Japan, which has a total of 164 hydrogen stations, 43, or roughly one-third, of which are operated by ENEOS. Looking ahead, the growth of FCVs, especially commercial vehicles such as buses and trucks, is expected due to the long driving range and quick filling times offered by hydrogen. ENEOS is working to develop large-scale hydrogen stations to accommodate these vehicles.

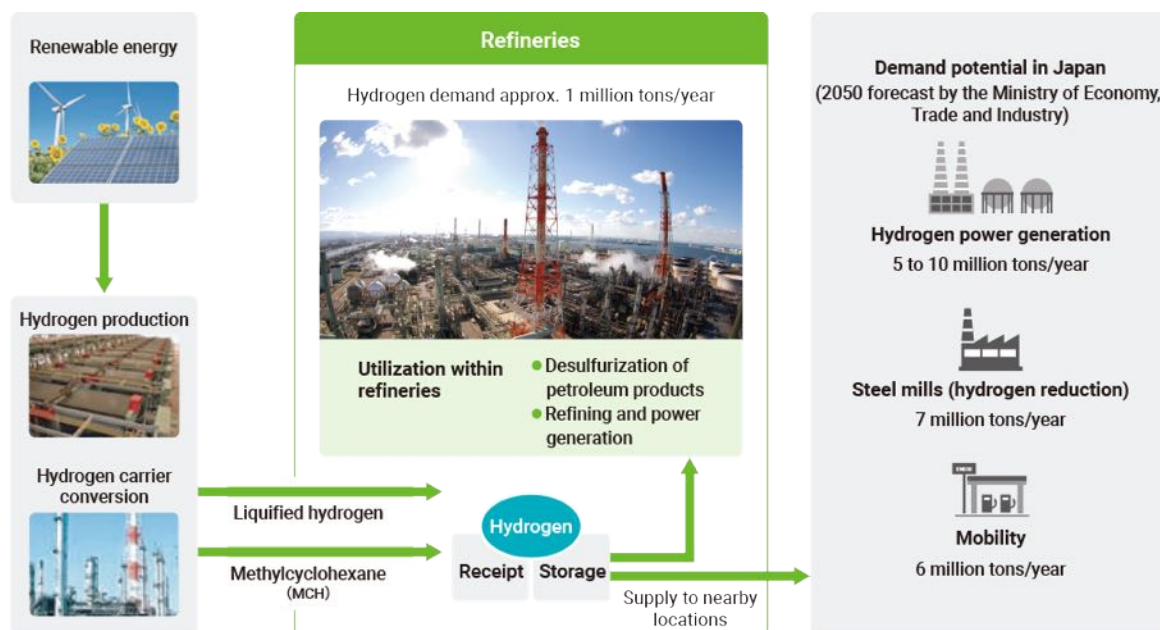
With an eye on the future mass consumption of hydrogen, we are implementing a number of collaborative projects with local governments and leading companies in Japan and overseas for the early establishment of a supply chain for transporting and supplying Japan with green hydrogen produced overseas, where there is abundant renewable energy and other resources. As part of this effort, we are focusing on methylcyclohexane (MCH), a hydrogen carrier, in order to transport green hydrogen from overseas to Japan in large quantities and with high efficiency. We are now working on the development of our proprietary Direct MCH[®] technology, which contributes to cost reduction (see the [news release](#) □ for details).

ENEOS refineries have the potential to serve as hubs for the stable supply of hydrogen due to the fact that they already have expertise in handling large quantities of hydrogen, can utilize existing infrastructure, such as ports, piers and tanks, and are located near power plants and steel mills, which are expected to require large amounts of hydrogen. We will fully utilize these advantages in the development of a hydrogen supply chain.



Tokyo Oi Hydrogen Station

Building a Supply Chain for CO₂-Free Hydrogen Using Our Refineries as Hubs



Source: "Green Growth Strategy Through Achieving Carbon Neutrality in 2050" published by the Ministry of Economy, Trade and Industry, December 25, 2020.

Initiatives for the Development of a Hydrogen Supply Chain

Overseas

Project/Organization	Region	Overview
Development of a Japan-Australia CO ₂ -free hydrogen supply chain	Australia	ENEOS is studying collaboration on the potential for the low-cost, stable supply of hydrogen produced from renewable energy with two Australian companies, Neoen Australia Pty Ltd and Origin Energy Limited. The projects will study more efficient production of methylcyclohexane (MCH) and maritime transport of MCH to Japan as a form of hydrogen storage and transport. For more information, see the following news releases. <ul style="list-style-type: none"> • Neoen Australia Pty Ltd: news release □ • Origin Energy Limited: news release □
Development of a CO ₂ -free hydrogen supply chain (derived from renewable energy) in Malaysia	Malaysia	The project will manufacture several tens of thousands of tons of CO ₂ -free hydrogen in Sarawak, Malaysia using electricity derived from renewable energy generated at a hydroelectric power plant. Thereafter, the hydrogen will be converted to MCH and transported by chemical tanker to demand centers outside Malaysia. For more information, see the news release □ (available in Japanese only).
Collaboration for development of a CO ₂ -free hydrogen and ammonia supply chain with Saudi Aramco	Saudi Arabia	The project will conduct feasibility studies on a business for hydrogen manufacture from fossil resources produced and supplied by Saudi Aramco, a business for the capture and storage of CO ₂ emitted during the manufacturing process, and the maritime transport of hydrogen to demand centers using ammonia or MCH. For more information, see the news release □ .
Joint study agreement to evaluate development of a clean hydrogen supply chain between the UAE and Japan	United Arab Emirates	The project will conduct a feasibility study on the utilization of by-product hydrogen from Abu Dhabi National Oil Company (ADNOC)'s refinery and petrochemical plant and blue hydrogen produced from natural gas. The hydrogen will be converted to methylcyclohexane (MCH) for export to Japan. For more information, see the news release □ .

Japan

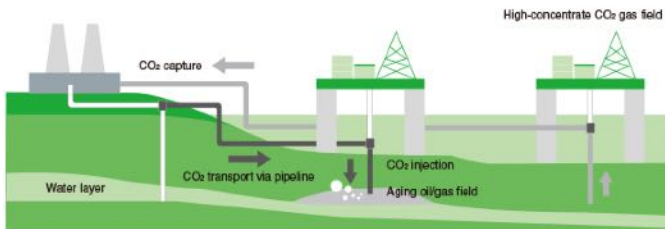
Project (Location)	Overview
<p>Selection for NEDO Green Innovation Fund</p>	<p>The following four demonstration projects were selected by the National Research and Development Agency, New Energy and Industrial Technology Development Organization (NEDO) for its Green Innovation Fund (available in Japanese only): (1) large-scale demonstration of an MCH supply chain; (2) direct MCH electrosynthesis (Direct MCH[®]) technology development; (3) hydrogen single fueled power generation equipment demonstration; and (4) demonstration project for the commercialization of a liquefied hydrogen supply chain. The demonstration project period is planned to last until the end of fiscal 2030 (end of fiscal 2029 for (4)).</p> <p>For more information, see the following news releases.</p> <ul style="list-style-type: none"> · News release on demonstration projects (1) to (4) · Joint news release with Kawasaki Heavy Industries, Ltd. and Iwatani Corporation on demonstration project (4) (available in Japanese only)
<p>Demonstration for feeding MCH into existing oil refining facilities</p>	<p>The project will demonstrate hydrogen extraction from MCH and consumption using ENEOS refining facilities. This will be the first dehydrogenization demonstration project using existing refining facilities in Japan. The candidate sites for the demonstration are Kawasaki Refinery, Wakayama Plant, and Mizushima Refinery. The demonstration is scheduled to be conducted by fiscal 2023.</p> <p>For more information, see the Chiyoda Corporation news release.</p>
<p>Hydrogen utilization research project in Tokyo Bay area</p>	<p>The project will research the construction of a hydrogen pipeline network for potential large-scale consumers of CO₂-free hydrogen, such as thermal power plants and steel mills, for the decarbonization of Tokyo Bay, with a focus on the Kawasaki coastal area. In addition, with the cooperation of Kawasaki City, the project will evaluate the feasibility of using existing pipelines in the city's industrial complex and identify issues associated with the construction of new hydrogen pipelines (extensions). The project aims for the development of efficient hydrogen supply infrastructure using hydrogen pipelines, with ENEOS's refinery in the coastal area serving as a hub for receipt of low-cost CO₂-free hydrogen from overseas.</p> <p>For more information, see the news release (available in Japanese only).</p>
<p>Full-scale study for large-scale hydrogen use in the Keihin Waterfront Area</p>	<p>The study will focus on estimating demand from the perspective of hydrogen users, identifying trends in relevant technological development, and collaboration with hydrogen suppliers, equipment manufacturers and supply companies, mainly in the Kawasaki Port area.</p> <p>For more information, see the news release (available in Japanese only).</p>
<p>ENEOS, JERA Co., Inc. and JFE Holdings, Inc. to begin joint study of a hydrogen and ammonia supply collaboration based in the Keihin Waterfront Area</p>	<p>The project will study the establishment of a hydrogen and ammonia receiving facility and supply network in the Keihin Waterfront Area using ENEOS's refineries, JERA's thermal power plants and an LNG receiving terminal, JFE Steel Corporation's land after decommissioning of its blast furnace and deep-water wharves capable of docking large ships.</p> <p>For more information, see the JERA news release.</p>
<p>Research project on local production for local consumption model for hydrogen in Mutsu Ogawara District (Aomori Prefecture)</p>	<p>The project will conduct research on the development of a local production for local consumption model for CO₂-free hydrogen in the Mutsu Ogawara district of Aomori Prefecture, an area with abundant renewable energy resources, including onshore and offshore wind power.</p> <p>For more information, see the news release (available in Japanese only).</p>
<p>Exploring the utilization of hydrogen energy at Woven City with Toyota Motor Corporation (Susono City, Shizuoka Prefecture)</p>	<p>The project will involve the construction and operation of a hydrogen station, production of CO₂-free hydrogen at hydrogen stations, and supply of hydrogen from hydrogen stations to Woven City and FCVs. The project will also study in detail a hydrogen supply-demand management system.</p> <p>For more information, see the news release.</p>
<p>Development of hydrogen stations</p>	<p>There are 164 hydrogen stations in Japan (as of September 30, 2023), 43 of which are operated by ENEOS. Aiming for the strategic development of hydrogen stations, ENEOS participates in the Japan Hydrogen Station Network Joint Company (Japan H₂ Mobility, abbreviation: JHyM), which was established in February 2018 by automobile manufacturers, infrastructure companies, and financial investors. Through collaboration in this all-Japan consortium, ENEOS is working on the strategic development and efficient operation of hydrogen stations.</p> <p>For more information, see the news release (available in Japanese only).</p>

<p>Commercial sales of CO₂-free hydrogen (derived from renewable energy) produced at hydrogen stations (First in Japan; Asahi Ward, Yokohama City)</p>	<p>The project will market CO₂-free hydrogen produced by water electrolysis using electricity generated from solar panels installed at hydrogen stations and renewable-energy-derived electricity procured from the ENEOS Group. In fiscal 2021, the project introduced a hydrogen EMS for optimal control of water electrolysis unit operations based on the amount of renewable energy electricity generated and hydrogen demand.</p> <p>Going forward, the project will aim for the manufacture of CO₂-free hydrogen using low-cost electricity by collaborating with virtual power plants (VPP), which remotely control hydrogen EMS and various energy resources.</p> <p>For more information, see the news release (available in Japanese only).</p>
<p>Demonstration project for commercialization of vessels equipped with high-power fuel cells</p>	<p>The project will develop a commercially viable fuel-cell-powered 150-ton medium-sized sightseeing vessel (capacity: around 100 passengers) and conduct sea trials, aiming for the use of fuel cells in maritime applications, which are expected to grow in the future.</p> <p>The project will develop piping and instrumentation systems for supplying hydrogen from tank trucks or onshore tanks to vessel tanks safely and in conformance with time and quality requirements. Construction and manufacture will begin in 2023 and sea trials in the Yokohama Port coastal area will begin in 2024.</p> <p>For more information, see the following news releases.</p> <ul style="list-style-type: none"> · News release on demonstration project · News release on collaboration with Yokohama City (available in Japanese only)
<p>Partnership agreement signed to expand CO₂-free hydrogen use to decarbonize railways</p>	<p>The partnership will jointly study the development of integrated hydrogen stations to supply hydrogen to hydrogen-hybrid trains and the decarbonization of the electricity supply using hydrogen co-firing power generation for the decarbonization of the railway lines operated by East Japan Railway Company.</p> <p>For more information, see the news release .</p>
<p>Hydrogen utilization study at Haneda Airport and surrounding areas</p>	<p>We will investigate the hydrogen supply potential using a model where hydrogen produced overseas is imported to the Kawasaki coastal area and then transported to the vicinity of Haneda Airport, which is a demand area. We will also investigate the hydrogen demand potential by utilizing hydrogen for electricity, heat, and GSE vehicles in Haneda Airport facilities, and hydrogen utilization in the surrounding area.</p> <p>For more information, see the news release .</p>
<p>Study for the development of a large-scale green hydrogen supply chain in Hokkaido</p>	<p>We will conduct a study for the development of a large-scale green hydrogen supply chain in Hokkaido, which is rich in renewable energy resources such as solar and wind power.</p> <p>For more information, see the news release .</p>

Oil and Gas E&P Using CO₂-EOR and CCS Technologies

JX Nippon Oil & Gas Exploration carries out its business activities with attention to the reduction of greenhouse gas emissions, a cause of global warming. The company is taking part in a project in the state of Texas in the United States to increase output from a depleted oil field by injecting CO₂ captured from the flue gas of a thermal power plant. Since April 2017, a total of 3.77 million tons of CO₂ has been injected into the oil field through this project, greatly contributing to increasing oil output and lowering greenhouse gas emissions using CO₂-EOR (enhanced oil recovery) technology. In March 2020, together with Japan Organization for Metals and Energy Security (JOGMEC), we concluded a joint study agreement with PETRONAS, Malaysia's state-owned oil company, for gas field development using CCS (CO₂ capture and storage) technology, in which CO₂ emitted from gas fields is captured and injected underground.

CO₂ Separation and Capture in a Gas Field in Malaysia



CO₂ recovery plant (state of Texas in the United States)

CCS Business

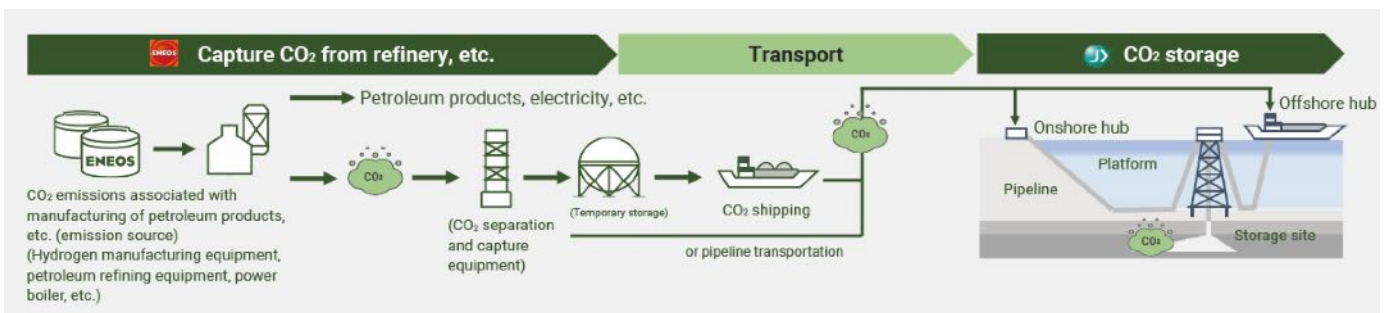
The Group is preparing to launch Japan's first large-scale CCS business in fiscal 2030 in cooperation with the government, which aims to achieve carbon neutrality by 2050, and various businesses that are actively working to achieve that goal.

In the Group's oil and natural gas E&P business, we commercialized a CCS/CCUS business in 2016 in Texas, USA, in which CO₂ captured from exhaust gas at a thermal power plant is injected underground. Therefore, we already have the necessary technology and knowledge for geological evaluation and CO₂ injection. While maximizing this expertise, we will collaborate with other companies to scale up operations and minimize costs, aiming for the full-scale implementation of CCS.

Specific Initiatives

- West Japan Carbon dioxide Storage Survey Co., Ltd. established jointly by three companies, Electric Power Development Co., Ltd. (J-POWER), ENEOS, and JX Nippon Oil & Gas Exploration, for the storage of CO₂ in western Japan (February 2023)
- Acquisition of shares of Japan Drilling Co., Ltd., which has offshore drilling technology necessary for CO₂ storage (March 2023)

Domestic CCS Value Chain of ENEOS



The 3Rs (Reduce, Reuse, Recycle)

Basic Approach

The ENEOS Group is doing its part to develop a recycling-oriented society by reducing waste and recycling resources in its own activities as well as in society. The Group is expanding its recycling business, and applies the 3Rs—reduce, reuse and recycle—to ensure that it uses resources efficiently.

Structure

For information on our structure, see [Environmental Management](#).

Material Issues, Plans and Results

Fiscal 2022 Targets, Results and Progress

Evaluation: 😊 Achieved/Steady progress 🙄 Not achieved

Material ESG Issue	Initiative	Target (KPI)	Results/Progress	
Contribution to the development of a recycling-oriented society	Reduction in landfill disposal	Waste-to-landfill ratio: Maintain zero emissions (less than 1%)	😊	0.8%

Second Medium-Term Environmental Management Plan (Fiscal 2020 to Fiscal 2022)

Target

Waste-to-landfill ratio
Maintain zero emissions (waste-to-landfill ratio of less than 1%)

Fiscal 2022 Results

Waste-to-landfill ratio (actual)
Waste-to-landfill ratio of 0.8%

Major Initiatives

Waste Reduction

The Group manages and recycles waste appropriately, with a target of maintaining zero emissions (waste-to-landfill ratio of less than 1%). In fiscal 2022, waste totaled 3,691 thousand tons and landfill waste totaled 30 thousand tons. The waste-to-landfill ratio was 0.8%, indicating that we continue to achieve our zero-emissions target.

The total amount of waste and the landfill disposal volume increased from the previous fiscal year due to factors such as an increase in the number of sites subject to data collection and an increase in production at JX Metals. There was no change in the waste-to-landfill ratio.

We pursue recycling and reuse through initiatives for waste reduction, including using the collected particulate matter and sludge released from oil refineries as raw materials for cement, and the repeated use of neutralized sludge¹ at our smelting and refining facilities.

In addition, we use LCA methodology² in evaluating the development of certain lubricant products.

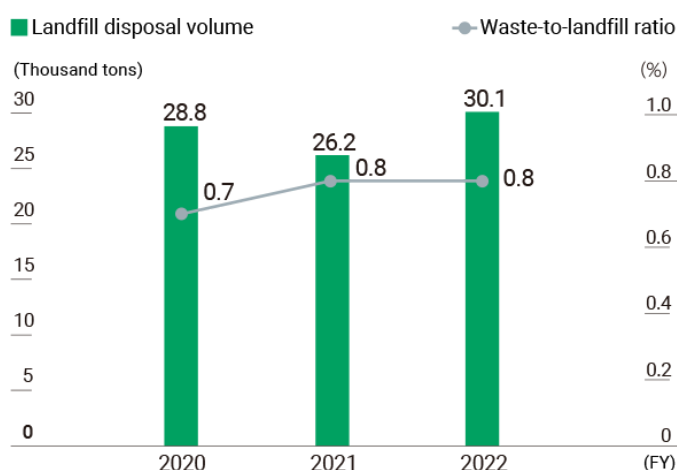
- 1 Material generated by the neutralization reaction in the smelting process.
- 2 LCA methodology involves quantitatively evaluating the environmental effects of product manufacturing throughout the entire life cycle, from procurement of raw materials to manufacturing, transport, use, and disposal. LCA is an acronym for “life cycle assessment.”

Responsible Management of Waste

We confirm whether waste emitted at our refineries is disposed of responsibly in accordance with our duty under the Waste Disposal and Public Cleansing Act.

For information about [☑](#), see the [Editorial Policy](#).

Landfill Disposal Volume and Waste-to-Landfill Ratio [☑](#)



Note:

For detailed data, see [Data](#).

Increasing the Use of Recyclable Raw Materials

The Group is working to reduce its use of raw materials by streamlining production and expanding the use of recyclable raw materials.

JX Metals promotes the effective use of resources by efficiently recovering copper, precious metals, and rare metals from recyclable raw materials, drawing from processes that utilize its smelting technology, developed over the course of more than a century. The company has established a long-term goal of increasing the use of recyclable raw materials in copper smelting to 50% (ratio in raw materials or ratio contained in products).

In fiscal 2022, 240 thousand tons of the 1,856 thousand tons of raw materials used in the company’s business activities were recycled resources.

Human Resource Development in Nonferrous Smelting, Refining and Recycling

In recent years, the number of researchers and engineers in fields related to nonferrous smelting, refining and recycling has been steadily decreasing in Japan. In response, JX Metals has collaborated with the Institute of Industrial Science of the University of Tokyo to launch the Endowed Research Unit for Nonferrous Metal Resource Recovery Engineering (JX Metals Endowed Unit) to combine the forces of industry, academia and government to reenergize and raise the level of activity in the industry. The JX Metals Endowed Unit is using industry-academia collaboration to advance various initiatives to cultivate human resources to develop and apply smelting and refining technologies in the nonferrous base metals and rare metals fields.

Researching Rare Metal Recycling from Lithium-Ion Batteries

JX Metals began recycling rare metals contained in lithium-ion batteries in 2009.

In 2020, it installed bench-scale equipment* (continuous small-scale testing equipment) at the Technology Development Center of Hitachi Works. Since then, JX Metals has been working on technological development for closed-loop recycling, where rare metals are recovered from used automotive lithium-ion batteries and reused as raw materials for new ones. To verify this technology, in May 2021 the company established JX Metals Circular Solutions Co., Ltd. (JXCS), which is conducting verification tests using recovery facilities for high-purity nickel sulfate (2021), high-purity cobalt sulfate (2022), and high-purity lithium carbonate (2023). These initiatives were selected in April 2022 for the Green Innovation (GI) Fund of the New Energy and Industrial Technology Development Organization (NEDO).

Amid the shift to EVs in Europe, in August 2021, JX Metals established JX Metals Circular Solutions Europe GmbH (JXCSE) in Germany to advance the commercialization of lithium-ion battery recycling, with an eye on collaboration with European automakers. JXCSE has participated in the “HVBatCycle” research consortium, supported by the Federal Ministry for Economic Affairs and Climate Action (BMWK), since January 2022 through TANIJOBIS, a JX Metals Group company also based in Germany. As part of the consortium, JXCSE installed bench-scale equipment on the TANIJOBIS premises in Goslar, where it began operations in March 2023 to verify closed-loop recycling using its technologies.

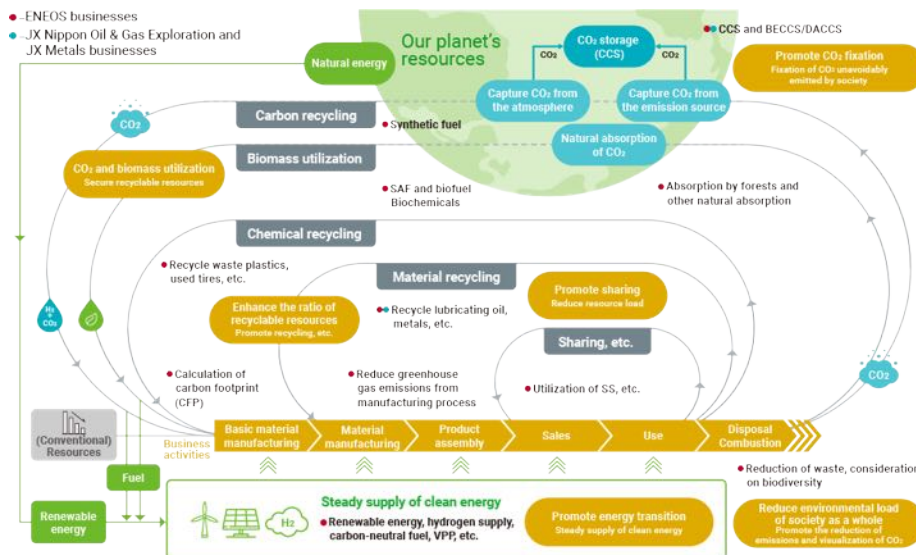
* Bench-scale equipment (continuous small-scale testing equipment) that recovers high-purity rare metals from pulverized batteries (black mass) in various forms (liquids, salts, metals) by solvent extraction method.

Pursuit of a Circular Economy

The Group is promoting a circular economy¹ for the realization of a recycling-oriented society that does not rely on conventional resources. The world is shifting from a linear economy² to a circular economy—from a mass production, mass consumption economy to an economy that recycles and reuses resources. A circular economy goes one step further than the 3Rs by considering the environment from the design stage, using maintenance to lengthen product life, and enhancing usage efficiency by incorporating leasing and sharing. Products supplied to society generate CO₂ in each stage of the life cycle, from procurement of resources to manufacturing, sales, use, and disposal. Creating a cycle where manufactured products are recycled instead of being disposed of can help to lower these CO₂ emissions. The Group is helping to realize a circular economy, and by extension a carbon-neutral society, in the materials and services field by shifting to non-fossil raw materials and developing sharing businesses.

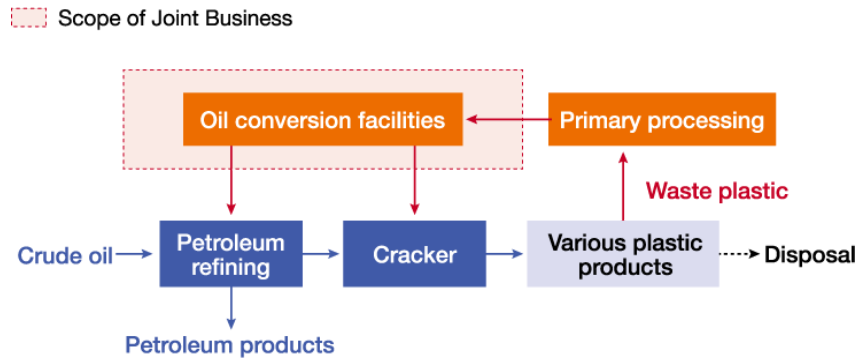
- 1 An economic system that seeks to recycle resources through their effective use in each stage of the value chain
- 2 An economic system where products flow in a single direction with resources being consumed and disposed without recycling or reuse

Efforts for a Circular Economy to Realize Circulating Society Independent from Conventional Resources



Joint Plastic-to-Oil Conversion Business (Chemical Recycling)

ENEOS is engaged in a joint plastic-to-oil conversion business with Mitsubishi Chemical Corporation at the Kashima industrial complex, site of the Kashima Refinery. The two companies are currently constructing a commercial chemical recycling facility with an annual processing capacity of 20,000 tons, which will be the largest-scale in Japan on a commercial basis. Commencement of operations is scheduled for fiscal 2023. The recovered oil produced at the facility will be used as a raw material at both companies' petroleum refinery and naphtha cracker to produce recycled petroleum and plastic products.



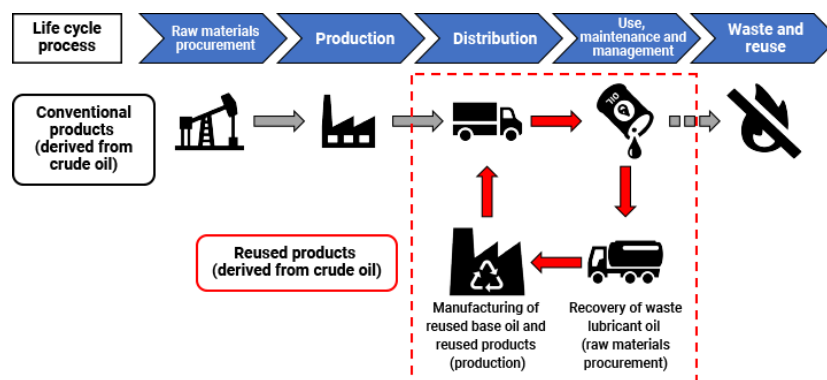
Using Waste Lubricants to Produce Lubricant Base Oil (Material Recycling)

ENEOS is working to commercialize a process for reusing waste lubricants in lubricant base oil.

Recycling waste lubricants as base oil, which is the main base material for lubricant products, reduces CO₂ emissions from lubricants throughout the entire life cycle and helps to ensure a stable supply of base oil. We began a two-year demonstration project in fiscal 2022 with the aim of quickly commercializing the process.

This demonstration project was selected for inclusion in the Demonstration Project for a Plastic Resource Circulation System toward a Decarbonized Society, run by the Ministry of the Environment.

Scope of Base Oil Reuse Business in the Lubricant Life Cycle



Smelting, Refining and Recycling Businesses

JX Metals is engaged in an integrated range of businesses related to nonferrous metals such as copper, precious metals and rare metals. These organically related businesses encompass resource development, smelting and recycling, and the provision of high-value-added materials, such as electronic materials. Smelting and recycling, which act as “veins” and “arteries” of this value chain, include the following three businesses.

- Smelting and Refining business: Recovery of metals by smelting and refining ore extracted from mines
- Recycling business: Recyclable raw materials are melted utilizing reaction heat from the smelting and refining process for the recovery of metals and reuse as raw materials
- Environmental Services business: Detoxification of industrial waste

Utilizing the key features and strengths of smelting and recycling, including zero emissions, proprietary treatment processes based on smelting and refining technologies, and a global collection network, JX Metals contributes significantly to the development of a sustainable, recycling-oriented society.

Key Features and Strengths of the Smelting and Recycling Businesses

1. Zero Emissions

JX Metals is pursuing zero emissions, where no secondary waste that requires landfill disposal is produced, in both its smelting and refining business and its recycling business. Iron and other ferrous metals other than nonferrous metals are recovered as slag and used as raw materials for cement and other purposes. By preventing the generation of secondary waste, we are reducing our environmental impact.

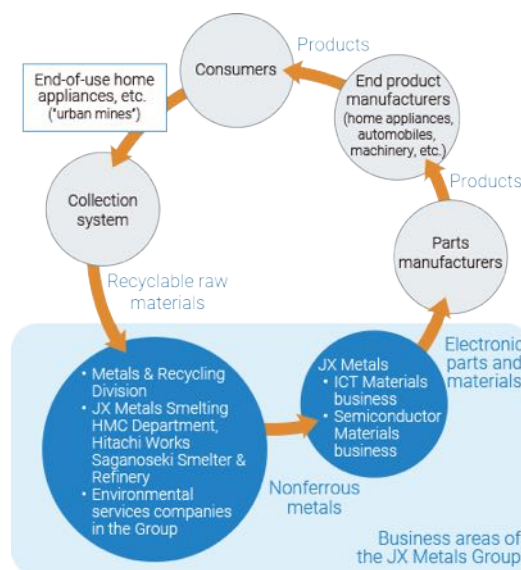


HMC Department, Hitachi Works, JX Metals Smelting

2. JX Metals’ Proprietary Treatment Processes Based on Smelting and Refining Technologies

JX Metals carries out recycling of nonferrous metals in its recycling business using efficient and reliable proprietary treatment processes based on technologies developed over many years through its operations at mines, smelters, and refineries.

At the JX Metals Smelting Saganoseki Smelter & Refinery, which boasts Asia’s largest treatment capacity for recycling copper and precious metals, energy is conserved by using the reaction heat generated during the copper concentrate smelting process for melting recyclable raw materials.



Resource-Recycling Initiatives in Pursuit of Zero Emissions

3. Global Collection Network

To advance its recycling business, JX Metals is focusing on boosting the collection of recyclable raw materials at its locations in Japan and overseas and increasing the processing capacity of its copper smelting and refining facilities. In fiscal 2021, a new collection site was established at JX Metals Smelting Saganoseki Smelter & Refinery (Oita Prefecture) to increase pre-processing capacity. Outside of Japan, in addition to existing collection and pre-treatment facilities in Taichung (Taiwan), along with collection support facilities in Arizona (United States) and Frankfurt (Germany), in fiscal 2022, JX Metals acquired eCycle Solutions Inc. (Canada), marking its entry into the collection, disassembly, and sorting business for electronic and electronics waste. Recyclable raw materials collected in Japan and abroad, along with raw materials collected by Group companies in Tomakomai (Hokkaido), Mikkaichi (Toyama Prefecture), and Shirakawa (Fukushima Prefecture), are sent to and undergo pre-processing in Hitachi (Ibaraki Prefecture) and at the Saganoseki Smelter & Refinery, and metals from these materials are recycled and recovered at the Saganoseki Smelter & Refinery.

Management of Chemical Substances

Basic Approach

Based on laws and regulations such as the Pollutant Release and Transfer Register (PRTR) Act, the ENEOS Group strives to properly manage chemical substances and reduce emissions of such substances. In addition, we are shifting to chemicals with lower impacts on health and the environment. We are also committed to properly managing chemical substances not covered by these laws and regulations.

Structure

For information on our structure, see [Environmental Management](#).

Major Initiatives

Compliance with Laws and Regulations

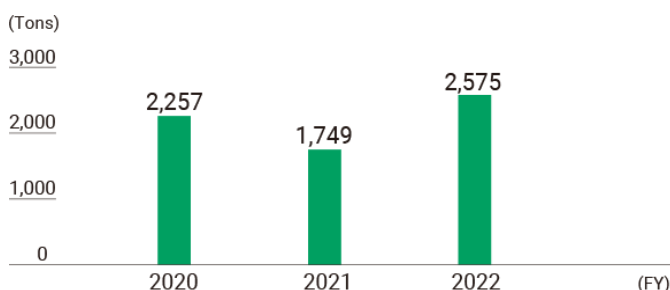
Management and Monitoring of Specified Chemical Substances under Japan’s Pollutant Release and Transfer Register Act

The Group manages and monitors the release and transfer amounts of specified chemical substances, such as benzene, toluene, and xylene, which are found in gasoline, based on Japan’s Act on Confirmation, etc. of Release Amounts of Specific Chemical Substances in the Environment and Promotion of Improvements to the Management Thereof (Pollutant Release and Transfer Register Act).

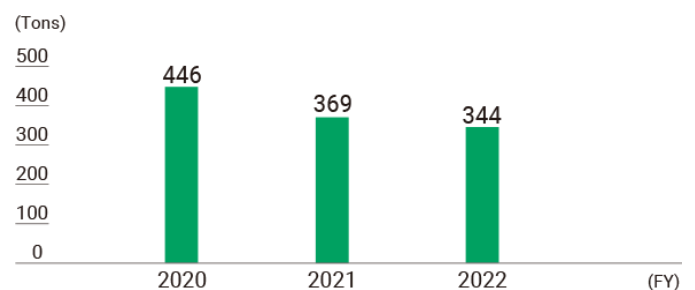
In fiscal 2022, the Group’s releases totaled 2,575 tons, an increase of 826 tons over the previous fiscal year, and transfers totaled 344 tons, a decrease of 25 tons over the previous fiscal year.

For information about , see the [Editorial Policy](#).

Release of Specified Chemical Substances



Transfer of Specified Chemical Substances



Note:

For detailed data, see [Data](#).

Management and Detoxification of PCB¹ Waste

The Group carries out storage notification and systematic treatment of PCB waste based on Japan's Act on Special Measures concerning Promotion of Proper Treatment of PCB Wastes (PCB Special Measures Act).

JX Nippon Tomakomai Chemical, which has been certified by the Minister of the Environment to provide low-concentration PCB waste treatment, carries out detoxification operations, thereby contributing to compliance with the Stockholm Convention on Persistent Organic Pollutants².

For more information, see [Low-Concentration PCB Waste Detoxification](#).

- 1 Polychlorinated biphenyl (PCB): Due to its excellent electric insulation properties, this chemical compound was used mainly in applications such as insulating fluids for transformers and capacitors, and carbonless copiers. However, its production and import are now prohibited.
- 2 A treaty regulating the production, use, and proper treatment of persistent organic pollutants, including PCB

Compliance with Domestic and International Regulations

Laws and regulations on the handling of chemical substances are being developed both in Japan and abroad to protect the environment, as well as safety and health. There are also cases where countries have newly implemented chemical substance registration systems or modified existing ones. The Group takes necessary steps, such as registering substances in chemical substance registration systems in accordance with regulations in Japan and abroad, including the REACH Regulation in Europe and the Law concerning the Examination and Regulation of Manufacture, etc. of Chemical Substances in Japan.

Guidelines on Chemical Substances in Our Products and Management of Chemical Substances

ENEOS has voluntarily established standards for managing the chemical substances used in its products.

We have specified prohibited substances (such as most organochlorine compounds, mercury compounds, lead compounds, and phthalates) and substances that require monitoring (such as VOCs including toluene, xylene and the like) to better manage their use in products, and we are working to mitigate any harmful effects they may have.

In addition, we provide essential product safety information to customers and others involved with our products using methods such as safety data sheets (SDS). In the event that we obtain new information about any hazards or environmental impacts of our products, we promptly update the relevant SDS to provide the latest information to customers and others.

Businesses that Contribute to Appropriate Management of Chemical Substances

Detoxification of Waste Asbestos

The treatment of waste, including asbestos, which was used in large quantities in the past, has become a major social issue.

JX Nippon Environmental Services performs high-temperature melting and detoxification of asbestos, responding to society's need for waste treatment. In fiscal 2022, the company treated approximately 2,800 tons of waste asbestos.

Low-Concentration PCB Waste Detoxification

Since March 2014, when JX Metals Tomakomai Chemical received certification from the Minister of the Environment as the first low-concentration PCB waste detoxification facility in Hokkaido, the company has been working to improve its treatment capacity.

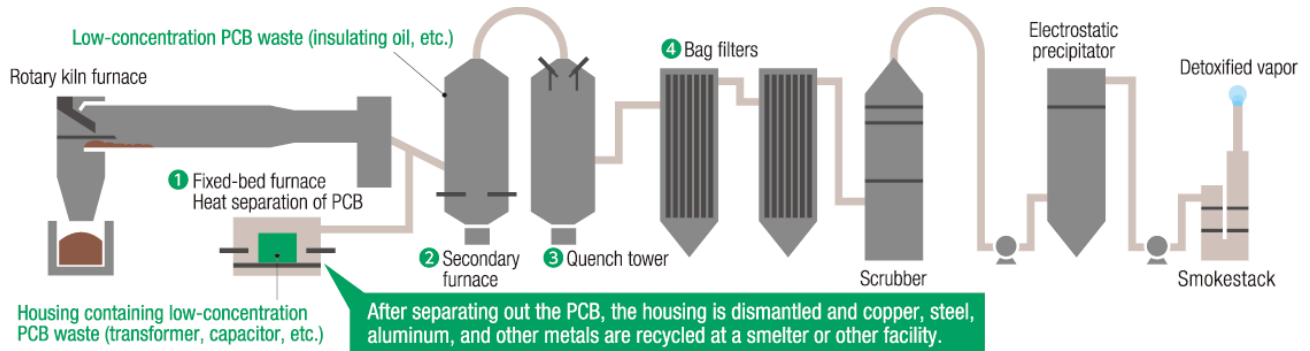
A deadline of March 31, 2027 has been prescribed by law for disposal of waste materials containing PCB. By that date, the owner must either dispose of such materials or have their disposal handled by an agent. However, there are only 25 incineration facilities in Japan, including JX Nippon Tomakomai Chemical, capable of detoxifying not only low-concentration PCB waste materials but also the transformers, drums, and other housings that contain them. Moreover, there are only 12 treatment facilities that perform decontamination by means of cleaning processes. The number and capacity of these facilities is still inadequate to meet the demand for low-concentration PCB waste disposal.

Moving forward, we will maintain stable operations for the treatment of industrial waste as part of our efforts to contribute to the environmental conservation of local communities.



JX Metals Tomakomai Chemical rotary kiln furnace

Process for Complete Detoxification of Low-Concentration PCB Waste



Changes Since Initial Certification

	Treated items	Treatment capacity
March 2014 (certification by Minister of the Environment)	<ul style="list-style-type: none"> Transformers Metal scrap (drums, etc.) Waste oil containing low-concentration PCB 	Solids: 6 tons/day (3 batches of 2 tons each) Waste oil: 8.4 kL
March 2015	Waste materials from outside Hokkaido can be accepted without the need for advance consultation with local governments	
September 2015 (additional certification by Minister of the Environment)	Increased size of objects that can be treated Width: 2.5 meters / Depth: 1.5 meters / Height: 2.3 meters	
	Additional treated items: <ul style="list-style-type: none"> Capacitors Metal coating scrap containing low-concentration PCB 	Increase in treatment capacity Solids: 12 tons/day (3 batches of 4 tons each)
March 2018 (certification by Minister of the Environment)	Additional treated item: <ul style="list-style-type: none"> Inorganic sludge (concrete scrap) 	
September 2018 (certification by Minister of the Environment)		Increase in treatment capacity Solids: 13.7 tons/day Waste oil: 9.4 kL

Prevention of Environmental Pollution

Basic Approach

In addition to complying with relevant laws and regulations, the ENEOS Group works to maintain and conserve natural resources such as water, soil, and the atmosphere by curbing the further release of environmental pollutants, effectively utilizing water resources, and other measures.

To prevent environmental pollution, we continuously work to mitigate risks by improving our facilities and conducting emergency response and other training drills covering items identified as serious concerns from an environmental perspective through the environmental management system (EMS) of each Group company.

Structure

For information on our structure (EMS), see [Environmental Management](#).

Material Issues, Plans and Results

Fiscal 2022 Targets, Results and Progress

Evaluation: 😊 Achieved/Steady progress ☹️ Not achieved

Material ESG Issue	Initiative	Target (KPI)	Results/Progress	
Understanding and management of water risks	Ensuring prevention of water pollution	Serious environmental incidents: zero Serious legal compliance incidents: zero	😊	Zero
	Identification of water risks and examination of responses	Understand risks at manufacturing sites (increase number of sites subject to risk confirmation)	😊	<ul style="list-style-type: none"> Investigated water risks at manufacturing sites (20 sites), confirmed no high-risk sites Added overseas sites (7 sites) subject to risk confirmation, investigated the sites and confirmed that there are no water risks affecting operations
Control of air pollutant emissions	Ensuring prevention of air pollution	Serious environmental incidents: zero Serious legal compliance incidents: zero	😊	Zero

Major Initiatives

Establishment of and Compliance with Targets and Voluntary Standards More Rigorous than Statutory Requirements

ENEOS's refineries and plants voluntarily conclude pollution prevention agreements with local governments. In these agreements, we have set targets for the avoidance and reduction of environmental pollution and the quality of wastewater that are more rigorous than those stipulated by laws and regulations, and we comply with them.

In fiscal 2022, there were no serious leaks.

Prevention of Air Pollution

For information about [☑](#), see the [Editorial Policy](#).

Reducing SO_x Emissions [☑](#)

Sulfur oxides (SO_x), which are known to cause acid rain, are released into the atmosphere mainly as a component of exhaust gases from combustion facilities.

The Group carries out measures such as using fuels with low sulfur content, removing SO_x using flue gas desulfurizers, and managing emissions using voluntary standards.

SO_x emissions in fiscal 2022 totaled 11 thousand tons, about the same as the previous fiscal year.



Flue gas desulfurizer

Reducing NO_x Emissions [☑](#)

Nitrogen oxides (NO_x), like SO_x, are known to cause acid rain and are released into the atmosphere mainly as a component of exhaust gases from combustion facilities.

The Group carries out measures such as using low-NO_x boilers at combustion facilities, removing NO_x using flue gas denitrizers, and managing emissions using voluntary standards.

NO_x emissions in fiscal 2022 totaled 13 thousand tons, about the same as the previous fiscal year.



Flue gas denitrizer

Reducing VOC Emissions [☑](#)

Volatile organic compounds (VOCs), which are thought to produce photochemical oxidants through a photochemical smog reaction with NO_x and ultraviolet rays from sunlight, are released from places such as storage facilities for petroleum products.

The Group has installed VOC recovery equipment in storage facilities and truck loading facilities.

VOC emissions in fiscal 2022 totaled 12.1 thousand tons, up slightly from the previous fiscal year.

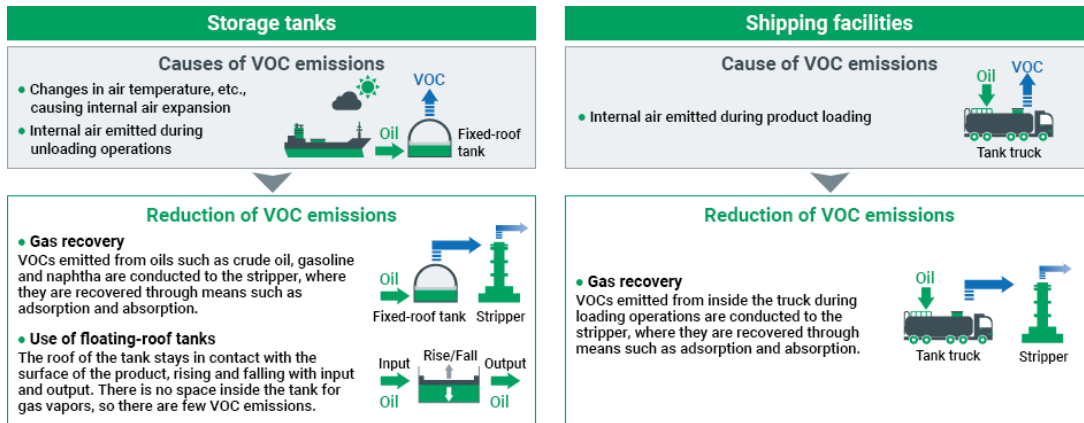
VOC Recovery

Volatile organic compounds (VOCs) containing hydrocarbons are released into the air whenever gasoline is pumped from tank trucks into storage tanks at service stations. These VOCs are not only a source of photochemical oxidants, but also cause irritating odors in neighboring communities and can adversely affect the health of both customers and employees.

Therefore, ENEOS has installed recovery equipment on the ventilation ducts of service station storage tanks, which enables tank trucks to recover these VOCs so that they are not released into the atmosphere.

The ENEOS Group's Kiire Terminal recovers, without releasing, the gases that have accumulated inside tankers when loading crude oil, and reuses the VOCs contained in these gases by absorbing them into the crude oil. Gases, including odor-causing ones, that are not absorbed are broken down. The Group was the first in the world to implement this mechanism. This technology is contributing to the advancement of environmental conservation measures and the effective utilization of energy.

VOC Emissions and Reduction Measures at Refineries



Effective Utilization of Water Resources and Preventing Water Pollution

For information about , see the [Editorial Policy](#).

Effective Utilization of Water Resources

Each of the Group's principal business sites has established and operates an environmental management system (EMS), which they use to appropriately assess and address environmental impacts concerning water usage.

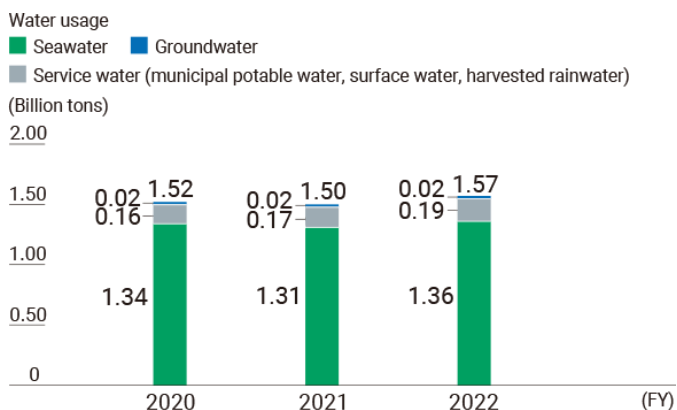
Water Usage

The Group uses water for purposes such as operating and cooling power generation facilities at refineries and smelters. Approximately 90% of this water is seawater.

In fiscal 2022, the volume of water used was 1.57 billion tons, and the water discharge volume was 1.46 billion tons.

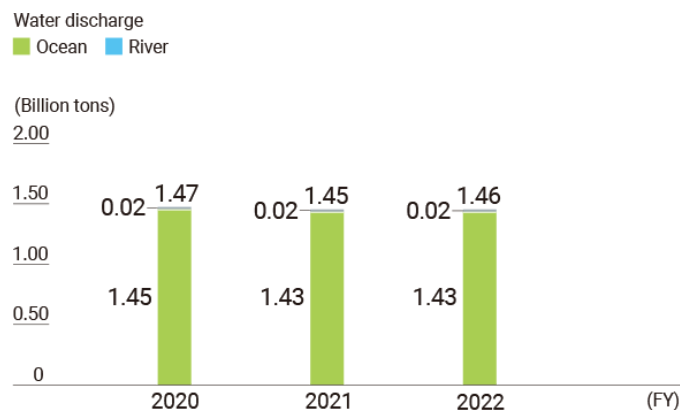
The ENEOS Group recycles approximately 97% of the water used for cooling at its refineries. To reduce the amount of water used, smelters that use seawater for cooling have partially switched to recycled water.

ENEOS Group Water Usage Volume



Note:
For detailed data, see [Data](#).

ENEOS Group Water Discharge Volume



Notes:
The amount of wastewater discharged into groundwater and wells, discharged into off-site water treatment facilities, and discharged for water use and other use are all zero.
Figures for each item have been rounded. As a result, the sum of the figures may not match the total.
For detailed data, see [Data](#).

Response to Water Risks

The Group uses tools such as the Aqueduct water risk mapping tool from the World Resources Institute (WRI) to verify whether our manufacturing sites are in areas of elevated water risk.

In fiscal 2021, we assessed water risks at our manufacturing sites (21 sites) and confirmed that there are no high-risk sites. In fiscal 2022, we reassessed 20 of these sites and newly assessed seven major overseas manufacturing sites.

As a result, PT. JX Nippon Oil & Energy Lubricants Indonesia was assessed as high risk in terms of “coastal nutrition potential” of water quality. However, the impact on water quality has been reduced at the plant because the environmental impact on the water quality of the discharge destination has been identified and a management system based on ISO 14001, including compliance with local regulatory standards, has been put into place. We do not expect any major impact that will affect the operation of the plant.

Additionally, at the Caserones Copper Mine in Chile, where there is a high risk of drought, approximately 80% of the water used in the production process is recycled. As an operating mine, it has the lowest level in Chile of water usage per ton of ore processed.

With efforts to conserve and manage water resources gaining attention worldwide, going forward, we will review the results of risk assessments every three years. In addition, in the event that new high-risk indicators are identified due to the expansion of the scope of data or other factors, we will obtain detailed information from external organizations and assess the impacts on our operations.

Reducing the Release of Water Pollutants

The Group manages and monitors pollutants in wastewater through regular maintenance of water treatment facilities based on voluntary standards that are more rigorous than laws, regulations, ordinances, and agreements, including Japan’s Water Pollution Prevention Act.

In addition to our efforts at refineries and smelters, we carry out continuous operations for the treatment of acid mine drainage at closed mines.

In fiscal 2022, there were no violations of laws, regulations or voluntary standards concerning prevention of water pollution and no oil spills or other serious incidents at our manufacturing sites.

Management of Closed Mines

The JX Metals Group manages closed mines owned by itself, with the main operations of the detoxification of acid mine drainage (AMD) as well as the maintenance and protection of tailings and mine shafts.

AMD is strongly acidic and contains metals as a result of rainwater and other water coming into contact with ores remaining in the mines and tailings in the dams and surrounding altered rock. Therefore, the operation of treatment facilities must be maintained continuously. Additionally, the JX Metals Group is working to fortify tailings dams against the torrential rains caused by recent linear rainbands and the largest seismic motion. In this manner, the JX Metals Group is working to protect the natural environment through the management of its closed mines.



Motoyama AMD treatment facility at Toyoha Mine



Gallery inspection at Hanawa Mine

Development of Mine Closure Plans

The JX Metals Group recognizes the importance of minimizing the impacts on the surrounding environment and communities in the event of a mine closure. Regarding its Caserones Copper Mine, which is currently in operation, the JX Metals Group has developed a mine closure plan through dialogue with stakeholders, including the relevant authorities and local communities. It has also set aside financial reserves for the implementation of necessary measures. As a result, the JX Metals Group has secured means for appropriate response at the time of the mine's closure.

Preventing Marine Pollution

For the marine transport of oil, the ENEOS Group is required to comply with the International Convention for the Prevention of Pollution from Ships (MARPOL), an international convention developed by the International Maritime Organization (IMO) that includes regulations for the prevention of environmental pollution from oil and the prohibition of waste discharge into oceans and seas.

In addition to fully complying with this convention, we take further steps to prevent marine pollution, such as taking incinerator ash as defined in the convention back to land for proper disposal rather than discharging it into the ocean.

ENEOS established a new manufacturing method and a shipment system for low-sulfur marine fuel in accordance with the introduction of worldwide environmental regulations by the IMO in January 2020.

Soil Contamination Countermeasures

ENEOS performs systematic surveys on land that it owns that has the potential for soil or groundwater contamination, focusing particular efforts on property where refineries, oil depots, service stations and other facilities are located.

If pollution is detected, we implement appropriate countermeasures to address it.

Additionally, as one of its business areas, Group company NIPPO Corporation implements soil purification measures that are optimized in accordance with the type and degree of pollution.

Soil Surveys and Countermeasures in Fiscal 2022

	Number of cases	Expenditure (Million yen)
Soil surveys	61	262
Soil contamination countermeasures	25	506

Notes:

Properties involved in land transactions for ENEOS service stations, oil depots and other facilities.

In fiscal 2022, there was one property for which disclosure of soil contamination was required.

Biodiversity

Basic Approach

The operations of the ENEOS Group may impact the environment surrounding our operation and production sites. Given the nature of our business, we consider biodiversity conservation to be an important effort, as stated in the ENEOS Group Code of Conduct.

We carry out initiatives with attention to biodiversity in all aspects of our business activities. These initiatives include the implementation of environmental impact studies when establishing new operation and production sites in order to obtain an accurate understanding of local ecosystems, including plants, birds and other animals, and marine life.

In addition, ENEOS, which has many production sites, has established the Energy Group* Guidelines on Biodiversity.

Energy Group* Guidelines on Biodiversity

Basic Stance

We will carry out initiatives with attention to biodiversity in every aspect of our business activities, under the recognition that our business activities are deeply related to the Earth's biodiversity.

Action Policy

1. We will ascertain and analyze the impacts of our business activities on biodiversity and strive to make improvements.
2. We will promote activities that contribute to biodiversity preservation, such as nature protection and environmental education.
3. We will disclose and share information on our efforts to preserve biodiversity.

* ENEOS and its Group companies

Structure

For information on our structure, see [Environmental Management](#).

Material Issues, Plans and Results

Fiscal 2022 Targets, Results and Progress

Evaluation: 😊 Achieved/Steady progress 😞 Not achieved

Material ESG Issue	Initiative	Target (KPI)	Results/Progress
Understanding and management of biodiversity risks	Identification of biodiversity risks and examination of responses	Understand risks at manufacturing sites (increase number of sites subject to risk confirmation)	😊 <ul style="list-style-type: none"> • Investigated protected areas adjacent to manufacturing sites (20 sites), confirmed no high-risk sites • Added overseas sites (7 sites) subject to risk confirmation, investigated the sites and confirmed that there are no protected areas affecting operations

Understanding Biodiversity Risks

The Group has identified biodiversity risks as a material ESG issue and established the target “understanding risks at manufacturing sites.” The results of our initiatives to achieve this target are reported to the Executive Council and the Board of Directors at least once a year.

We utilize the Integrated Biodiversity Assessment Tool (IBAT), available to the general public, to understand risks at our manufacturing sites. In fiscal 2022, we added seven overseas sites to the number of sites subject to risk confirmation and investigated the risks at a total of 27 sites¹, including the 20 sites from the previous fiscal year. As a result, we verified that there were no protected areas within a five-kilometer radius of our manufacturing sites that fall under the categories of strict nature reserve, wilderness area, national park, or natural monument or feature (see table below for categories I a, I b, II, and III).

Going forward, we will review the results of risk assessments every three years. In addition, in the event that new protected or conservation areas are identified due to the expansion of scope of data or other factors, we will obtain detailed information from external organizations and assess the impacts on our operations.

1 ENEOS: 17 (11 in Japan, 6 overseas), JX Nippon Oil & Gas Exploration: 3 (1 in Japan, 2 overseas), and JX Metals: 7 (6 in Japan, 1 overseas).

International Union for Conservation of Nature (IUCN) Protected Area Categories

Category I a Category I b	Strict nature reserve Wilderness area	Protected areas that are managed for academic research or protection of wilderness
Category II	National park	Areas managed for protection of functioning ecosystems and recreation
Category III	Natural monument or feature	Areas managed for protection of special natural features
Category IV	Habitat/species management area	Areas managed for conservation by additional management
Category V	Protected landscape or seascape	Areas managed for landscape protection and recreation
Category VI	Protected area with sustainable use of natural resources	Areas managed for sustainable use of natural ecosystems

Major Initiatives

Participation in Initiatives

Endorsement of the Declaration of Biodiversity by Keidanren

ENEOS Holdings endorses the Declaration of Biodiversity by Keidanren, which states the aim of “realizing a sustainable society through building a society in harmony with nature.”

Participation in the Japan Business Initiative for Biodiversity (JBIB)

ENEOS has been a member of the Japan Business Initiative for Biodiversity (JBIB), a consortium of businesses actively working to conserve biodiversity in Japan, since 2013.



Participation in Call to Action

In December 2020, ENEOS Holdings joined the Call to Action of the global coalition Business for Nature*.

The Call to Action calls on governments around the world to adopt ambitious policies to reverse nature loss in the decade up to 2030, under the concept that “healthy societies, resilient economies, and thriving businesses rely on nature,” with many enterprises around the world having declared their support to date.

* Spearheaded by organizations such as the World Economic Forum, the World Business Council for Sustainable Development and the International Chamber of Commerce, Business for Nature is a global coalition established with the aim of encouraging businesses to take action toward nature conservation and restoration and drawing on businesses’ aspirations for nature conservation and restoration to influence policy decision makers.

Participation in the 30by30 Alliance for Biodiversity

In April 2022, ENEOS Holdings joined the 30by30 Alliance for Biodiversity.

The 30by30 Alliance is a voluntary alliance launched in April 2022 by 17 organizations representing the industrial, private, and governmental sectors, including the Ministry of the Environment. Its objective is to reach the 30by30 target for Japan, which aims to conserve or protect 30% of land and sea areas by 2030, one of the proposed targets in the first draft of the post-2020 Global Biodiversity Framework.

In October 2023, the central greenbelt of the Negishi Refinery, one of the Group’s manufacturing sites, was certified as an Other Effective area-based Conservation Measures (OECM)-certified site*, a Ministry of the Environment certification system for achieving the 30by30 target.

* A new system that began in fiscal 2023 to recognize areas where the Ministry of the Environment certifies that “biodiversity is being conserved through private sector initiatives,” as the 30by30 target cannot be achieved solely through the inclusion of protected areas such as national parks.



Major Initiatives in Japan

The Group carries out activities at its manufacturing sites for the conservation of vibrant biodiversity as one way of participating in community efforts to protect biodiversity and maintaining ecosystem networks in large green areas around the sites. At our other business sites as well, we carry out environmental conservation activities suited to the surrounding environments.

We also carry out activities such as regular environmental training for employees and community contribution activities related to environmental conservation.

Status of Certifications Related to Biodiversity

Type	Scope	Acquired
ABINC certification*	Central greenbelt at ENEOS Negishi Refinery	February 2020

Green Area Management: Initiatives at the ENEOS Negishi Refinery

The ENEOS Negishi Refinery is one of Japan's largest oil refineries, with an area of 2.2 million square meters and a circumference of around 12 kilometers. The area in which it is located has a network of ecosystems with a diverse array of organisms inhabiting an expansive greenbelt that includes Sankei-en and Negishi Forest Park. The Negishi Refinery carries out activities for the conservation of biodiversity utilizing the greenbelt (approximately 60,000 square meters), a hub for the area's ecosystem network, at the center of the premises.

Ecosystem surveys were begun in fiscal 2013, and in surveys to date, the presence of over 150 types of living organisms has been confirmed.

In fiscal 2018, we began holding interactive events and using goat grazing to weed the greenbelt areas, further enhancing these areas with the expansion of these efforts. Since fiscal 2019, we have been stepping up maintenance and management of the green areas.

The Negishi Refinery was granted certification by ABINC* in February 2020. In fiscal 2022, the refinery participated in a certification verification program of the Ministry of the Environment and was evaluated as being equivalent to an Other Effective area-based Conservation Measures (OECM)-certified site. In October 2023, the refinery was officially recognized as an Other Effective area-based Conservation Measures (OECM)-certified site.



Interactive event

* ABINC certification is awarded on the basis of the JBIB Guidelines for Sustainable Business Sites and the JBIB Land Use Scorecard developed by the Japan Business Initiative for Biodiversity (JBIB).



ABINC certification mark



Seaweed Bed Creation: Initiative at the ENEOS Sakai Refinery

The ENEOS Sakai Refinery is located in the Sakai-Semboku Coastal Industrial Zone in the inner part of Osaka Bay. Osaka Bay is an enclosed sea area, and the inner part of the bay has a water quality that makes it difficult for living things to thrive, as nutrients such as nitrogen and phosphorus flowing in from the land tend to stagnate, resulting in red tides.

The refinery is working to create seaweed beds so that a variety of creatures can live in the waters. It has installed algae seeds and blocks for the epiphytic growth of algae on the seawall of the refinery, and is monitoring their growth.

By creating seaweed beds, we can expect multi-dimensional effects such as improving water quality through the absorption of nutrients and the supply of oxygen, increasing places for the spawning and growth of marine life, and accumulating blue carbon through the photosynthesis of algae.

This initiative was selected as a model Sato-umi development project by the Ministry of the Environment in fiscal 2022. A sato-umi is a coastal area where biological productivity and biodiversity has increased through human interaction.



Installation of blocks for the epiphytic growth of algae

Forest Stewardship and Afforestation Activities

Group companies are involved in forest stewardship activities that contribute to the preservation of biodiversity.

ENEOS implements forest stewardship activities called ENEOS-no-Mori at six locations across Japan in partnership with local governments and the National Land Afforestation Promotion Organization (NLAPO).

Since 1998, JX Nippon Oil & Gas Exploration has implemented a forest stewardship project called JX Nakajo Forest for the preservation of pine trees on and around the site of its Nakajo Field Office in Niigata Prefecture.

JX Metals is working to maintain and improve the natural environment by continually engaging in afforestation activities such as tree planting and thinning, mainly at the sites of its closed mines.



ENEOS-no-Mori activity



JX Nakajo Forest afforestation activity



Tree planting in Nikko Ryuju Forest (Nanyo City, Yamagata Prefecture)

Providing Sustainable Seafood Menu Options at the Employee Cafeteria

Since 2019, the Company has been offering sustainable seafood* menu options once a month at the ENEOS Building employee cafeteria, used by the Company and its Group companies. In 2020, we began offering sustainable seafood menus at the employee cafeterias of some of our refineries. Through this initiative, we are working to raise awareness about biodiversity conservation and environmental conservation among Group employees through food, a part of everyday life.

* The seafood has met the MSC's global standard for sustainability or ASC's global standard for responsibly farmed seafood.



Ordering a menu item at the employee cafeteria

Major Initiatives Overseas

Measures for Ballast Water (Seawater)

Oil tankers from Japan bound for oil-producing countries carry ballast water (seawater) as weight to maintain stability for unloaded voyages. However, this ballast water contains microorganisms and plankton from Japanese waters that are carried to the waters of oil-producing countries, where, if released, they can disturb the balance of local ecosystems.

Since 2004, the Group has replaced this ballast water while still at sea, and installed water treatment systems* for ballast water on its new vessels in an effort to avoid disturbing the ecosystems of the coastal waters of oil-producing countries. In fiscal 2022, we completed installation of ballast water treatment systems on all of the Group's 15 tankers.

Furthermore, we release ballast water from ships using methods compliant with international treaties.

* Systems that keep the level of aquatic organisms in ballast water within certain standards prior to release.

Our Response to Climate Change Risks and Opportunities (TCFD)

Basic Approach

As an energy and materials company group, the ENEOS Group recognizes that its response to climate change involves both material management risks and opportunities. We believe that developing practical solutions to climate change will enable us to continuously generate profits into the future. As a clear expression of this intent, in our Long-Term Vision we state that we will take on the challenge of achieving both a stable supply of energy and materials and the realization of a carbon-neutral society.

Specifically, we aim to reduce our own greenhouse gas emissions (Scope 1+2) by 46% by fiscal 2030 compared to fiscal 2013 and achieve carbon neutrality by fiscal 2040. In order to achieve carbon neutrality, including Scope 3 emissions, by fiscal 2050, we will pursue energy transitions through energy saving at our refineries, plants, and smelters, and in the energy field, we will expand the use of renewable energy and work toward the early practical implementation of hydrogen and carbon-neutral fuels. In the materials and services field, we will pursue the development of a circular economy through efforts such as the conversion of raw materials and sharing services to increase the amount of avoided emissions.

To enhance and broaden its disclosures, the Company signed a statement of support for the recommendations of the Task Force on Climate-related Financial Disclosures (TCFD) in May 2019. The Company also endorsed the Challenge Zero initiative of the Japan Business Federation (Keidanren) in June 2020, and is working on the development of technologies to mitigate the impacts of climate change.



Overview of TCFD Disclosure Recommendations

Governance	Disclose the organization’s governance around climate-related risks and opportunities.	References
	a. Describe the board’s oversight of climate-related risks and opportunities	<ul style="list-style-type: none"> > Governance System for Climate Change > Integrated Report 2023—Message from the President, Interview with the President (P21-28)
	b. Describe management’s role in assessing and managing climate change-related risks and opportunities	
Strategy	Disclose the actual and potential impacts of climate-related risks and opportunities on the organization’s businesses, strategy, and financial planning where such information is material.	References
	a. Describe the climate-related risks and opportunities the organization has identified over the short, medium, and long term.	<ul style="list-style-type: none"> > Financial Impacts of Climate Change-Related Risks and Opportunities
	b. Describe the impact of climate-related risks and opportunities on the organization’s businesses, strategy, and financial planning.	
	c. Describe the resilience of the organization’s strategy, taking into consideration different climate-related scenarios, including a 2°C or lower scenario.	<ul style="list-style-type: none"> > Integrated Report 2023—Interview with the President (P23-28) > Building a Business Portfolio That Addresses Risks and Opportunities

Risk Management	Disclose how the organization identifies, assesses, and manages climate-related risks.	References
a. Describe the organization’s processes for identifying and assessing climate-related risks.		> ESG Management Structure > Risk Management
b. Describe the organization’s processes for managing climate-related risks.		
c. Describe how processes for identifying, assessing, and managing climate-related risks are integrated into the organization’s overall risk management.		
Metrics and Targets	Disclose the metrics and targets used to assess and manage relevant climate-related risks and opportunities where such information is material.	References
a. Disclose the metrics used by the organization to assess climate-related risks and opportunities in line with its strategy and risk management process.		> ESG Management Structure > Risk Management
b. Disclose Scope 1, Scope 2, and, if appropriate, Scope 3 greenhouse gas (GHG) emissions and the related risks.		
c. Describe the targets used by the organization to manage climate-related risks and opportunities and performance against targets.		> Integrated Report 2023—Carbon Neutrality Plan (P31-34) > Indicators and Targets

Governance System for Climate Change

The ENEOS Holdings Executive Council, chaired by the ENEOS Holdings president, deliberates on the Group’s response to climate change, including in future business plans, and manages and evaluates the status of climate initiatives from a cross-functional perspective. The council reports the results of its deliberations, management, and evaluation to the ENEOS Holdings Board of Directors, which also monitors and supervises the council.

Deliberations in Fiscal 2022

Board of Directors and Executive Council

- Report on status of ESG activities and response to material risks in fiscal 2021 (April)
- Approach to formulating the ENEOS Group Carbon Neutrality Plan within the third Medium-Term Management Plan (December)
- Selection of material risks and identification of material ESG issues for fiscal 2023 (February)

Response to Climate Change and Link to Executive Remuneration

Remuneration for the Company’s directors consists of a monthly remuneration in accordance with role, performance-linked bonuses, and share-based remuneration. The performance indicators on which share-based remuneration is based include greenhouse gas emissions reduction, along with operating profit excluding inventory valuation, ROE, and other financial indicators.

The inclusion of greenhouse gas emissions reduction reflects our commitment to reducing emissions and functions as an incentive for forming and implementing highly competitive business strategies from a medium- to long-term perspective.

Scenario Analysis

In conducting its scenario analysis, the Group referenced STEPS¹, APS², and NZE³ of World Energy Outlook (WEO) 2022 by the IEA for long-term forecasts of world energy demand, and Representative Concentration Pathways (RCP⁴) of the IPCC for the assessment of physical risks such as changes in climate and sea levels. This resulted in the identification of risks and opportunities (see table below: Financial Impacts of Climate Change-Related Risks and Opportunities).

In revising our Long-Term Vision announced in 2019, we referenced multiple WEO scenarios, using the middle ground among them as the Group's base case. As a result, although the direction of the social scenario in our Long-Term Vision will remain the same as the one in 2019, we believe the speed of this change toward decarbonization will be greater than anticipated.

In the base-case scenario, risks include a decline in domestic fuel oil demand by around half in 2040 compared to 2019, while opportunities include the growth of the market for energy derived from decarbonized and recyclable resources and the generalization of environmental value trading.

Additionally, demand is expected to grow for high-value-added services in mobility, such as EVs and car sharing, and lifestyle support for making life more convenient, as well as recycled resources, along with high-performance and advanced materials required for digital devices.

During the transition from fossil fuels to a portfolio centered on decarbonization, the Group will achieve both a stable supply of energy and the realization of a carbon-neutral society while keeping close watch over demand trends for fuel oil. The Group has also concluded that it has a high degree of resilience in responding to multiple scenarios, including 1.5°C, as it has a number of advantages that enable it to withstand change and is carrying out investment, demonstration projects and other measures accordingly.

Even if efforts to achieve carbon neutrality accelerate worldwide, the ENEOS Group, with its high degree of resilience, will lead Japan's energy transition, greatly contributing to the development of a decarbonized society.

- 1 Stated Policies Scenario: A scenario that reflects government policies already announced
- 2 Announced Pledges Scenario: A scenario that assumes that countries will achieve their ambitious targets
- 3 Net Zero Emissions by 2050 Scenario: A scenario in which the world will achieve net zero in 2050
- 4 Representative Concentration Pathways: A scenario on rising temperatures based on a greenhouse gas concentration trajectory

Social Scenario

Changes in Business Environment since the Formulation of the Second Medium-Term Management Plan

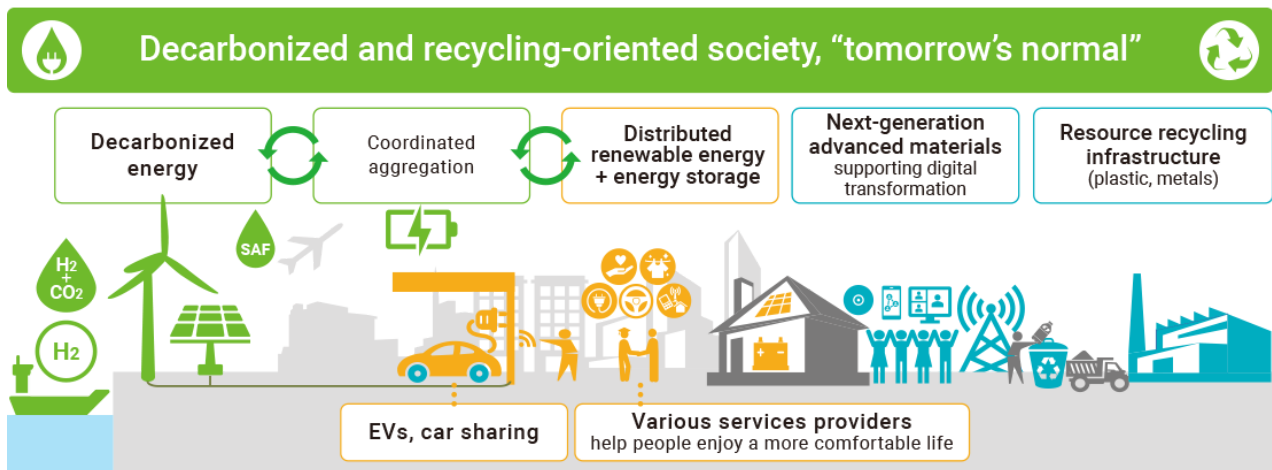
- Fluctuations in energy security
- Formation of a social consensus toward carbon neutrality
- Further progress in digital transformation



No change in major direction.

The speed of change is accelerating.

Must take on the challenge of the energy transition.



Financial Impacts of Climate Change-Related Risks and Opportunities

We have developed and operate an [enterprise risk management \(ERM\)](#) system to identify and analyze Group management risks and ensure appropriate responses. Based on this process, we recognize that our response to climate change involves both material management risks and opportunities, which we have identified as shown in the table below.

We estimate financial impacts based on our own base scenario for transition risks and the IPCC RCP8.5 scenario* as the stress case for physical risks. These estimates include many potential risks, uncertainties, and assumptions, and changes in material factors may lead to significantly different outcomes.

* Intergovernmental Panel on Climate Change (IPCC) assessment scenario, in which the global average temperature rises by about 4°C by 2100 compared to the period from 1986 to 2005

Financial Impacts of Climate Change-Related Risks and Opportunities

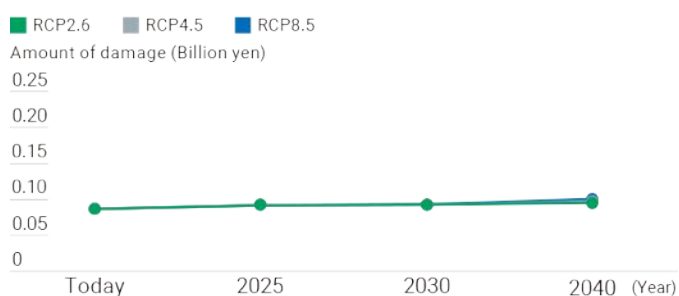
	Category	Financial impact			
		Short term (2025)	Medium term (2030)	Long term (2040)	Assessment method
Transition risks	<ul style="list-style-type: none"> Higher costs for achieving carbon neutrality 	None	¥30 billion annually	¥120 billion annually	Amount of decline in operating income if carbon credits were purchased for the entire reduction targets for 2030 and 2040 of 4 million tons and 19 million tons, respectively Carbon credit price (\$50/t-CO ₂ ¹) × quantity × exchange rate 1 Internal carbon price
	<ul style="list-style-type: none"> Declining demand for petroleum due to the accelerated proliferation of EVs driven by technological innovation Declining demand for petroleum due to growing environmental awareness 	Limited impacts	Approx. ¥50 billion/year decline	Approx. ¥100 billion/year decline	Amount of decline in operating income if domestic petroleum demand declined by approx. 20% in 2030 and approx. 50% in 2040 compared to 2019 (Calculated based on the fiscal 2025 income targets of the third Medium-Term Management Plan)
	<ul style="list-style-type: none"> Stranding of upstream oil assets 	Limited risk			Estimation of oil upstream asset reserves based on the number of extractable years discounted by current production
Physical risks	<ul style="list-style-type: none"> Increasing frequency and severity of wind and flood damage due to extreme weather events (major typhoons) and rising sea levels 	¥100 to ¥200 million/year			Referenced the IPCC RCP8.5 scenario for estimation of the total amount of damage (decrease in operating income) using WRI Aqueduct ² , etc. for 31 of our facilities and assets in Japan, such as refineries and smelters 2 A water risk assessment tool developed by the World Resources Institute
	<ul style="list-style-type: none"> Rising sea levels caused by global warming 	Limited risk			Estimated from amount of increase (approx. 0.2 meters) in sea level around Japan as of 2040 as projected by Aqueduct

Opportunities	<ul style="list-style-type: none"> Increasing demand for renewable energy, hydrogen, and carbon-neutral fuels 	Careful planning and rollout phase	Up to ¥50 billion/year	Up to ¥200 billion/year	Net income estimated based on certain assumptions about the estimated market size, the Company's market share, and operating income margin due to an expected increase in demand for renewable energy, hydrogen, and carbon-neutral fuels associated with advancements toward a decarbonized, recycling-oriented society
	<ul style="list-style-type: none"> Expansion of EV charging and environmentally friendly mobility services 	Careful planning and rollout phase	Up to ¥50 billion/year	Up to ¥100 billion/year	Net income estimated based on certain assumptions about the estimated market size, the Company's market share, and operating income margin due to an increase in demand for EV charging, which is expected to grow with the development of a decarbonized society, and an expansion of business opportunities such as environmentally friendly mobility services
	<ul style="list-style-type: none"> Increasing demand for products that effectively reduce environmental impacts Increasing demand for materials made from recyclable resources 	¥100 billion/year	Up to ¥150 billion/year	Up to ¥200 billion/year	Net income estimated based on certain assumptions about the estimated market size, the Company's market share, and the operating income margin due to the expected increase in demand for products that contribute to the reduction of greenhouse gas emissions and the expected increase in demand for materials derived from recyclable resources for a circular economy

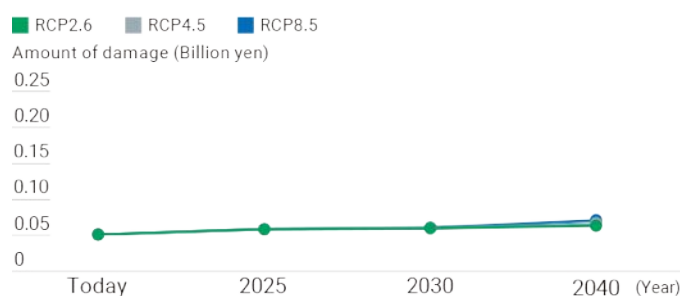
Assessment of Physical Risks

In assessing physical risks, we examined the risks from the objective perspective of Sompo Risk Management Inc., an external expert, referring to the IPCC RCP scenario. For the scenarios, we have adopted RCP8.5 (equivalent to a 4°C increase) as a stress case, and RCP4.5 (equivalent to STEPS in IEA WEO) and RCP2.6 (equivalent to APS) as cases that are close to our base-case scenario. As a result of simulating the amount of damage caused by flooding using WRI Aqueduct and other means for 31 of our facilities and assets in Japan, such as refineries and smelters, our current estimate of the average annual amount of damage in the stress case is over 100 million yen, and we expect the average annual amount of damage to be about 100 million to 200 million yen in 2040. There is a tendency for damage to be greater in locations where storm surges are a concern due to large rivers in the vicinity or strong winds during the passage of typhoons. We are implementing measures to mitigate these risks to ensure that the overall impact is minimal.

Expected Annual Amount of Damage Due to Inland Flooding



Expected Annual Amount of Damage Due to Coastal Flooding



Building a Business Portfolio That Addresses Risks and Opportunities

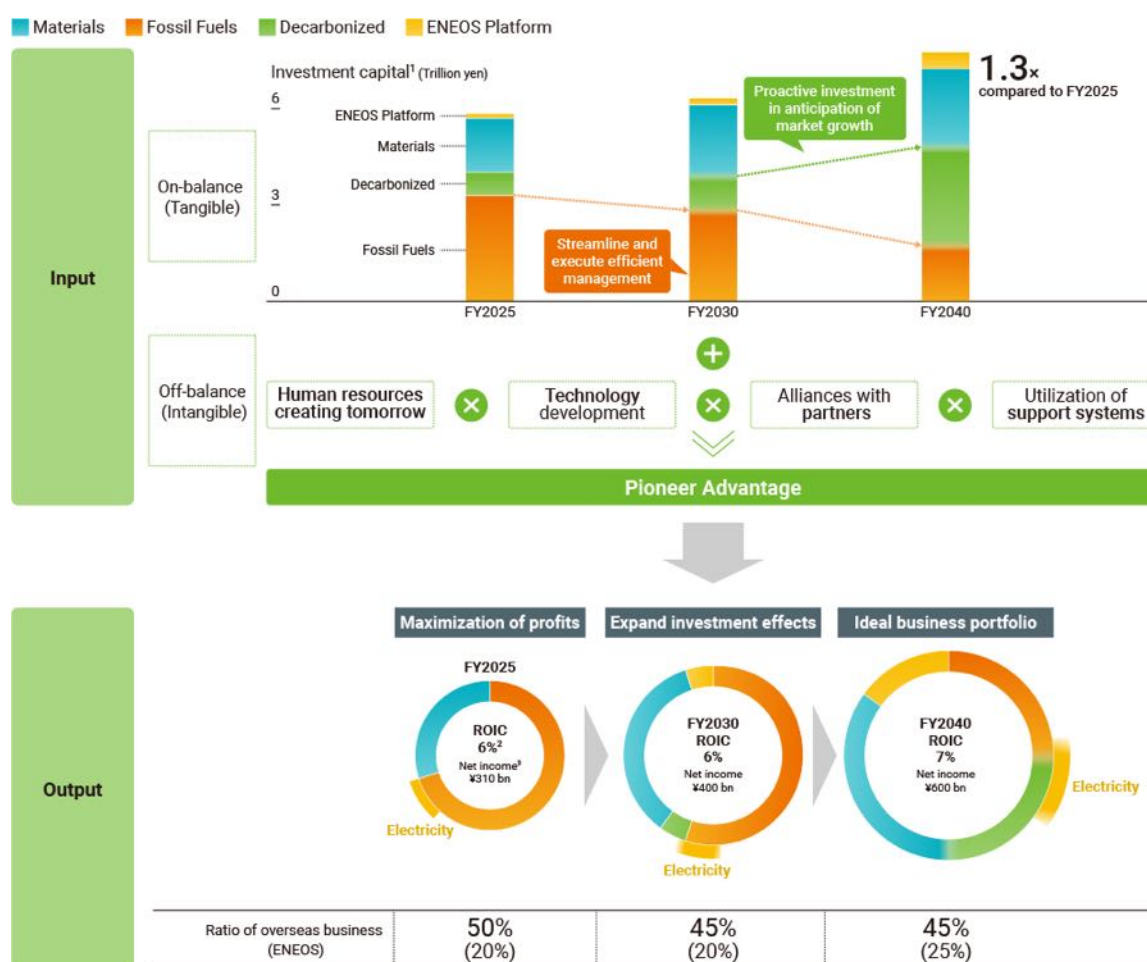
While it is certain that society will move toward carbon neutrality based on international trends and other factors, it remains unclear what the main source of carbon-neutral energy will be and when necessary technological breakthroughs will occur. Taking into account policy trends and other factors, we believe that the turning point will be around 2030. We have a high level of resilience that enables us to respond to any scenario, and we will continue working to establish our technological and strategic superiority toward the turning point, which will be around 2030.

We will make the necessary investments ahead of this turning point in 2030. We will focus on the development of intangible assets not booked on the balance sheet, such as technological development, collaboration with leading partners, utilization of support systems from the government, and human resources development.

Meanwhile, we will also streamline and improve the efficiency of our existing fossil-resource-derived energy businesses in line with the decline in demand in the domestic market. We will secure and develop human resources and other intangible assets during the third Medium-Term Management Plan to establish our advantage as a pioneer. We will also monitor the growth of the decarbonization market and expand capital investment in promising fields from 2030 onward. In terms of the scale of capital to be invested, we plan to increase the total amount by 1.3 times compared to fiscal 2025 by 2040. Currently, fossil energy accounts for more than half of the Group's earnings. Under the third Medium-Term Management Plan, we will implement various measures following the basic policies of "establish a solid earnings base," "accelerate execution of measures for energy transition," and "enhance the management base," to maximize earnings in our current business portfolio.

At the same time, by 2030, in addition to upfront investment in decarbonization, we will build a business foundation for EV charging and the ENEOS Platform to meet the needs of local communities and individuals. By around 2040, the "permeation" phase of the energy transition, we expect our earnings portfolio to comprise 50% decarbonized energy and fossil energy offset by CCS and other measures, and 50% materials and the ENEOS Platform.

Scale of Investment Capital and Profits in the Long-Term Vision by Business Area



1 Fixed asset balance by business + working capital of inventory, etc.
 2 Including incubation businesses. The target for FY2025 is 7% or higher excluding the incubation businesses.
 3 Net income attributable to owners of the parent

Internal Carbon Pricing System

We are advancing our shift to being a business that contributes to the reduction of carbon emissions by setting an internal carbon price of 50 dollars per ton* as a reference and identifying the impacts of both the risks and opportunities associated with changes in our CO₂ emissions. We have set specific CO₂ reduction values with the aim of accelerating the construction of a business portfolio that will enable us to achieve carbon neutrality. We will use these values as factors to guide investments in energy efficiency that will lower our carbon emissions and to encourage exploration of new investments that will advance our conversion to decarbonized energy. The internal carbon price will be updated as the business environment evolves.

* For ENEOS and JX Nippon Oil & Gas Exploration business areas

Realizing a Just Transition

In building our business portfolio for a decarbonized society, we believe that reducing social and economic burdens is essential to the continuity of social and economic activity during the transition period. The most effective way we can contribute to a just transition is by fully leveraging our strengths, including our refineries, supply chain and other existing assets, our highly professional and motivated human capital, and our close relationships with local communities, including local economies.

For example, in building a hydrogen supply chain, which is currently in progress, we can use our refineries, logistics, and service station network to establish a competitive advantage, which will enable us to minimize any adverse impacts on our employees or related companies as well as on the employment and labor conditions and people's livelihoods in local communities.

Our approach is aligned with the International Labour Organization's "Guidelines for a just transition towards environmentally sustainable economies and societies for all." We also conduct human rights due diligence based on the United Nations Guiding Principles on Business and Human Rights every two years, and we will carry out regular reviews and implement appropriate measures as we pursue our initiatives during the transition.

Indicators and Targets

In the ENEOS Group Carbon Neutrality Plan, announced in May 2023, we state our intent to achieve carbon neutrality in our own emissions (Scope 1+2) by fiscal 2040, and we are working in step with governments and other companies toward the realization of carbon neutrality, including Scope 3, by fiscal 2050. We have set interim targets for 2025 and 2030 for our own emissions, and for 2025, 2030, and 2040 for the portion that includes Scope 3.

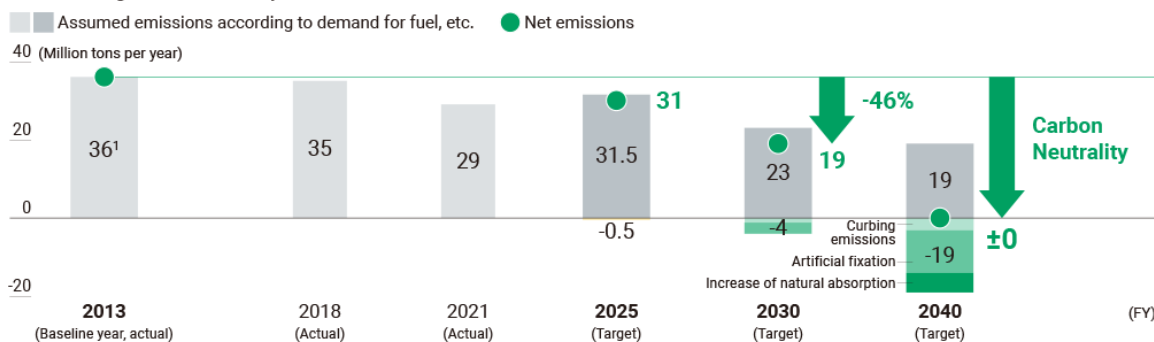
In setting these targets, we considered multiple scenarios, including those that align with the 1.5°C target in the Paris Agreement.

For information on our results of reduction in CO₂ emissions, see [Prevention of Global Warming](#).

Roadmap for Reduction of ENEOS Group Greenhouse Gas Emissions

		FY2025	FY2030	FY2040	
Greenhouse gas emissions target¹ (Scope 1+2) <small>Unit: million tons per year</small>		≤31 (-14%)	≤19 (-46%)	±0	Comparison with baseline year shown in parentheses
Methane emissions target² <small>Unit: tons per year</small>		350 (-80%)	Less than 300	(-100%)	
Assumed emissions according to demand for fuel, etc.		31.5	23	19	
Action	Curbing our greenhouse gas emissions	- 0.5	- 1	- 3	
	Artificial fixation of CO ₂	—	- 3	- 11	
	Increase of natural absorption of CO ₂	- 0.5 (create)	- 2 (create)	- 5	

Greenhouse gas emissions Scope 1+2



1 Greenhouse gas emissions in the base year (fiscal 2013): 36 million tons. Figure revised from the time of announcement in May 2022 (30 million tons) due to a change in the calculation method for domestic emissions from the standard under the Act on Promotion of Global Warming Countermeasures to the GX-ETS standard. There is no change to the target for transition-linked bonds (issued on June 15, 2022), but the greenhouse gas emission target for fiscal 2030 has been changed from 16 million tons to 19 million tons.

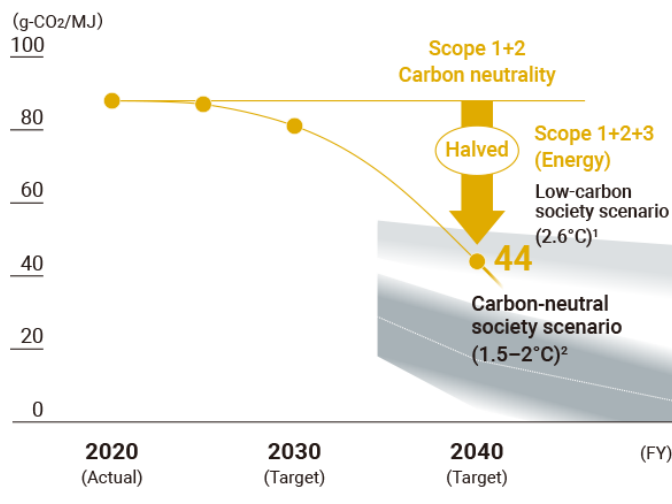
2 Methane emissions in base year (fiscal 2021): 1,600 tons

Roadmap for the Reduction of Greenhouse Gas Emissions of Society

			FY2025	FY2030	FY2040	
Energy field	Promote energy transition	CI (Carbon Intensity)	87 g-CO₂/MJ	81 g-CO₂/MJ	44 g-CO₂/MJ	
		CO ₂ -free hydrogen	Investment decision for commercialization	250 thousand tons	1–4 million tons	
		Carbon-neutral fuels	SAF ¹	1st case investment decision	500–700 thousand KL	Domestic share: 50%
			Biofuel	—	Supply 10% mixing to high-octane gasoline ²	Supply 20% mixing to gasoline ²
			Synthetic fuel	Demonstration of 1 barrel/day-scale	Manufacture synthetic fuel 300 barrels/day	Manufacture synthetic fuel 10 thousand barrels/day or more
		Renewable energy Renewable energy total power generation capacity	2 GW	3 GW	6–8 GW	
CCS (for other businesses)	—	—	4–10 million tons			
Materials and services field	Promote circular economy	Petrochemicals Non-fossil resource ratio ³	20-thousand-ton scale Start of waste plastic liquefaction business	20%	35%	
		Lubricants Recycling amount	Completion of demonstration	100 thousand KL	200 thousand KL	
		Copper smelting Recycling ratio	—	25%	50%	
		Final disposal ratio of waste	Less than 1.0%			
	Expansion of products which contribute to avoided emissions	Avoided emissions (materials) ⁴	750 thousand tons-CO ₂ e	1,500 thousand tons-CO ₂ e	2,000 thousand tons-CO ₂ e	

- Sustainable aviation fuel, a low-carbon aviation fuel made from biomass, waste, and waste oil.
- Biofuel + synthetic fuel
- Input ratio of green raw materials (waste-plastic-recycled oil, bionaphtha, etc.) against the production volume of products derived from naphtha cracker
- Assuming about 20–50 million tons-CO₂e of avoided emissions (for fiscal 2040) by hydrogen and carbon-neutral fuel

Carbon Intensity (CI) Targets for the Energy Supplied by the ENEOS Group



CI (Carbon Intensity)

- Indicator of CO₂ emissions (g) (Scope 1+2+3) per unit of energy supply (MJ).
- Reduced due to supply of hydrogen, carbon-neutral fuels, renewable energy, etc.
- Does not include materials (petrochemicals, lubricants, asphalt, etc.)

- ENEOS assumptions referring to IEA STEPS case
- ENEOS assumptions referring to IEA APS/NZE case

Social

The ENEOS Group's mission is to harness the Earth's power for the common good and for the day-to-day life of each individual. To fulfill this mission, we contribute to resolving the challenges faced by internal and external stakeholders. For social data, please refer to the [Data](#) page.

Safety

Basic approach, structure and initiatives



Human Rights

Basic approach, structure and initiatives



Human Resource Development

Basic approach, structure and initiatives



Health

Basic approach, structure and initiatives



Healthy Work Environment

Basic approach, structure and initiatives



Quality

Basic approach, structure and initiatives



Supply Chain Management

Basic approach, structure and initiatives



Social Contribution

Basic approach, structure and initiatives



Safety

Basic Approach

As a corporate group responsible for the stable supply of energy and materials, the ENEOS Group believes that ensuring safe operations is the basis of our business survival and social credibility, as well as the source of our competitive edge.

Based on this understanding, safety has been prioritized in the ENEOS Group Philosophy, and our basic policy on safety and security has been stipulated in the ENEOS Group Code of Conduct.

Based on the above, each Group company has established its own safety policy in accordance with its business characteristics and assesses risks pertaining to occupational safety, thereby ensuring multiple layers of effective safety activities. Specifically, we aim to enhance our safety activities and safety training programs, in which the employees of our contractor companies also participate, and we have established preventive and emergency measures to cope with all manner of accidents, problems and natural disasters.

We check with our labor unions to make sure efforts are being made to maintain the facilities needed to ensure the health and safety of labor union members (Article 90 of the Ancillary Agreement to the Labor Agreement).

ENEOS Group Code of Conduct (excerpt)

2. Safety and security

- (1) We regard safety and security as the foundation of our business activities, set high safety and security standards, always ensure safety and security, and take appropriate measures to prevent any incidents and injuries.
- (2) We have established preventive and emergency measures to minimize damage to our business sites caused by natural disasters, including earthquakes. We also make every effort to protect the lives and safety of our directors, officers and employees, communities, and others concerned.
- (3) We shall not work under the influence of alcohol or drugs, when ill, or under other conditions where safety cannot be ensured.

ENEOS Group Safety Policies

Each ENEOS Group company has established a policy on occupational health and safety which states its commitment to prioritizing and fully ensuring the safety of its workers.

- ENEOS
We aim to ensure that nobody gets hurt and to eliminate accidents.
- JX Nippon Oil & Gas Exploration
Ensuring that Health, Safety and Environment (HSE) considerations are given prevailing status over our other business considerations.
- JX Metals
We place the highest priority on ensuring the health and safety of people working in all areas of business operations.

See the following for further details on the safety policies of the Group's principal operating companies.

- > [ENEOS Group Safety Philosophy and Policies](#) □
- > [JX Nippon Oil & Gas Exploration Health, Safety, and Environmental Policy](#) □
- > [JX Metals Group Basic Policy on Health and Safety](#) □

Structure

For information about our structure, see [ESG Management Structure](#).

We have established the ENEOS Group Safety, Health & Environment Council, chaired by the officer responsible for the Safety, Health & Environment Department at ENEOS Holdings. The council meets, in principle, twice annually, to share information on the status of occupational injuries and the implementation of safety activities at ENEOS Holdings and its principal operating companies, as well as to discuss and develop measures to prevent occupational injuries.

Operation of Safety Management System and Status of Certification

Each Group company has built safety management systems tailored to its respective business characteristics. Our companies are continuously making efforts to raise safety awareness and prevent occupational injuries through means such as implementing regular safety education and training, conducting investigations into the causes of incidents and formulating and implementing measures to prevent recurrence.

ENEOS has established and implemented its own safe operations management system (SOMS), which conforms to ISO standards, at all of its refineries and plants.

JX Nippon Oil & Gas Exploration has adopted its own HSE¹ management system (HSEMS), which conforms to ISO standards. Through HSEMS system management, the company has established an integrated safe operations framework that includes overseas business sites.

JX Metals is moving ahead with the acquisition of ISO 45001² and JIS Q 45100³ certification, and by March 2023, 13 domestic business sites had obtained certification. The remaining business sites, including those that have newly joined the JX Metals Group, plan to acquire certification in fiscal 2023 and beyond.

1 Acronym for “health, safety and environment”

2 An international standard for occupational health and safety management systems

3 JIS standard based on the international standard ISO 45001, with additional requirements particular to Japan.

Material Issues, Plans and Results

Fiscal 2022 Targets, Results and Progress

Evaluation: 😊 Achieved/Steady progress ☹️ Not achieved

Material ESG Issue	Initiative	Target (KPI)	Results/Progress	
Ensuring safety / Health enhancement	Reduction in occupational injuries	Zero serious occupational injuries (occupational fatalities)	😊	Zero
		Achieve TRIR* of 1.0 or less * Number of occupational injuries per million working hours (non-lost-time occupational injuries + lost-time occupational injuries and fatalities)	😊	1.0

Results of Major Initiatives for Ensuring Safety

The ENEOS Group prioritizes and is fully committed to the safety of its workers. We have set material targets for zero serious occupational injuries (occupational fatalities) and a total recordable incident rate (TRIR)* of 1.0 or less, and we implement comprehensive safety activities and safety training for employees, including those of contractor companies.

In fiscal 2022, we had zero serious occupational injuries (occupational fatalities) and TRIR of 1.0, thus achieving our material targets. We believe that the achievement of these targets attests to the effectiveness of our safety activities.

A total of 29 workers sustained lost-work-time occupational injuries in fiscal 2022. While this was a decline from 43 workers in the previous fiscal year, improvement is still needed. As many of these incidents have occurred in the course of work activities, we will enhance our ongoing safety activities to continue reducing lost work time. We have also found that a certain number of accidents occur outside of work, such as when moving from one place to another. As a preventive measure for accidents that occur outside of work, we seek to raise safety awareness by sharing situation analysis and cause investigation results for individual incidents.

As a company group that provides work environments for a large number of employees, including those of contractor companies, we will continue to implement effective safety activities in accordance with the characteristics of our businesses as part of our efforts to eliminate occupational accidents.

* Total recordable incident rate (TRIR) is the number of occupational injuries per million working hours (non-lost-time occupational injuries + lost-time occupational injuries and fatalities)

For information about , see the [Editorial Policy](#).

Occupational Injuries

(Persons)

			FY2020	FY2021	FY2022
Number of occupational injuries	Directly hired employees	Fatalities	0	0	0
		Lost work time	12	17	12
		Subtotal	12	17	12
	Contractors (contractor companies, etc.)	Fatalities	2	0	0
		Lost work time	26	26	17
		Subtotal	28	26	17
Total			40	43	29

Note:

Scope of occupational injury statistics: ENEOS, JX Nippon Oil & Gas Exploration and JX Metals


Occupational Injury Frequency Rate*



Notes:

Scope: The refineries, plants and business sites of ENEOS, JX Nippon Oil & Gas Exploration and JX Metals (For details, see [Data](#)).

* Frequency rate: The number of injuries and fatalities per million cumulative hours worked; indicates the frequency of occurrence of occupational injuries.

[Definition of terms by the Ministry of Health, Labour and Welfare](#) 
(Available in Japanese only)


Occupational Injury Severity Rate*



Notes:

Scope: The refineries, plants and business sites of ENEOS, JX Nippon Oil & Gas Exploration and JX Metals (For details, see [Data](#)).

* Severity rate: The aggregated number of working days lost per thousand cumulative hours worked; indicates the severity of occupational injuries.

[Definition of terms by the Ministry of Health, Labour and Welfare](#) 
(Available in Japanese only)

TRIR and LTIR

Item		FY2020	FY2021	FY2022
Total recordable incident rate (TRIR)	Directly hired employees	1.23	1.13	1.00
	Contractors (contractor companies, etc.)	1.86	2.13	2.59
Lost time injury rate (LTIR)	Directly hired employees	0.35	0.26	0.19
	Contractors (contractor companies, etc.)	0.63	0.72	0.51

Notes:

Scope: ENEOS Holdings, ENEOS head office and 11 refineries and plants, JX Nippon Oil & Gas Exploration head office and 3 business sites, JX Metals head office and 5 business sites (For details, see [Data](#)).

TRIR: Number of occupational injuries per million working hours (non-lost-time occupational injuries + lost-time occupational injuries and fatalities), excluding heat stroke (first aid)

LTIR: Number of lost-time occupational injuries and fatalities per million working hours

Major Initiatives

Increased Scope of Data for TRIR and LTIR

As part of the management of safety-related targets, the three principal operating companies use TRIR and LTIR as indicators. In fiscal 2022, we decided to expand the scope of data for TRIR and LTIR.

In addition to the original scope of data, which includes company employees and employees of contractor companies at business sites under the direct control of the three principal operating companies, the expanded scope of data will also cover the group companies of each of the three principal operating companies. We plan to make preparations for dissemination to and training for these companies in fiscal 2023, and start collecting data in fiscal 2024.

Safety Activities

Group companies are working to raise safety awareness and enhance safety management. Risks at production and manufacturing sites are managed using a PDCA cycle to identify hazards, assess risks and take necessary risk mitigation measures and assess their effectiveness.

Every year in July, ENEOS releases a video message on safety by its president to all employees, demonstrating the company's top-down commitment to safety. At its refineries and plants, the company has implemented a behavior-based safety (BBS) system that is used to facilitate safe operations by focusing on individual behavior.

JX Nippon Oil & Gas Exploration has implemented various safety activities at its business sites both overseas and in Japan (Vietnam, Malaysia, and Nakajo). For example, workers have stop work authority (SWA) so that anyone can halt work in the event of unsafe behavior. Furthermore, we encourage the active participation of frontline workers in safety to help raise the safety awareness of the entire workforce, through activities such as Unsafe Condition Unsafe Act (UCUX), where workers can point out or propose improvements at any time to resolve unsafe conditions or behaviors.

JX Metals is working continuously to improve safety awareness and sensitivity to risks through means such as enhancing hazard simulation training at its business sites and developing and implementing safety training materials based on past accidents (videos re-enacting occupational accidents, e-learning, etc.).

Group-wide Safety Action Items

In order to prevent serious occupational injuries, we designated preventing falls, separating people from heavy machinery, and preventing heatstroke as the three safety action items for the three principal operating companies. We established these action items in the ENEOS Group guidelines in February 2020.

Since fiscal 2021, we have reflected the three safety action items, positioned as common issues for the three principal operating companies, into the safety activities of each company. The principal operating companies are also sharing safety initiatives with their own group companies as part of their efforts to eliminate occupational injuries.

Group-wide Safety Action Items

- Preventing falls
- Separating people from heavy machinery
- Preventing heatstroke

Hazard Simulation Training Using Virtual Reality

The ENEOS Group launched the ENEOS Group Safety Education Center in Hitachi City, Ibaraki Prefecture in 2013 to enable workers to learn about the hazards inherent in day-to-day operations through simulated experiences. Since fiscal 2017, the center has implemented a training program unique to the Group using virtual reality (VR) technology.

The program enables workers to feel what it is like to be involved in an accident and think about victims' psychological state, as well as accident causes and preventive measures.

Using VR technology, trainees can experience simulated accidents that cannot be safely replicated in the real world, such as steam explosions, being struck by heavy machinery, getting caught in rotating equipment, and falling from heights. These experiences improve their ability to detect workplace hazards to avoid or deal with when they occur. Since the launch of the program, VR experiences with scattering of chemicals, getting fingers caught in slings, grinder recoil, falling down stairs, electric shock, and fire caused by static electricity have been added to the program, further enhancing the content of the training.

In fiscal 2022, 1,013 persons participated in training at the facility, bringing the total number since the establishment of the center to 13,353. We have also installed hazard simulation equipment at each of our production sites (ENEOS: 11 sites, JX Metals: 7 sites). Workers at these sites, including those from contractor companies, are required to undergo training using this hazard simulation equipment before engaging in onsite work. With these and other efforts, we are working to ensure safety across the entire Group.



Virtual-reality training equipment

Using AI to Ensure Safety While Walking

In fiscal 2022, ENEOS introduced an AI-driven program for analyzing walking motion as a way to improve movement safety. The program uses a special device to measure a person's walking speed, stride length, center of gravity, and other elements to determine the level of safety in the walking motion. The program then uses the results to provide suggestions for exercises or other ways to improve safety while walking.

Improving Human Skills

As human factors are a major cause of occupational accidents and injuries, we have focused for many years on training to arm employees with the knowledge and technical skills needed to implement procedures and rules without fail. In recent years, however, there is growing awareness in the manufacturing industry, referencing leading initiatives in the healthcare and airline industries, about the importance of stepping up initiatives to improve non-technical skills, including status confirmation of work environments and communication among workers, in addition to compliance with procedures and rules. Accordingly, we are incorporating knowledge and activities for the improvement of these non-technical skills.

In the ENEOS manufacturing division, we refer to these non-technical skills as human skills, which we have stipulated in the activity guidelines for improving human skills in the manufacturing division. In accordance with these guidelines, at all of our plants and refineries, top management shares the importance of human skills, and systems have been put into place for the implementation of various forms of education and training and the integration of the resulting skills into existing daily safety activities in the workplace. In this manner, we are working to improve the human skills of all employees in the manufacturing division to prevent human-factor-related accidents and occupational injuries.

Foundation for Safe and Stable Operations



Initiatives with Contractor Companies

At ENEOS refineries and other facilities, when selecting contractor companies, we evaluate the companies' safety management in their business operations. In addition, even after beginning business relationships with contractor companies, we conduct regular evaluations of the status of their safety management, identify areas for improvement and follow up on the implementation of improvement measures.

Moreover, in order to ensure proper safety management of contractor companies, we require the primary contractor to submit and execute a safety management plan, establish KPIs for the contractor company, conduct regular monitoring and evaluation, and report on improvements.

All new entrants to contractor companies are given orientation training.

Main Initiatives at Refineries and Plants for Earthquakes

The ENEOS Group implements various earthquake measures at its refineries and plants.

Measures to Protect Lives

As a precaution against earthquakes and tsunamis, we have voluntarily implemented seismic reinforcement of our onsite offices and production unit control rooms, with priority given to the protection of human life.

We have also designated locations and methods for evacuation in case of an earthquake or tsunami, and we carry out disaster preparedness drills every year.



Elevated warehouse (Sakai Refinery)

Measures for Seismic Reinforcement of Facilities

We are carrying out legally required seismic reinforcement work for tanks that store hazardous materials.

Upgrade work on floating-roof tanks subject to this requirement was completed before the statutory deadline. As for internal floating-roof tanks, which became subject to legislation in fiscal 2011, plans are in place to complete seismic reinforcement work by the statutory deadline (end of fiscal 2023).

For high-pressure gas facilities, we have already completed seismic assessments following government instructions, as well as the retrofitting of spherical tanks with braces to increase earthquake resistance, taking into account the effects of the Great East Japan Earthquake. Seismic countermeasures for facilities of high importance were completed in fiscal 2021, marking the completion of our seismic reinforcement of high-pressure gas facilities.



Brace retrofitting on a spherical tank

Measures to Mitigate Damage from Disasters

We have installed seismographs at all of our refineries and plants as part of a system that automatically shuts down equipment in a prompt and safe manner in the event of an earthquake, depending on the intensity.

Countermeasures against Accidents and Malfunctions

Disaster Prevention Facilities

At our refineries, plants, and stockpiling terminals, we have established self-defensive organizations for disaster prevention and installed necessary disaster response equipment and facilities in preparation for potential accidents and disasters. We have also established a defensive organization for cooperative disaster prevention with nearby companies to improve the disaster preparedness of industrial complexes.



High-capacity foam water canon (Oita Refinery)

Oil Spill Countermeasures

We have multiple oil dikes surrounding our storage tanks and systems to prevent leakage from spreading offsite. In addition, to promptly respond to oil spills at sea, we have oil fences to prevent oil spills from spreading and oil recovery vessels in place.



Drill for oil spill at sea using oil fences and oil recovery vessels (ENEOS Kiire Terminal)

Fire Countermeasures

We have equipped our refineries and plants with fire extinguishing equipment, such as large chemical firefighting vehicles, high-altitude water cannon vehicles, and high-capacity foam water cannon systems, for response in the event of a major fire.

Our facilities also have disaster response vessels with firefighting capabilities to respond to fires at sea.



High-altitude chemical water cannon vehicles (Mizushima Refinery)

Disaster Drills

We regularly implement comprehensive disaster response drills for our self-defensive organizations for disaster prevention to ensure that we can respond in a quick and agile manner should an actual disaster occur. We also hold other drills, including joint disaster preparedness drills involving local fire departments as well as disaster response organizations from nearby companies and local communities.



Comprehensive disaster response drill with refinery self-defensive organization for disaster prevention and local government (Sendai Refinery)

Ensuring a Stable Supply

The ENEOS Group has established a backup system for ensuring a stable supply in the event of a major disaster that impacts the functions of production and shipping sites through collaboration with other production and shipping sites. We also conduct drills and training regularly to ensure that our sites can continue to function in the event of a disaster.

Human Rights

Basic Approach

As a corporate group with global business operations, the ENEOS Group believes that an important element in striving for sustainable development is respect for the human rights of all stakeholders, including employees.

The Group supports international norms such as the United Nations Guiding Principles on Business and Human Rights and the fundamental labor rights of the International Labour Organization (ILO) Declaration on Fundamental Principles and Rights at Work (freedom of association and the effective recognition of the right to collective bargaining, the elimination of all forms of forced or compulsory labor, the effective abolition of child labor, the elimination of discrimination in respect of employment and occupation).

We conduct our business activities with respect for the human rights not only of our employees, but of all stakeholders, including our suppliers, customers, business partners and members of local communities.

ENEOS Group Code of Conduct (excerpt)

5. Respect for human rights

- (1) We shall not infringe on human rights through our business activities. We respect internationally accepted human rights standards and diversity, acknowledging differences pertaining to gender, age, nationality, race, ethnicity, skin color, culture, thought, religion, belief, political opinions, sexual orientation, and the presence or absence of disability.
- (2) We shall not engage in any type of discrimination or harassment.
- (3) We shall not engage in any forms of forced labor or child labor.
- (4) We shall not engage in business transactions which may lead to the prolongation of conflicts, human rights violations, or inhumane acts.

Human Rights Policy

We have stipulated respect for human rights as a basic principle in the ENEOS Group Code of Conduct, and we have supplemented this principle with the Human Rights Policy. The Group asks all business partners involved in its business activities to understand and cooperate with this policy, and strives to ensure thorough awareness and compliance.

ENEOS Group Human Rights Policy

The ENEOS Group conducts its business activities under the ENEOS Group Philosophy, which states that we will contribute to the development of our communities and help to ensure a vibrant future through creation and innovation in energy, resources, and materials.

This policy was formulated as a guideline for promoting respect for human rights across the entire Group and fulfilling related obligations pursuant to the United Nations Guiding Principles on Business and Human Rights.

1. Basic Approach

The ENEOS Group fully recognizes that human rights must be respected in all of the countries and regions where it conducts its business activities.

2. Compliance with Applicable Laws and Regulations

The ENEOS Group complies with the laws, ordinances and regulations applicable in the countries and regions where it conducts its business activities. In addition, the ENEOS Group will pursue a method for respecting international principles on human rights in case of a contradiction between internationally recognized human rights and the laws and regulations of each country and region.

3. Respect for International Norms on Human Rights

The ENEOS Group supports and respects the International Bill of Human Rights (consisting of the Universal Declaration of Human Rights, International Covenant on Civil and Political Rights, and the International Covenant on Economic, Social and Cultural Rights), which stipulates the fundamental human rights of all people, along with international norms on human rights such as the ILO Declaration on the Fundamental Principles and Rights at Work of the International Labor Organization, which sets forth fundamental labor rights, other conventions relating to the human rights of workers on wages and working hours, the Declaration on the Rights of Indigenous Peoples, and the Children's Rights and Business Principles. As a participant in the UN Global Compact, we support and respect the 10 principles of the UN Global Compact.

4. Fulfillment of Responsibility to Respect Human Rights

The ENEOS Group is committed to upholding human rights. If it is determined that our business activities cause or have caused adverse impacts on human rights, we will take appropriate action to remedy such impacts in accordance with our responsibility to respect human rights. As part of our efforts, the ENEOS Group will promote the following initiatives.

- Human Rights Due Diligence

The ENEOS Group will establish and continually implement a mechanism for human rights due diligence. Human rights due diligence refers to the continuous process of conducting preventive surveys and investigations, rectifying issues using appropriate means, and disclosing the progress and results of such externally, in order to prevent or mitigate possible adverse impacts on human rights caused by the company.

- Dialogue and Discussions

The ENEOS Group conducts in earnest dialogue and discussions with relevant stakeholders to ensure that it comprehends and addresses the impacts it has on human rights from the perspective of those affected.

5. Training

The ENEOS Group will provide appropriate training to its officers and employees to ensure that this policy is incorporated into the business activities of all companies belonging to the ENEOS Group.

6. Information Disclosure

The progress and results of initiatives for respect for human rights under this policy will be disclosed on our website and in reports, among other media.

7. Applicable Scope

This policy applies to all officers and employees of the ENEOS Group. All business partners involved in the ENEOS Group's business activities will be asked to cooperate with this policy.

8. Positioning

This policy supplements the provisions of the ENEOS Group Philosophy and the ENEOS Group Code of Conduct.

Structure

For information about our structure, see [ESG Management Structure](#).

Internal Structure for Business and Human Rights

Based on the third-party opinion received in human rights due diligence and the assessment results of the Corporate Human Rights Benchmark (CHRB), the Corporate Planning Department and the Human Resources Department of ENEOS Holdings are taking the lead in strengthening human rights initiatives across the Group.

An overview of these efforts is presented below.

Operations	Departments in charge (breakdown)
Various consultation contact points (human rights, people with disabilities, sexual minorities), human rights awareness (in-house training)	Human Resources Department 1 general manager, 1 deputy general manager, 11 in group responsible
Human rights due diligence planning	Corporate Planning Department 1 general manager, 1 deputy general manager, 7 in group responsible

Material Issues, Plans and Results

Fiscal 2022 Targets, Results and Progress

Evaluation: 😊 Achieved/Steady progress 😞 Not achieved

Material ESG Issue	Initiative	Target (KPI)	Results/Progress	
Compliance with international principles on human rights	Human rights due diligence	Conduct survey of technical intern trainees at suppliers and formulate responses	😊	<ul style="list-style-type: none"> Conducted surveys Formulated responses
	Human rights awareness	Implement human rights training	😞	Some companies have not completed the training because the implementation date was extended to the first half of fiscal 2023 due to revisions to the training content

Major Initiatives

Participation in the UN Global Compact

ENEOS Holdings, ENEOS, JX Nippon Oil & Gas Exploration and JX Metals support the UN Global Compact and work to realize its 10 principles in four areas, including human rights.

We also support the Japanese government's National Action Plan on Business and Human Rights (2020–2025), established in 2020, and are working to promote responsible corporate actions involving respect for human rights through its implementation.

Corporate Human Rights Benchmark (CHRB)

The ENEOS Group became subject to Corporate Human Rights Benchmark (CHRB) assessment* in 2019, and regularly engages in dialogue with CHRB to exchange opinions on business and human rights.

Since fiscal 2020, based on the assessment and dialogue with CHRB, we have been focusing our efforts on the consideration of human rights factors in supply chain management (see [Human Rights Due Diligence](#)).

Going forward, in order to sufficiently address the questions posed by CHRB, we will carry out initiatives on business and human rights and proactively disclose relevant information.



* See the CHRB website for assessment results.

Raising Awareness of Human Rights through Training and e-Learning

At our Group companies, we continue to provide human rights awareness training and e-learning for all officers and employees to raise awareness of human rights and prevent human rights violations in the workplace. The training promotes understanding of human rights violation risks specified in the National Action Plan on Business and Human Rights (2020-2025).

Policies, Principles, and Norms on the Rights of Indigenous Peoples

The Group supports and respects international norms on human rights with regard to the rights of indigenous peoples.

Main international norms on human rights that we support and respect

- United Nations International Bill of Human Rights (consisting of the Universal Declaration of Human Rights, International Covenant on Civil and Political Rights, and the International Covenant on Economic, Social and Cultural Rights)
- 10 principles of the UN Global Compact
- International Labour Organization (ILO) Declaration on the Fundamental Principles and Rights at Work
- ILO conventions relating to human rights of workers on wages and working hours
- United Nations Declaration on the Rights of Indigenous Peoples
- United Nations Children's Rights and Business Principles

Mine Development and Respecting the Human Rights of Local Residents

The development and operation of mines can have a particularly significant impact on the surrounding environment. It is therefore essential to give due consideration to the human rights of local residents.

SCM Minera Lumina Copper Chile, the operator of the Caserones Copper Mine, applies a basic three-point policy for supporting local communities: respect for life, protection of the community and environment, and compliance with laws and regulations. In keeping with this policy, after the project launch in 2007, the operator began holding briefings and engaging in dialogue with the Collas, the indigenous people who live in the area around the mine site, in an effort to build trust.

There were no cases of infringement of residents' rights in fiscal 2022.



Briefing for local residents

Response to the UK Modern Slavery Act 2015

ENEOS Group company ENEOS Europe Limited has released a statement in response to the United Kingdom Modern Slavery Act 2015, which came into effect in October 2015.

* See the following for more information.

> [FY2022-Anti-Slavery-and-Human-Trafficking-Statement.pdf \(eneoseurope.com\)](#) (PDF : 945KB)

Initiatives for Business and Human Rights

Human Rights Due Diligence

The Group has three procedures to comprehensively identify and address human rights risks: human rights due diligence, CSR procurement surveys in the supply chain, and a response flowchart for suspected human rights violations.

1. Human Rights Due Diligence for ENEOS Holdings and Group Companies

The ENEOS Group began carrying out human rights due diligence in accordance with the United Nations Guiding Principles on Business and Human Rights (UNGP) in fiscal 2019. We implement the due diligence process every two years. Human rights due diligence consists of identifying and assessing the scope of human rights violation risks in our business activities, formulating improvement measures, and developing a training system.

In the second round of human rights due diligence, conducted in fiscal 2021, we followed suit from the first round in assessing and verifying whether the Group had committed any human rights violations involving employees, customers, residents living near refineries or smelters, residents living near service stations, or suppliers. In addition, in this second round of human rights due diligence, we carried out engagement with NGO Human Rights Now and the ENEOS and the JX Metals labor unions, and used the results to assess and verify human rights risks in the Group. We identified human rights risks to be addressed and formulated responses.

Scoping for Human Rights Risk Survey

In the course of human rights due diligence, in which we reference Guidance on Human Rights Due Diligence of the Japan Federation of Bar Associations and the opinions of NGOs in addition to the UNGP, we conduct scoping of human rights risks to be evaluated and verified (see table below).

Human Rights Due Diligence Issues for Confirmation

Stakeholders	Human rights issues	
Employees	Harassment	Management of working hours
	Discrimination	Health
	Safety	Work-life balance*
	Freedom of association (right to organize, right to collective bargaining)*	Fair and sound labor standards*
Suppliers	Human rights violations by suppliers	
Customers/ Business partners	Quality defects (including contamination)	Inadequate provision of product information
	Improper management of chemical substances used in products	Information security (privacy)
Local communities	Environment (including environmental degradation, health impacts, and damage in local areas)	

* Additional human rights risks included in the second round of human rights due diligence, conducted in fiscal 2021.

Rights Verified in Human Rights Due Diligence

- The ILO's fundamental labor rights (freedom of association and the effective recognition of the right to collective bargaining, elimination of all forms of forced or compulsory labor, effective abolition of child labor and elimination of discrimination in respect of employment and occupation)
- Three labor rights (right to organize, right to collective bargaining, freedom of association)
- Freedom from forced or compulsory labor
- Freedom from all forms of harassment
- Right to work in a safe and healthy work environment
- Freedom from discrimination
- Rights of foreign workers
- Rights of immigrants
- Rights of persons with disabilities
- Rights of women

- Rights of sexual minorities
- Right to access to remedies
- Social security
- Prohibition of child labor
- Access rights to resources
- Rights concerning health

Human Rights Risks to Be Addressed

- 1) Latent human rights risks concerning technical intern trainees in the supply chain
- 2) Insufficient right to access to remedies at suppliers

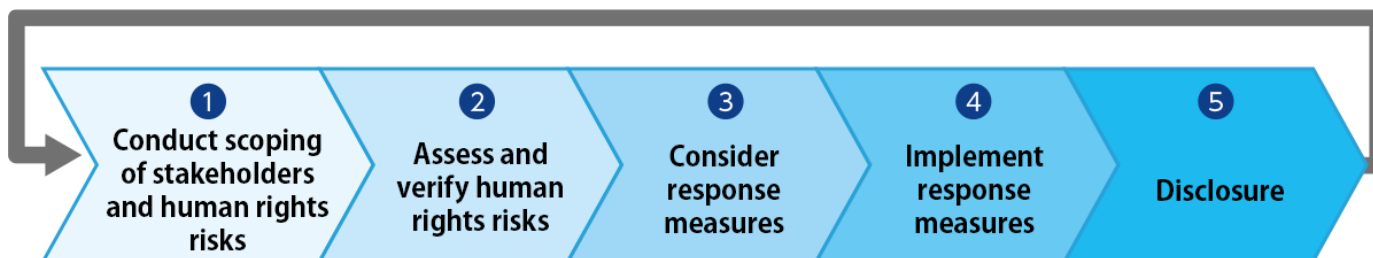
Response Measures and Initiatives

- 1) Conduct survey of technical intern trainees and formulate responses
The fiscal 2022 CSR procurement survey included indicating the presence of foreign technical intern trainees. For suppliers who indicated the presence of foreign trainees, we will conduct surveys of the actual conditions and if the results indicate any potential human rights risks, we will follow up with on-site audits and other measures.
- 2) Expand grievance mechanisms
In fiscal 2022, we established human rights consultation contact points for suppliers.

Risk Management

The company-wide risk management (ERM) system operated by the Group (see [Risk Management](#)) identifies various risks in the Group’s operations, including harassment, child labor, and forced labor. In addition to our implementation of human rights due diligence, this serves as a framework for continuously assessing impacts on human rights.

| Human Rights Due Diligence Cycle



1. Scoping of stakeholders and human rights risks subject to human rights risks survey

- Stakeholders: Employees, customers, local residents living around refineries/smelters, local residents living around service stations, suppliers, etc.
- Human rights risks: See [Human Rights Due Diligence Issues for Confirmation](#)

2. Assess and verify human rights risks

For the human rights risks identified through scoping conducted in step 1, conduct self-assessments in each department to determine whether human rights violations have occurred through business operations
After self-assessments, request confirmation by outside experts and identify human rights risks requiring priority response

3. Consider response measures

Based on the results of the self-assessments and the opinions of outside experts, consider response measures for human rights risks requiring priority response

4. Implement response measures

Introduce response measures based on consideration of measures in step 3
Fiscal 2023 (plan):
Incorporating the opinions of third parties, identify human rights risks in the value chains of our main businesses

5. Disclosure

Report on response

Situation in Fiscal 2022 and Future Plan

As of November 2023, there have been no serious human rights violations in the value chains of our main businesses. If a human rights violation occurs in the course of our business activities, we will take corrective steps and promptly implement remedy measures pursuant to laws and regulations and following the instructions of the relevant authorities, while also working to prevent recurrence.

In fiscal 2023, we plan to conduct the third round of human rights due diligence, which will incorporate third-party opinions, as we seek to identify potential human rights risks in the value chains of our main businesses. As in fiscal 2021, we plan to receive third-party verification of our third round of human rights due diligence, which we will conduct in fiscal 2023.

We will continue our pursuit of more highly effective human rights due diligence through efforts such as identifying high-risk countries and businesses, for which we will prioritize human rights due diligence.

Third-Party Opinion

The Group has asked an international human rights NGO to conduct desk research for third-party verification of its human rights risk assessments. As in fiscal 2021, we plan to receive third-party verification of our third round of human rights due diligence, which we will conduct in fiscal 2023.

A portion of the fiscal 2021 third-party opinion is summarized as follows.

A portion of the third-party opinion (★ denotes observations from fiscal 2019)

Initiatives for supply chain management implemented in fiscal 2020 were deemed to have achieved steady progress, while further issues to be addressed were also indicated.

- **Right to access to remedies ★**
Further dissemination and promotion of the use of the whistleblower systems (hotlines)
- **Discrimination and harassment ★**
Advanced efforts for discrimination and harassment prevention training
- **Supply chain management ★**
Effective implementation of the Group Code of Conduct among Group companies and suppliers in Japan and overseas, and response to human rights risks across the entire value chain, including overseas
- **Just Transition**
Implementation of human rights due diligence based on potential human rights risks due to global warming initiatives
- **Human rights in conflict-affected areas**
Implementation of appropriate measures to avoid contributing to human rights harm in areas where serious human rights violations occur, and implementation of engagement with stakeholders

2. CSR Procurement Surveys in the Supply Chain

We began conducting CSR procurement surveys in cooperation with our suppliers in fiscal 2018. By including the Group's human rights due diligence verification items in the surveys, we conduct similar human rights due diligence for our suppliers. Although no serious human rights risks have been identified to date, we have urged suppliers who need improvement to take corrective action. We will continue to monitor the status of improvements with regular checks every two years. For details, see [Supply Chain Management](#).

To date, our CSR procurement surveys have targeted primary suppliers. Going forward, we will select suppliers in terms of importance to our business and ESG risks. We also plan to develop a mechanism for even more effective identification and response to human rights risks through such means as positioning the CSR procurement survey as part of our broader human rights due diligence and subsequently enhancing the human rights risk survey process.

In addition to these initiatives, the JX Metals Group is taking measures against conflict minerals. For details, see [Confronting the Issue of Conflict Minerals](#).

3. Response to Suspected Negative Impacts on Human Rights

In fiscal 2021, upon the directive of the Board of Directors, we developed the Human Rights Response Flowchart to facilitate timely identification and analysis of and measures to avoid and mitigate the impact of human rights violations involving the Group. The flowchart, which is aligned with the human rights due diligence framework of the UNGP, is used to determine responses in terms of the impacts of our business operations on human rights violations, mainly those committed by third parties.

We will continue to use the flowchart to determine appropriate responses whenever human rights risks are detected, and we will report to the Board of Directors on the status of those responses twice a year. In this way, we will continue our earnest response to human rights risks in our business activities.

Overview of Human Rights Response Flowchart

- Identification of human rights risks
Use desktop research, media reports, external findings, engagement with outside parties, etc., to determine whether there are any human rights violations by third parties and complicity in such violations
- Examination of response measures
In the event of complicity in human rights violations, consider urging the party to remedy the situation or terminating the business relationship

Based on this flowchart, we determined the following responses.

JX Nippon Oil & Gas Exploration completed the withdrawal from the Yetagun gas field project in the Republic of the Union of Myanmar

Upon careful consideration and discussion of the situation in the country, including its response to social issues, and project economics based on evaluation of the gas field, the company decided to withdraw from the project in April 2022. The withdrawal process was initiated and subsequently completed with the approval of the Myanmar government in April 2023.

Consultation Contact Points (Remedy Measures)

If it is confirmed that human rights have been impacted in our business activities, the Group will provide remedy to the affected parties in accordance with the ENEOS Group Code of Conduct and Human Rights Policy.

The Group has established compliance hotlines, human rights/harassment consultation contact points, and supplier-related human rights contact points as internal contact points for consultation and reporting of issues, including human rights violations. These contact points accept anonymous reports and provide consultation on issues ranging from human rights issues that may occur in the course of day-to-day operations to serious human rights violations. The contact points are available in Japanese and English for employees in Japan and overseas.

Under our compliance hotline system, all reports received are reported to officers by email, and the status of response is explained to Audit and Supervisory Committee members and corporate auditors semi-annually. We inform employees of this system through the company intranet, and in training sessions held by the Legal & Corporate Affairs Department, we encourage employees to use the system.

Persons who contact the contact points are not in any way subjected to unfavorable treatment for seeking consultation or making reports. Retaliation against persons who make reports is strictly prohibited, and their privacy is rigorously protected. Employees who report matters to compliance hotlines and the human rights/harassment consultation contact points are not restricted from seeking remediation outside the company for those matters.

Therefore, employees are also free to seek other remedies using the legal systems of their respective countries (Whistleblower Protection Act, etc.). Each report received by the Group is investigated and addressed. Generally, all reports are resolved within one year. See [Compliance](#) for the internal reporting workflow of these hotlines.

Labor-Management Negotiations on Appropriate Labor Conditions

At least once every year, Group representatives meet with employee representatives (labor unions) to negotiate overall working conditions, including wages. The wages of newly hired employees greatly exceed the minimum wage in Japan (The percentage of employees covered by the collective bargaining agreement is 70.9%. Refer to [Data](#) for the labor union participation rate).

The Group respects the ILO's fundamental labor rights (freedom of association and the effective recognition of the right to collective bargaining, elimination of all forms of forced or compulsory labor, effective abolition of child labor, elimination of discrimination in respect of employment and occupation). Workers who exercise their rights are protected by the laws and regulations of each country.

In accordance with labor agreements, ENEOS discusses criteria with the labor union in advance in the event that a large number of union members are transferred due to the closure or downsizing equivalent to closure of a business site. Union members are officially notified at the time of external announcement of the closure or downsizing equivalent to closure of the business site. In addition, the content of discussions with the labor union and items to be notified in advance are mutually determined by labor and management.

Preventing Forced Labor and Child Labor

From a standpoint of completely eliminating forced labor and child labor, the Group supports and respects not only the laws of each country, but also international norms on human rights such as the United Nations International Bill of Human Rights, the International Labour Organization (ILO) Declaration on Fundamental Principles and Rights at Work, conventions relating to human rights of workers on wages and working hours, and the Children's Rights and Business Principles. As a signatory, we support and respect the 10 principles of the United Nations Global Compact—a point that is clearly stated in the ENEOS Group Human Rights Policy.

In addition, the ENEOS Group Code of Conduct clearly states that we will not use forced labor or child labor, and we are making thorough efforts to eliminate forced labor and child labor by conducting our business in accordance with this Code of Conduct.

Furthermore, in order to promote compliance with the Group Code of Conduct in the supply chain, we have established Group procurement policies and procurement guidelines that reflect the content of the Code of Conduct, and request suppliers to implement initiatives based on these policies. In order to ensure the effectiveness of our requests, the Group clearly states to suppliers that it emphasizes compliance with these policies and may review the details of transactions in some cases, and obtains written consent from suppliers who have agreed to comply with these policies. Additionally, we conduct CSR procurement surveys for suppliers, in which we have established survey items including child labor and forced labor, and urge suppliers to implement improvement measures as needed. This survey will be conducted every two years so that we can continue to monitor the progress of improvements.

Human Resource Development

Basic Approach

The ENEOS Group believes that an important challenge in the achievement of our growth strategy in a rapidly changing business environment is the development of creative, innovative human resources who can take on challenges on a global scale. In accordance with this approach, we have set out basic principles on human resource development in the Group Code of Conduct and the Group Basic Policy on Human Resources Development, and we have established consistent systems for each phase of human resource development, including hiring, assignment, evaluation, promotion, and training. In addition, each Group company pursues human resource development in accordance with its own business policies based on the Group Code of Conduct and the Group Basic Policy on Human Resources Development.

ENEOS Group Code of Conduct (excerpt)

12. Establishment of a healthy work environment

- (1) We strive to enable all personnel to carry out their business operations in the workplace with vigor, and to enable ourselves, our families and our colleagues to lead healthy and cultured lives by promoting health care and work-life balance.
- (2) We promote diversity in order to enable diverse individuals to maximize their abilities.
- (3) We strive to secure and maintain a pleasant work environment through interactive dialogue and ongoing communication.
- (4) We strive to train our people, and seek to enhance the abilities of ourselves and others.
- (5) We shall obtain the necessary confirmation and approval from the appropriate person(s) with authority before we commence any religious activity, political activity, or any similar activities during work.

ENEOS Group Basic Policy on Human Resources Development

We will continuously and systematically develop human resources to secure talent capable of tackling challenges globally with the spirit of creativity and innovation.

We will carefully develop employees with a strong awareness of the Group's mission and our five core values, a strong sense of ethics and a willingness to take on challenges.

We will develop human resources who will help us enhance corporate value over the medium to long term in order to strengthen our management foundation.

We maintain various functions and roles based on the business format and organization of the company. Each of these is indispensable to the operations of the company, and we will promote appropriate development efforts to ensure that all employees can contribute to the organization by maximizing their capabilities.

We will establish systems for actively supporting employees looking to grow themselves by promoting diverse development and growth tailored to each employee's aptitude.

We believe that supporting the growth of our diverse workforce will help to invigorate company organizations, thereby strengthening our competitiveness. We respect the individuality of each and every employee and support the self-led growth of employees tailored to their aptitude.

Structure

For information about our structure, see [ESG Management Structure](#).

Material Issues, Plans and Results

Fiscal 2022 Targets, Results and Progress

Evaluation: 😊 Achieved/Steady progress ☹️ Not achieved

Material ESG Issue	Initiative	Target (KPI)	Results/Progress	
Retaining and developing human resources	Development of human resources capable of enhancing corporate value	Implement effective training and evaluation based on the human resources development plan	😊	<ul style="list-style-type: none"> Implemented various training programs Evaluated the training content as appropriate and incorporated it into training starting the following fiscal year

Major Initiatives

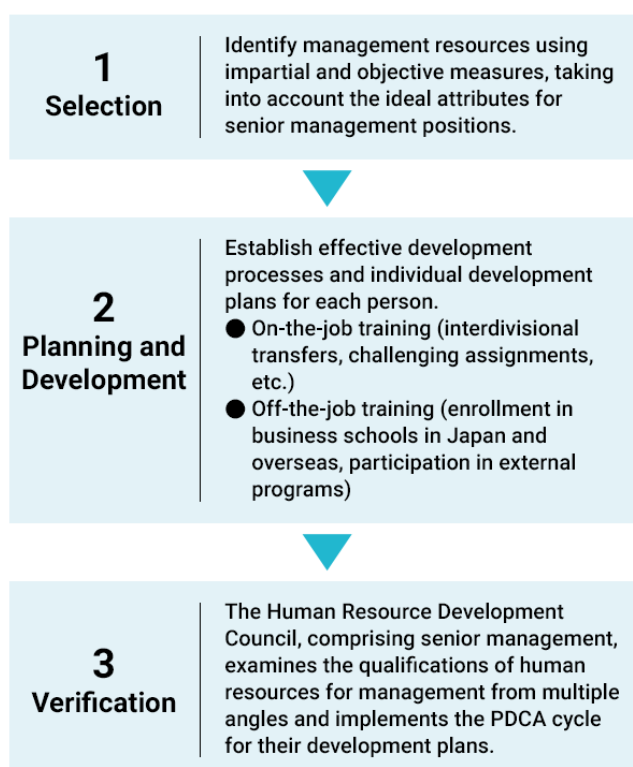
Each Group company implements development programs in accordance with its own business policies based on the Group Code of Conduct and the Group Basic Policy on Human Resources Development.

Developing Management Resources

With an eye on the future direction of its companies, the ENEOS Group must work to more systematically and strategically develop management resources as the future leaders of the Group in order to respond to the rapid changes expected to take place in the management environment going forward.

ENEOS Holdings and its principal operating companies are working on the development of these management resources as a common challenge facing the Group. We will work together to identify, at an early stage, employees suitable for management positions and provide comprehensive training to draw out their full potential as future senior executives.

Workflow for the Selection and Development of Management Resources at ENEOS



Main Human Resource Development Programs

ENEOS

Language and cross-cultural skills training

Training is held in Malaysia for employees with advanced English skills to acquire cross-cultural skills that will enable them to respond quickly in overseas business settings, with participants taking a break from work for about one month to participate.

Promotion of career opportunities for female employees

Female employees are selected to take part in off-site training in order to develop candidates for executive positions. Seminars are held to raise awareness among supervisors and an external mentorship program is offered to support the career development of female employees.

M&A training

Training for the development of human resources responsible for various projects, with a focus on M&A, in order to strengthen development of human resources capable of carrying out the company's transformation (new businesses, overseas businesses, etc.)

Training Assignments at Venture Companies

We offer a program to dispatch internally selected employees on one-year training assignments to venture companies as a way to develop human resources who can powerfully advance new business creation through practical experience starting up venture businesses, which is not possible through their day-to-day work.

Trigger for the Future

This lecture program covers topics that align with the company's future direction to provide opportunities for creative inspiration different from day-to-day business operations and training.

ENEOS Learning Platform

As part of our support for autonomous career development, we offer unlimited-use online learning services (Udemy business / Schoo for business / flier) for a certain period of time, on the condition that the user bears part of the cost.

360-degree feedback

We ask supervisors, as well as their peers and subordinates, to complete surveys about the supervisors' behavioral characteristics as a way of helping them gain awareness that will lead to future career development. Survey results do not directly affect supervisor evaluation and treatment.

Evaluation feedback interviews and self-assessment interviews

Regular interviews are conducted with all regular employees to evaluate performance during the fiscal year and to share information about work issues and skill development opportunities in the next fiscal year. We have also established human resources systems to get an accurate understanding of employees' ambitions for long-term career design and skill development. Regular interviews are held to give the company and supervisors a better understanding of employees' wishes, helping to ensure optimal assignment, relocation, and development of employees (interviews held for all regular employees, who account for 90% of all employees).

JX Nippon Oil & Gas Exploration

Training by rank

Classification-leveled training and training to develop core resources are provided.

Career development interviews

Employees are interviewed at key points in their careers to enhance the effectiveness of career development over the medium to long term, matching employees' own wishes and the needs of the company. Based on the results, the company offers support for every individual to take on new challenges in order to achieve their future vision for themselves.

Employee training programs

Six programs are offered throughout the year, mainly for young employees to educate them about E&P business technologies, contracts, and economic calculations. Training is led by in-house instructors using curricula developed by the company.

Project management training

We provide e-learning opportunities for project management, covering all aspects from the basics to practical application, to enable all employees to work autonomously utilizing their project management knowledge and skills.

JX Metals

Training by rank

Classification-leveled training and training to develop core resources are provided.

Overseas language training

All management-track employees in their second year at the company as well as other employees in need of language training are sent abroad to study foreign languages for one to three months.

Note:

In fiscal 2022, we resumed dispatching employees whose overseas language training had been postponed due to the COVID-19 pandemic.

Career development interviews for young employees

Recognizing that human resources are the source of our organization's strength, regular human resources and division interviews with young employees are conducted as an effort to ensure the systematic development of these employees and enhance their proposal-making capabilities.

Energizing individuals and organizations

Efforts are made to strengthen human resource management and development, as well as establish an environment in which diverse human resources can work with enthusiasm.

Training Hours in Fiscal 2022

	Total training hours	Training hours per employee
ENEOS Holdings and ENEOS	31,243	3.5
JX Nippon Oil & Gas Exploration	4,245	12.1
JX Metals	31,515	14.2
Total	67,003	5.8

Note:

Number of hours of internal group training and external training organized by the human resources departments of ENEOS Holdings and the Group's principal operating companies, aggregated for each employer.

Measures to Promote Dialogue

ENEOS engages in various dialogue initiatives to encourage interaction and discussion among different departments. In fiscal 2022, we held our In-house Career Forum, which aims to broaden participant understanding of each department through a question and answer session, online.

Global Business Skills Training

ENEOS administers the Global Business Skills Training program to foster human resources seeking to develop their careers internationally. The one-month program targets employees with advanced English skills. It aims to improve their language ability and strengthen cross-cultural communication skills. In fiscal 2022, we dispatched employees to Malaysia for training.

We encourage all employees who are university graduates to take TOEIC® every three years, and we offer several options for language training, including online training. Participants in the Global Business Skills Training program are also encouraged to continue their foreign language studies even after the program is over.

Development of Locally Hired Overseas Employees

ENEOS aims to boost the overseas expansion of its business operations by training locally hired overseas employees to become senior managers at its overseas sites.

To this end, the company conducts face-to-face group training for managers and team leaders hired locally overseas. In addition, the company has implemented an initiative in which locally hired human resources expected to play active roles at their respective overseas sites in the future are assigned to the ENEOS head office in Japan for several years to experience head office operations firsthand.

In fiscal 2022, group training was conducted online. Assignments to the head office were postponed due to the impact of the COVID-19 pandemic.

Support for Employee Self-Development

The ENEOS Group has a self-development support system for employees with a desire to learn.

Voluntary Participation in Training

ENEOS Holdings offers various seminars and correspondence courses for employees of its principal operating companies and other Group companies. We provide seminars and online learning services that employees can select based on their individual needs in order to support their self-development. From fiscal 2023, in addition to self-development support, we will switch to an open recruitment model, in which supervisor recommendations are not required for most of the external dispatch training programs and work skill improvement training. In this manner, we will expand our support for employees who wish to learn autonomously.

Self-Innovation Support

JX Metals has established a program in which employees can apply for and participate in external training programs of their choice, and upon completion, the company reimburses half the cost (to a maximum of 500,000 yen per program). Employees can select from a wide range of programs, motivating them more than before to take the initiative in their self-innovation.

Life Plan Seminar

ENEOS hosts a life plan seminar every year for employees to look back on their personal and career histories and focus on their future life plans in terms of finances and health. In fiscal 2022, 118 employees participated in the seminar.

In addition, to help employees prepare for life after mandatory retirement, we hold pension seminars to explain the pension system in general, including the corporate pension system, and key points for making preparations. We also host seminars on stocks, bonds, and investment trusts to explain basic knowledge about asset formation for a wide range of age groups.

Development of Digital (DX) Talent

For the establishment of a solid earnings base and the realization of energy transition, the Group will accelerate business transformation through digital transformation (DX) in the areas of base businesses, growth businesses, and carbon neutrality.

As a driving force to support these efforts, we will focus on the development of digital talent by enhancing the autonomous capabilities of employees and promoting the assignment of appropriate personnel to appropriate posts. In the third Medium-Term Management Plan (FY2023–FY2025), we have set a target to develop 2,000 advanced digital resources, which is approximately 20% of our total workforce.

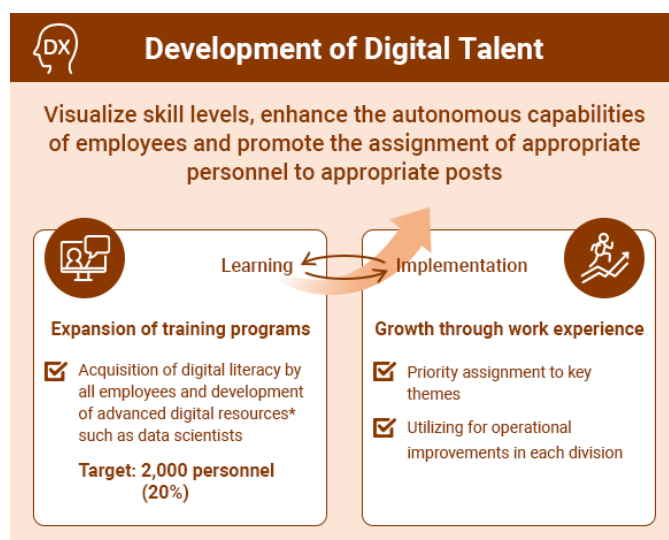
In addition to the development measures for digital talent that were implemented during the second Medium-Term Management Plan (FY2020–FY2022), from fiscal 2023 ENEOS has introduced new level certification (four levels, from 1 to 4) and three types of digital resources. Through these efforts, we are visualizing the development status and strengthening DX implementation and practical skills.

By providing e-learning to all employees to enable them to acquire digital literacy, we aim to ensure that all personnel are digitally literate human resources (Level 1). In addition, as a measure to develop advanced digital resources (Levels 2 to 4), we have established three types: Business Designer¹, DX Coordinator², and Data Analyst³, and we are pursuing the development of human resources who will play a central role in DX by combining training and work experience for each type.

In the training conducted through fiscal 2022, we have trained approximately 3,500 digitally literate human resources and approximately 600 advanced digital resources, mainly Data Analysts. In the future, we will also focus on the areas of business design and project management to develop human resources with business execution capabilities.

In addition, the Digital Talent Development Council, which was newly established within the DX Promotion Committee (held quarterly), chaired by the CDO and comprising officers responsible for DX, discusses matters such as level certification and assignments to accelerate the development of digital talent.

- 1 Consistently involved in and contributes to the planning of business transformation / business models, the launch and monetization of new businesses, and the overall promotion of DX.
- 2 Engages those involved and builds appropriate cooperative relationships while ensuring the materialization of products, services, and measures, as well as quality, cost and delivery (QCD).
- 3 Formulates hypotheses for business transformation and new business creation, and uses data to verify hypotheses and derive suggestions.



* Personnel with practical experience and knowledge for promotion of DX, and can demonstrate value as a core of DX projects in their area of responsibility

Health

Basic Approach

The ENEOS Group believes that focusing on the health of our employees and their families results in a vibrant, productive workforce, bringing vitality to our organization. This in turn is the driving force for the achievement of our growth strategies and the source of our competitiveness. Accordingly, we have stipulated health enhancement as a standard in the Group Code of Conduct and are promoting health management to contribute to employees' personal health management and improvement.

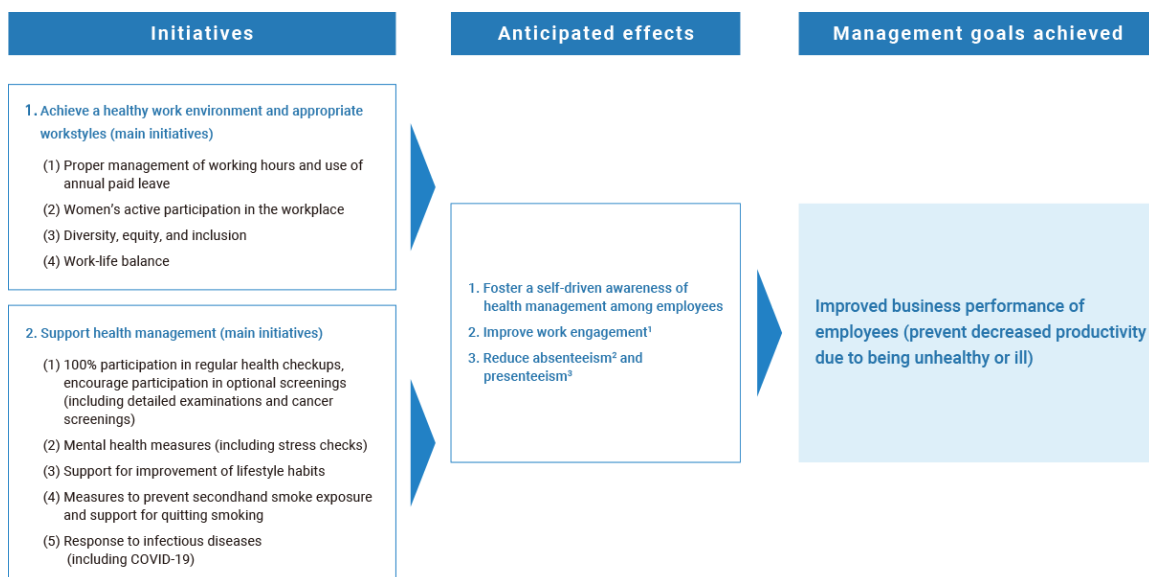
ENEOS Group Code of Conduct (excerpt)

4. Health enhancement
 - (1) Health is the core element of our business continuity and development. We take active measures to maintain and enhance the mental and physical health of individuals employed by our group companies.
 - (2) We endeavor to identify and evaluate health disorders related to our business activities and promote measures to reduce such risks. We also collect and provide information to external sources in order to ensure the sustainable development of occupational health.

ENEOS Group Health Declaration

The ENEOS Group's mission is to contribute to the development of our communities and help to ensure a vibrant future through creation and innovation in energy, resources and materials. Health, safety and environment is one of our five core values in the ENEOS Group Philosophy. We believe that focusing on the health of our employees and their families results in a vibrant, productive workforce, which is the source of our competitiveness, as well as the vitality of our organization, and is the driving force for the achievement of our growth strategies. Accordingly, we will actively promote health and productivity management, an initiative to maintain and improve the physical and mental health of our valued employees.

Overview of Health and Productivity Management



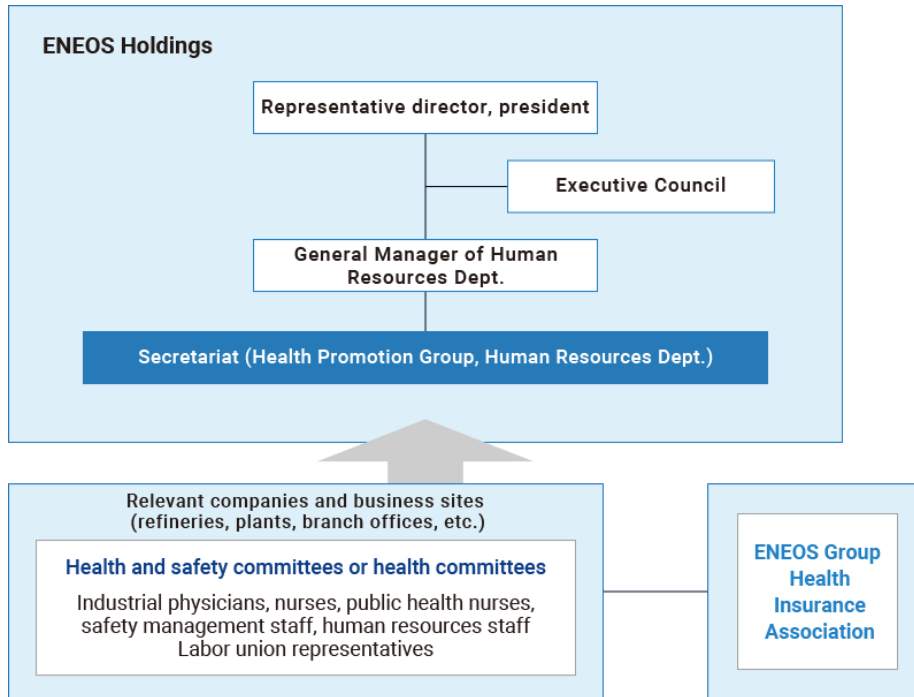
¹ Positive mental state with regard to work as defined by the following three items: vitality, enthusiasm, and devotion
² Absence due to personal injury or illness
³ Not performing to one's full capacity at work due to health issues, despite being present

Structure

For information about our structure, see [ESG Management Structure](#).

Departments in charge of human resources at Group companies take on the role of promoting health enhancement measures. At our sites in Japan, meetings of health and safety committees or health committees are convened each month for discussions on health between the companies and labor unions or employee representatives.

Support Structure for Health and Productivity Management



Material Issues, Plans and Results

Fiscal 2022 Targets, Results and Progress

Evaluation: 😊 Achieved/Steady progress ☹️ Not achieved

Material ESG Issue	Initiative	Target (KPI)	Results/Progress
Ensuring safety / Health enhancement	Ensuring health of employees	Increase the cancer screening rate for employees (recommendations) Achieve screening rate of 70% or higher for stomach cancer, colorectal cancer, breast cancer, and cervical cancer	☹️ Achieved only for colorectal cancer (cancer screening rate (recommendations): 69.8%)

Major Initiatives

Employee Health Management

In addition to providing regular health checkups for all of its employees, both in Japan and overseas, the ENEOS Group¹ provides support for preventing lifestyle-related diseases and is also working to increase the cancer screening rate² and prevent infectious diseases³. For employees assigned overseas and traveling for business, we offer vaccinations against epidemics and infectious diseases, in addition to building medical support systems. In accordance with the purpose of Japan's Health Promotion Act, we are working to thoroughly eliminate the risks from passive smoking.

In fiscal 2022, we maintained a 100% participation rate in the regular health checkups. While the cancer screening rate of 69.8% fell slightly short of the annual target of 70%, it improved by 3.4 percentage points over the previous fiscal year. We continue to encourage employees to undergo medical examinations with the aim of further increasing the examination rate. Furthermore, for employees diagnosed with medical issues, we ensure follow-up care through efforts such as encouraging these employees to undergo further testing as needed.

1 Data from ENEOS Holdings and principal operating companies

2 Subsidies and fees for physical exams as part of regular health screenings

3 COVID-19 vaccination at the workplace, influenza vaccination (subsidized through company health insurance), work exemption for measles vaccination, etc.

Setting New Health Management Indicators

We have set two new indicators for our health management targets for fiscal 2023: the percentage of employees with a healthy weight (body mass index (BMI)) and the percentage of employees who smoke cigarettes.

We use BMI as an indicator for the prevention of lifestyle-related diseases, which is the main measure for preventing all diseases. A BMI above 25 can more than double the risk of lifestyle-related diseases, such as dyslipidemia, diabetes and hypertension. We have set a target to maintain the percentage of employees with a healthy weight (BMI under 25) at 70% or more, and we are supporting their efforts by providing guidance on health issues following regular health checkups.

We use the percentage of employees who smoke cigarettes as an indicator for our ongoing efforts to thoroughly eliminate the risks from passive smoking. As smoking is a major cause of lung cancer and a risk factor for many other diseases, a company-wide ban on smoking will undoubtedly contribute to the enhancement of employee health. The ENEOS Group Health Insurance Association has also been implementing a smoking cessation support program since fiscal 2020; thus, we have determined that this is also a useful indicator in terms of cooperation with the association. We aim to reduce the number of smokers by at least 1.0% each year, ultimately reducing the smoking rate to 20% or less.

Mental Health Measures

To help prevent mental health issues, the Group makes effective use of a stress check system.

The system improves employee awareness of stress. For individual follow-up for those facing high levels of stress, we offer sessions with occupational physicians. Additional measures include systems for counseling with external counselors.

We also conduct group analysis within the organization and provide training, advice and assistance for improvements in high-stress work environments. In fiscal 2022, we continued to provide individual consultation and feedback for the stress check results of managers, and conduct follow-up as needed through training or individual consultations with external counselors and the subsequent development of action plan sheets.

Health Measures for Employees Traveling and Working Overseas

To prevent illness in employees traveling and working overseas, the Group actively implements measures such as vaccinations for employees traveling to certain destinations as recommended on the website of Japan's Ministry of Health, Labour, and Welfare's Quarantine Information Office.

ENEOS has stockpiled supplies at its overseas sites, according to the same standards used at our sites in Japan, as a safety measure for infectious disease epidemics. Since fiscal 2021, we have conducted stress checks for employees working overseas as a first line of defense against mental health disorders and to encourage employees to be aware of their stress levels. Going forward, we will continue to conduct stress checks annually.

As a measure against malaria, JX Nippon Oil & Gas Exploration has formulated standards for travel to malaria-prone regions. The standards state that the company will bear the cost of anti-malaria medication for employees traveling overseas under certain conditions, and take appropriate measures if an employee is infected. Additionally, in order to prevent physical and mental health issues caused by overwork of employees working overseas, employees whose monthly overtime hours exceed a certain threshold are required to submit a self-check sheet, and are then interviewed by an industrial physician or undergo a telephone health consultation as necessary.

JX Metals centrally manages the health information of expatriates through a health management support system, and actively encourages them to manage their health before, during, and after travel to their assigned destinations. Industrial physicians confirm the results of medical examinations and other information for accompanying family members before relocation, and support them so that they can continue to receive medical care in local areas as necessary.

Industrial Hygiene at Refineries and Other Production Sites

To prevent health hazards to workers at refineries and other production sites, the Group trains industrial hygienists for each site and carries out industrial hygiene activities.

At ENEOS, these activities include the implementation of measures against exposure to chemical substances and noise. In addition, the labor unions confirm our efforts to provide and maintain the equipment needed to ensure the health and safety of labor union members.

The JX Metals Group conducts work environment measurements and assessments and implements necessary improvements based on the results in order to prevent health hazards to workers, regardless of whether or not the worksite belongs to a contractor.

Measures Against Exposure to Chemical Substances

ENEOS conducts risk assessments using individual samplers to test for exposure to specific chemical substances that pose health risks in the work environments of refineries and other facilities. Based on the results of these assessments, we implement appropriate countermeasures to mitigate such risks as part of our efforts to prevent impacts on the health of employees.



Employee testing for exposure to chemical substances using individual samplers

Measures Against Exposure to Noise

ENEOS is taking measures against exposure to occupational noise in its refineries, plants and other business sites to prevent noise-induced hearing loss.

Comprehensive noise measurements are carried out in all areas of refineries and other business sites where production equipment is located to identify areas with noise levels of 85 decibels or higher and 95 decibels or higher, the reference values for preventing noise-induced hearing loss. Based on these measurements, we have developed workplace maps that indicate areas with high noise levels.

We have also established rules for all refineries whereby workers are required to wear appropriate ear protection, such as ear plugs or earmuffs, depending on noise levels. For areas with noise levels of 95 decibels or higher, we are implementing even more rigorous measures by requiring double protection using both ear plugs and earmuffs.



Noise measurement

Health Indicators

Trends in Health Indicators of Principal Operating Companies

	Health indicators	Fiscal 2020	Fiscal 2021	Fiscal 2022	
1	Smoking rate	24.4%	22.8%	22.0%	
2	Percentage of employees maintaining a healthy body weight (BMI under 25)	69.1%	70.3%	70.9%	
3	Percentage of employees taking part in habitual exercise*	34.3%	37.7%	34.6%	
4	Cancer screening rate	Stomach cancer	61.2%	68.4%	68.7%
		Colorectal cancer	69.3%	73.8%	78.0%
		Cervical cancer	42.3%	37.6%	46.8%
		Breast cancer	52.8%	46.4%	58.0%
5	Stress check rate	98.0%	95.3%	93.4%	
6	Regular health checkup rate	100.0%	100.0%	100.0%	

Note:

Data from ENEOS Holdings and principal operating companies

* Habitual exercise is defined as exercising for at least 30 minutes at a time at least twice a week and continuing this for at least one year.

External Evaluation of Our Health Management

The Company and its principal operating companies participate in the Ministry of Economy, Trade and Industry's Survey on Health and Productivity Management, which uses objective indicators to assess enterprises' health enhancement initiatives. We have been certified for six consecutive years, since 2018, as a Health and Productivity Management Outstanding Organization in recognition of our outstanding health and productivity management practices undertaken in collaboration with insurers.

The Company's health management initiatives are introduced in external seminars and informational magazines in order to promote the growth of health and productivity management.



Healthy Work Environment

Basic Approach

The ENEOS Group promotes the management of work-life balance as a way for all employees to increase their motivation and creativity and perform at their full potential.

The Group believes that creating environments where employees accept a person's individuality (diversity & inclusion), regardless of differences pertaining to gender, age, nationality, race, ethnicity, skin color, culture, thought, religion, belief, political opinions, sexual orientation, gender identity, presence or absence of disability, and familial or personal circumstances, and everyone is given equal opportunity (equity) will lead to the creation of new value throughout the organization and the growth of the Group.

Based on this belief, we have stipulated basic principles for the establishment of a healthy work environment in the Group Code of Conduct, and we implement various measures accordingly.

ENEOS Group Code of Conduct (excerpt)

12. Establishment of a healthy work environment

- (1) We strive to enable all personnel to carry out their business operations in the workplace with vigor, and to enable ourselves, our families and our colleagues to lead healthy and cultured lives by promoting health care and work-life balance.
- (2) We promote diversity in order to enable diverse individuals to maximize their abilities.
- (3) We strive to secure and maintain a pleasant work environment through interactive dialogue and ongoing communication.
- (4) We strive to train our people, and seek to enhance the abilities of ourselves and others.
- (5) We shall obtain the necessary confirmation and approval from the appropriate person(s) with authority before we commence any religious activity, political activity, or any similar activities during work.

Structure

For information about our structure, see [ESG Management Structure](#).

We are responding to various issues in a more agile manner under our ESG management structure. Specifically, we are implementing measures such as workstyle reforms, workplace and career advancement initiatives for female employees and employees with disabilities, and the expansion of systems to promote work-life balance. We are also raising awareness about diversity, equity, and inclusion through in-house training for all personnel, including officers.

Material Issues, Plans and Results

Fiscal 2022 Targets, Results and Progress

Evaluation: 😊 Achieved/Steady progress ☹️ Not achieved

Material ESG Issue	Initiative	Target (KPI)	Results/Progress	
Diversity and inclusion	Advancement of women in the workplace	Maintain rate of women among newly hired university graduates at 25% or higher	☹️	21.9%
	Advancement of employees with disabilities	Maintain employment rate of people with disabilities at 2.3% or higher	😊	2.44%
Work-life management	Workstyle reforms	Maintain annual paid leave days taken at 80% or higher	😊	88.8%
	Utilization of work-life balance support systems/programs	Maintain 100% rate of return to work after childcare leave	😊	100%

Major Initiatives

Diversity, Equity, and Inclusion

The Group has clearly stated its basic approach that promoting diversity, equity, and inclusion leads to the creation of new value throughout the organization and the growth of the Group. In order to ensure that our diverse workforce can work with vigor and maximize their talents, we are promoting the advancement of female employees, employees with disabilities, and sexual minorities, implementing workstyle reforms, and expanding support systems to enable employees to balance work with childcare, family care, and medical conditions. In addition, we strive to further establish diversity, equity and inclusion in the Group through internal training for all employees, including officers.

Basic Approach to Diversity, Equity, and Inclusion

- We aim to increase the motivation and creativity of all employees and enable them to maximize their talents by fostering a corporate culture where each and every employee understands the importance of diversity, equity, and inclusion, and where employees respect each other, help each other, and grow together.
- Through the promotion of diversity, equity, and inclusion, we aim to ensure the diversity of the organization and employees and foster a culture that embraces different ways of thinking and ideas and encourages thorough discussion based on mutual trust. This will enable us to promptly and accurately meet the ever-changing needs of customers and society and create new social value.
- We will continue to contribute to the realization of a society in which all stakeholders, including employees, can actively participate by promoting diversity, equity, and inclusion in Japan and overseas.

Advancement of Women in the Workplace

To support the career planning and growth of our female employees, the Group is working to reform individual workstyles and awareness, and is developing and expanding systems for all employees. Group companies also have their own action plans for the advancement of women in the workplace based on the Act on Promotion of Women's Participation and Advancement in the Workplace. We have also set numerical targets for the hiring percentage of female university graduates and the number of female employees promoted to managerial positions, and we implement various measures to promote the active participation and career advancement of female employees.

For more information about our systems, see [Major Systems for Promoting Work-Life Management](#).

Targets for Action Plan on the Advancement of Women in the Workplace

• ENEOS

1. Ensure that the ratio of women among newly hired university graduates from fiscal 2023 to fiscal 2025 is at least 50% for administrative positions and at least 20% for engineering positions
2. Change the behavior and mindset of employees, focusing on management, toward the promotion of diversity
3. Aim to have 100 female managers* (from group managers to officers) by April 2026

* Including female managers seconded to main Group companies

Reference: Summary and Results of Second ENEOS Action Plan

• Period of plan: April 1, 2020 to March 31, 2023 (3 years)

• Targets

- (1) Ensure that the ratio of women among newly hired university graduates in fiscal 2022 is at least 32%*
Did not achieve: Ratio of women among newly hired university graduates in fiscal 2022 was 30.2% (35.3% in fiscal 2021 and 38.7% in fiscal 2020)
- (2) Change the behavior and mindset of employees, focusing on management, toward the promotion of diversity
Did not achieve: Although efforts were made to build a system and raise awareness as planned, results of an engagement survey indicated that awareness of inclusion was low
- (3) Aim to at least double the number of female managers (from group managers to officers), compared to fiscal 2019 (24), by April 2023
Achieved: 51 female managers as of April 2023 compared to 24 in fiscal 2019

* Excludes company baseball team and second round of new graduate hires

• JX Nippon Oil & Gas Exploration

1. Maintain the percentage of female workers at 20% of the workforce
2. Promote thorough awareness of diversity and inclusion within the company
3. Increase the hours of participation in training for career advancement for female employees by 20% per person compared to the previous plan

• JX Metals

1. Increase the number of women in managerial positions to 30 or higher by March 31, 2026 (non-consolidated basis)
2. Ensure that employees take at least 80% of their annual paid leave
3. Continuously enhance and implement recruitment activities to increase the number of female employees and develop a workplace environment for increasing recruitment
4. Examine and implement ways to inform employees about work-life balance support systems and encourage their use to ensure that our diverse workforce can utilize these systems based on their individual needs

Note: Formulated pursuant to the Act on Promotion of Women's Participation and Advancement in the Workplace and the Act on Advancement of Measures to Support Raising Next-Generation Children.

Promoting Female Employees to Managerial Positions

ENEOS had 24 women in positions of group manager or above in fiscal 2019, and worked to promote women to leadership positions with a target of at least doubling that number by April 2023. As of April 2023, the number of women in leadership positions was 118, and of these, the number of female managers was 51 (two executive officers, two department general managers or equivalent, nine department deputy general managers or equivalent, and 38 group managers or equivalent). The company aims to have 100 female managers (from group managers to officers) by April 2026.

JX Nippon Oil & Gas Exploration aims to have at least 10 women in leadership positions in fiscal 2023. As of April 2023, 10 women held leadership positions. JX Metals was aiming to increase the number of women in leadership positions to at least 24 from April 2021 to April 2023, but as of April 2023 had only 21. From fiscal 2023, the company will work to increase the number of women in leadership positions to at least 30 by the end of March 2026.

Employment Status of Female Employees

(As of March 31, 2023)

Category	Number of female employees	Percentage of total
Newly hired employees	145	22.2%
Employees	1,547	13.8%
Leadership positions	152	5.3%
Directors*	3	21.4%
Average years of service for female employees	15.6 years (Difference in average years of service between male and female employees: 2.5 years)	

Note:

Data on number of female directors is from ENEOS Holdings; other data is for ENEOS Holdings and principal operating companies.

* Data on number of female directors is as of December 19, 2023.

Training and Seminars for the Advancement of Women in the Workplace

ENEOS holds the following training and seminars to further promote the advancement of women in the workplace.

Training for Managers

As part of our efforts to provide positive work environments for a wide variety of employees, we held diversity management training for our executives and managerial staff at the team leader level and above. This included training on management methods to help employees achieve work-life balance in terms of childcare or family care.

Training for Female Employees

We are supporting the formation of networks of female employees so that they can think about and envision their own careers. As part of this effort, we held networking events for female employees working as operators at manufacturing sites. The events included lively group discussions about the unique rewards and challenges of working in the operating division and participants' visions for their future careers. We have also introduced an external mentorship program for female employees who aspire to managerial positions, with the aim of alleviating issues and anxieties in thinking about their careers and encouraging their growth.



Networking session held for female operators

ENEOS Receives Highest “Eruboshi” (L Star) Certification

In October 2020, ENEOS received the highest of three “Eruboshi” (L Star) certifications from the Minister of Health, Welfare and Labour as an enterprise fully compliant with the standards of the Act on Promotion of Women’s Participation and Advancement in the Workplace.



Promoting Mid-Career Hires to Managerial Positions

The Group is working to transform its human resources portfolio in accordance with the third Medium-Term Management Plan (FY2023–FY2025). As part of this effort, we are increasing the hiring of experienced professionals with expertise and knowledge that we currently do not have in-house in order to transform our business portfolio. We are also increasing the number of experienced personnel appointed to managerial positions.

As of March 31, 2023, ENEOS had 259 mid-career hires, 37 of whom were in managerial positions. The number of mid-career hires has already reached 40% of the number of university graduates hired, and we will continue to accelerate the recruitment of experienced personnel in order to acquire human resources with new ideas and abilities.

At JX Nippon Oil & Gas Exploration, the number of mid-career hires was 37, with five in managerial positions.

At JX Metals the number of mid-career hires was 560, with 76 in managerial positions.

Note:

Figures indicate the number of employees hired mid-career and those in managerial positions since fiscal 2017.

Promoting Foreign National Employees to Managerial Positions

The Group plans to strengthen its overseas business as it accelerates its energy transitions toward 2040. As one of the measures to retain and develop human resources who will play leading roles in our efforts, we are focusing on hiring foreign nationals. We will also increase the appointment of foreign nationals to managerial positions.

As of March 31, 2023, ENEOS had 55 employees of foreign nationality, of which four were in managerial positions. At JX Nippon Oil & Gas Exploration, the number of employees of foreign nationality was seven, with four in managerial positions, and at JX Metals the number of employees of foreign nationality was 16, of which four were in managerial positions.

In addition to the above, there were a total of 644 employees of foreign nationality serving in managerial positions at our overseas subsidiaries.

Promoting Career Opportunities for Employees with Disabilities

The Group promotes active participation by employees with disabilities by providing assignments based on individual characteristics and aptitudes rather than grouping individuals at specific worksites. The Group also engages counselors and job coaches to support employees with disabilities in worksite adaptation. At the end of fiscal 2022, the percentage of employees with disabilities was 2.44%, higher than the legal requirement of 2.3%. Looking ahead, we will continue our efforts to hire and enhance our support structure for people with disabilities. In addition, we are a signatory and participant in The Valuable 500, an international initiative that supports the advancement of people with disabilities.



Re-employment of Retired Employees

The Group has put in place a re-employment system for employees who have the desire and motivation to continue working after mandatory retirement. This system provides these employees with further opportunities to share their valuable knowledge, skills, and experience with the company. In fiscal 2022, the number of employees re-employed after retirement was 473.

Note:

Data from ENEOS Holdings and principal operating companies.

Promoting the Active Participation of Senior Employees

Senior personnel with a wealth of knowledge and experience are invaluable resources for transforming and improving our base businesses in accordance with the third Medium-Term Management Plan. Retaining human resources is becoming increasingly critical, and as part of these efforts we have developed a system that enables more active participation by senior employees.

ENEOS ensures appropriate treatment of employees rehired after mandatory retirement through a system in which ranking (grade) and salary are based on the magnitude of the role they play in our operations. We expect many of these rehired retirees to fulfill roles equivalent to those of the current generation of managers, and have accordingly established a new role grade equivalent to the manager level.

JX Nippon Oil & Gas Exploration has applied the same system as the one for its current employees, which has eliminated imbalances in job responsibilities and treatment.

JX Metals raised the mandatory retirement age from 60 to 65 and applies the same salary increases and promotion system for rehired retirees as it does for general employees.

Creation of Local Jobs

The Group is actively engaged in employing local staff at our overseas business sites.

Number of Locally Hired Staff at Overseas Sites (Fiscal 2022)

(Persons)

ENEOS	1,160
JX Nippon Oil & Gas Exploration	337
JX Metals	3,137
Total	4,634

Ikuboss Corporate Alliance Membership and Activities

ENEOS has been a member of the Ikuboss Corporate Alliance*, established by NPO Fathering Japan, since fiscal 2017. Within the company, we are sharing the ideal attributes for supervisors required in an increasingly diverse workplace and pursuing various initiatives to develop suitable human resources.

In fiscal 2022, we held diversity management training for managerial staff at the team leader level and above, including officers. The curriculum was designed to instill the knowledge and awareness of diversity management required of managerial staff from a standpoint of uniting subordinates with various attributes and making them the underlying strength of the organization. Voluntary training was also conducted as a follow-up for the participants in the training. The participants brought their own workplace issues and awareness to the table, and each participant shared their thoughts and opinions.

Main Points

Diversity management training (e-learning) for all managerial staff

- Enhancing the strengths of subordinates
- Preparedness as a supervisor
- Elimination of time wasting
- Enhancing organizational strengths
- Employee awareness

Voluntary diversity management training

- Dealing with unconscious bias
- Sharing of problem awareness in the workplace and group discussions

* An "ikuboss" is a boss (executive or manager) who thinks about the work-life balance of staff under his or her supervision. Ikubosses support the careers and lives of their staff, while delivering results to the organization and enjoying their own work and private lives. The Ikuboss Corporate Alliance is a network of companies that are actively working to change the mindsets of their management staff as part of their efforts to foster ikubosses in this new age.

ENEOS Ikuboss Declaration

1. We will work to reduce total annual working hours to enable our entire workforce to reach their full potential despite time constraints due to life events.
2. We will promote diversity, equity, and inclusion centered on the advancement of women in the workplace in order to pursue business reforms under a flexible mindset.
3. We value work-life balance and will support bosses who actively enjoy life and encourage those around them to do the same.
4. We will foster Ikubosses as drivers of these initiatives.

Initiatives for Sexual Minorities

The entire Group is working to foster an organizational culture that correctly understands sexual minorities and accepts their individuality. In fiscal 2022, we published the Workplace Support Guidebook for Sexual Minorities and set up a dedicated in-house consultation contact point.

For example, ENEOS conducts e-learning for all employees as part of its human rights awareness training. We also have a consultation contact point for sexual minorities. In fiscal 2022, we strengthened our internal support system by forming an in-house support group called ENEOS ALLY to show understanding for the values and conduct of sexual minorities.

In November 2022, as in the previous year, work with Pride* awarded ENEOS the Gold Award, their highest honor, based on their "PRIDE Index," an evaluation index on programs related to sexual minorities within businesses and organizations.

* A private organization that supports the promotion and instillment of diversity management concerning sexual minorities within business organizations.



Raising Awareness among Employees

We conduct e-learning to inform and raise awareness among employees about the importance of diversity, equity, and inclusion.

Publication of Women's Empowerment Newsletter

ENEOS publishes the Women's Empowerment Newsletter for its manufacturing sites in order to make diversity, equity, and inclusion a more familiar topic to all employees. In fiscal 2022, the newsletter featured articles on topics such as the advancement of women in the workplace, the promotion of diversity, equity, and inclusion, and networking sessions held for female operators working at manufacturing sites.

Engagement Survey

ENEOS conducted an engagement survey in fiscal 2022 with the aim of improving employee engagement through the visualization and improvement of issues and problems between the company and employees. In this process, we also checked motivation to work and demonstrate one's abilities, career perception, and the status of diversity, equity, and inclusion. Findings from the survey are now being used to consider subsequent measures.

JX Nippon Oil & Gas Exploration plans to conduct an engagement survey in fiscal 2023.

JX Metals conducted an employee awareness survey in fiscal 2022, which it will continue to conduct once every two years.

Work-Life Management

In accordance with the basic approach below, the Group aims to reduce total annual working hours and encourage the taking of annual paid leave to increase the motivation and creativity of each and every employee and enable them to maximize their abilities.

Work-Life Management Guidelines

- To allow adequate time for each and every employee to achieve a good balance between work and private life, we promote the reduction of total annual working hours and encourage the taking of annual paid leave by improving productivity and workflow.
- We work to ensure the establishment and utilization of effective human resource systems and programs, so that even employees limited in their workstyles by circumstances such as childcare and family care can achieve sustainable career development and performance.
- We raise employee awareness to promote understanding of the importance of work-life management.

Proper Management of Total Annual Working Hours

The Group defines those regulations related to Japan's Labor Standard Act, such as working hours, rest periods, days off, and leave, as human resource regulations.

We have developed a mechanism for the proper calculation and management of working hours in order to reduce total annual working hours (reduce overtime work and encourage the taking of annual paid leave), including for managerial staff.

1. Prevention of prolonged working hours
Implement Action 5+, an internal program that prohibits working on Sundays and between the hours of 10 p.m. and 6 a.m. IT systems issue reminders to those working prolonged hours and their supervisors. Additionally, robotic process automation (RPA) is used to automatically aggregate data on working hours and distribute it to the relevant human resources staff at all business sites daily.
2. Visualization of overtime hours
Post the working hours of all workplaces monthly on our intranet.
3. Training to encourage changes in mindset/behavior
Hold training sessions for managers at the deputy general manager level on closely managing working hours in their organizations. Implement e-learning for managers at the section manager level and below and non-managerial employees on working hours and rest periods based on the Labor Standards Act.

Encouraging Employees to Take Annual Paid Leave

The Group promotes various initiatives at our Group companies to encourage employees to take annual paid leave.

Major Measures

1. Formulation of plans for taking annual paid leave: At the start of each year, each employee draws up a schedule for taking paid leave for the year.
2. Designation of first extended holiday (five consecutive days or more) and second extended holiday (three consecutive days or more): Employees are encouraged to designate two extended holidays for the year using their annual paid leave.
3. Designation of memorial day (one day per year): Fostering a culture where employees set one day a year of their choice to take annual paid leave.
4. Designation of days where employees are encouraged to take annual paid leave (around 2 days/year): The Company designates weekdays, adjacent to national holidays, when employees are encouraged to take annual paid leave.
5. Availability of annual paid leave in half-day increments: Encourages flexible use of annual paid leave.
6. Managerial staff serve as role models in actively taking annual paid leave.

Status of Annual Paid Leave in Fiscal 2022

Number of days granted	22.0
Number of days taken	19.5
Usage rate	88.8%

Note:

Data from ENEOS Holdings and principal operating companies.

Review of Operational Efficiency and Unnecessarily High Quality of Work

By promoting vigorous workstyles and work-life management through workstyle reforms, ENEOS Holdings and ENEOS are working to secure and develop talent as well as enable employees to engage in higher-value-added work.

Specifically, our initiatives target work efficiency and the maximization of results through a best mix of on-site work and telework (working from home). To this end, when delegating work to others or when starting one's own work, we encourage employees to mutually clarify deadlines, workloads, and work responsibilities. In addition, we previously required employees using telework to come to the workplace at least one day per week, but we have eliminated this requirement to encourage more autonomous workstyles.

Major Systems for Promoting Work-Life Management

The Group has developed systems to promote work-life management at Group companies.

Systems Introduced in Fiscal 2022

Increased number of paid leave days for menstrual leave, allowed in half-day increments

In order to create an environment in which women can play an even more active role, ENEOS Holdings and ENEOS have set the number of days of paid leave permitted for menstrual leave at three days per time, which can now be taken in half-day increments.

Major Systems for Work-Life Management at Group Companies

	System	Implemented at
Childbirth/ Childcare	Special time off for spouse's childbirth (paid)	ENEOS Holdings, ENEOS, JX Nippon Oil & Gas Exploration, JX Metals
	Childcare leave (until the child reaches the age of 2; first 14 days are paid)	ENEOS Holdings, ENEOS, JX Nippon Oil & Gas Exploration, JX Metals (unpaid*)
	Time off for child rearing (paid)	ENEOS Holdings, ENEOS, JX Nippon Oil & Gas Exploration
	Time off to care for an ill child (paid)	ENEOS Holdings, ENEOS (taken in 1-hour increments), JX Nippon Oil & Gas Exploration (taken in 1-hour increments), JX Metals (unpaid*)

Childbirth/ Childcare	Time off for expectant mothers to receive health guidance (paid)	ENEOS Holdings, ENEOS, JX Nippon Oil & Gas Exploration
	Time off for childcare (paid)	ENEOS Holdings, ENEOS, JX Nippon Oil & Gas Exploration, JX Metals (unpaid*)
	Childcare leave benefit	ENEOS
	Support for babysitter use	ENEOS, JX Metals
	Childcare subsidies	ENEOS, JX Metals
	Daycare at business sites	ENEOS Holdings, ENEOS, JX Nippon Oil & Gas Exploration, JX Metals
	Counseling services for pregnancy, childbirth and childcare	ENEOS Holdings, ENEOS, JX Nippon Oil & Gas Exploration, JX Metals
	Return-to-work grant	JX Metals
	Childcare concierge service	JX Metals
Family care	Family care leave (730 days; first 14 days are paid)	ENEOS Holdings, ENEOS, JX Nippon Oil & Gas Exploration (365 days; first 14 days are paid), JX Metals (unpaid*)
	Time off for family care (paid)	ENEOS Holdings, ENEOS (taken in 1-hour increments), JX Nippon Oil & Gas Exploration (taken in 1-hour increments), JX Metals (unpaid*)
	Family care leave benefit/allowance	ENEOS, JX Metals
	Home helper subsidies	ENEOS, JX Metals
	Family care subsidies	ENEOS, JX Metals
	Telephone family care consultation service	ENEOS Holdings, ENEOS, JX Nippon Oil & Gas Exploration, JX Metals
	Re-hiring system for retirement due to family care	JX Nippon Oil & Gas Exploration
General	Telework (working from home) system	ENEOS Holdings, ENEOS, JX Nippon Oil & Gas Exploration, JX Metals
	Flextime system	ENEOS Holdings, ENEOS, JX Nippon Oil & Gas Exploration, JX Metals
	Reduced work hours system	ENEOS Holdings, ENEOS, JX Nippon Oil & Gas Exploration, JX Metals
	Study abroad (at own expense) leave of absence system	ENEOS
	Spouse accompaniment leave of absence (retirement) system	ENEOS Holdings, ENEOS
	Spouse accompaniment job transfer system	ENEOS Holdings, ENEOS
	Job transfer deferment system	ENEOS Holdings, ENEOS
	Leave system for supporting continuation of career	JX Nippon Oil & Gas Exploration
	Reduced work days system (employees re-hired after mandatory retirement)	JX Nippon Oil & Gas Exploration
	Cumulative annual paid leave	JX Metals
	Return-to-work system	JX Metals

Notes:

Data from ENEOS Holdings and principal operating companies.
The systems listed above are company systems, which are separate from public systems.

* Accumulated days of annual paid leave can also be used to take leave for family care and childcare (paid leave).

Utilization of Major Systems in Fiscal 2022

Number of employees taking childcare leave	357 (of which 316 are male)
Percentage of male employees taking childcare leave	77.9%
Percentage of employees returning to work after taking childbirth or childcare leave	100%
Retention rate 12 months after returning to work	97.4%
Number of employees taking family care leave	9

Note:

Data from ENEOS Holdings and principal operating companies.

Telework

ENEOS Holdings and ENEOS have introduced a telework system to enable employees to work in a variety of ways that take into account their individual circumstances. We are also promoting telework, and we give employees the option of using both telework and office work as they see fit to maintain and improve individual and organizational productivity. Currently, the percentage of head office staff working at the office is around 50%.

Shareholding Association System

The ENEOS Group has established an employee shareholding system to help employees build their wealth. Through the shareholding association, employees of Group companies can acquire shares of ENEOS Holdings.

Quality

Basic Approach

The ENEOS Group believes that the provision of high-quality, safe, and reliable products and services that provide customer satisfaction and the provision of accurate and easy-to-understand information are important elements in gaining the trust of our customers and achieving sustainable growth. Based on this approach, we have stipulated basic principles on quality in our Group Code of Conduct.

Each Group company has established its own quality management policies according to the nature of its business and works to continuously improve quality from a customer-oriented perspective based on these policies.

ENEOS Group Code of Conduct (excerpt)

6. Product and service quality

- (1) We always conduct our business activities with a spirit of innovation and a willingness to take on challenges.
- (2) We strive to contribute to the solution of domestic and international social issues and gain customer satisfaction and trust by developing and providing innovative technology and useful products and services.
- (3) We comply with domestic and international standards for the products and services we provide. We perform quality control and risk management, covering areas such as safety, security, environment and health. We also strive to provide a stable supply of goods and services, even in the event of emergencies.
- (4) We always provide our customers with appropriate and clear labels and explanations on our products and services, and we respond promptly and sincerely to customer inquiries.
- (5) In the event of malfunctions in our products or services, we strive to conduct exhaustive investigations and implement measures to prevent recurrence.

Energy Group* Quality Policy

We seek to earn the trust and satisfaction of our customers by adopting a customer-oriented perspective and adhering to the following.

1. Provide products and services that are safe and can be used with peace of mind;
2. Continuously strive to enhance the quality of our products and services; and
3. Provide accurate information that is easy to understand.

* ENEOS and its Group Companies

JX Metals Group Basic Quality Policy

1. Grasp the requirements of customers and society correctly in order to offer products and services that customers can trust and that satisfy their needs.
2. Improve and maintain quality in all processes from development, design, and production to delivery, while paying due attention to safety and environmental conservation.
3. Establish a quality management system, carry out continual improvements, and develop human resources.
4. Comply with all pertinent laws and regulations of Japan and other countries, and provide customers and society with accurate information on quality.

Structure

For information about our structure, see [ESG Management Structure](#).

Within the ENEOS Group, Group companies conduct activities based on their quality policies and regularly oversee, assess, and share information about the status of quality-related initiatives.

Many of our business sites in Japan and overseas (see table below) have obtained ISO 9001 certification, a global standard for quality management systems.

Business Sites with ISO 9001 Certification

ENEOS	Domestic	Head office; Sendai Refinery; Kawasaki Refinery; Negishi Refinery; Sakai Refinery; Mizushima Refinery; Marifu Refinery; Oita Refinery; Yokohama Plant; Wakayama Plant; Sodegaura Terminal; Kashima Refinery, Kashima Oil Co., Ltd.; Osaka International Refining Company, Limited, Chiba Refinery; ENEOS Wakayama Petroleum Refining Co., Ltd.; Sankyo Yuka Kogyo K.K. (head office, refinery); Nihon Gosei Jushi K.K.; ENEOS NUC Corporation (head office, Kawasaki Plant); ENEOS Techno Materials Corporation (head office, Yokohama Plant, Narita Plant); ENEOS LC COMPANY, LIMITED (Resin Sales & Planning Department); ENEOS Materials Corporation (Yokkaichi Plant, Chiba Plant, Kashima Plant)
	Overseas	ENEOS USA Inc.; JX Nippon Oil & Energy Vietnam Co., Ltd.; ENEOS (Thailand) Ltd.; ENEOS (Guangzhou) Lubricants Corporation; PT. JX Nippon Oil & Energy Lubricants Indonesia; Nippon Chemical Texas Inc.
JX Nippon Oil & Gas Exploration	Nakajo Field Office	
JX Metals	Domestic	Isohara Works; Kurami Works; Hitachi Works (Copper Foil Dept.); Ichinoseki Foil Manufacturing Co., Ltd.; Kitaibaraki Precision Co., Ltd.; JX Metals Coil Center Co., Ltd. (Kurami Office, Kawasaki Office); JX Metals Trading Co., Ltd. (Takatsuki Plant); JX Metals Smelting Co., Ltd. (Saganoseki Smelter & Refinery, Hitachi Refinery); JX Metals Resources Exploration & Development Co., Ltd.; JX Metals Precision Technology Co., Ltd. (Esashi Works, Nasu Works, Kakegawa Works); TANIOBIS Japan Co., Ltd. (head office, Mito Plant); Tokyo Denkai Co., Ltd.; Toho Titanium Co., Ltd. (Headquarters, Chigasaki Plant, Hitachi Plant, Yahata Plant, Wakamatsu Plant, Kurobe Plant); Japan Copper Casting Co., Ltd. (Saganoseki Plant); Furuuchi Chemical Corporation
	Overseas	Nippon Mining & Metals (Suzhou) Co., Ltd.; Nikko Fuji Precision (Wuxi) Co., Ltd.; JX Nippon Mining & Metals Dongguan Co., Ltd.; Nikko Metals Taiwan Co., Ltd.; JX Metals Philippines, Inc.; Materials Service Complex Malaysia Sdn. Bhd.; Materials Service Complex Coil Center (Thailand) Co., Ltd.; JX Metals Korea Co., Ltd.; TANIOBIS GmbH (Goslar); TANIOBIS Smelting GmbH & Co. KG (Laufenburg); TANIOBIS Co., Ltd. (Map Ta Phut)
NIPPO	Head office, Hokkaido Branch, Tohoku Branch, Kanto Daiichi Branch, Kanto Daini Branch, Hoku-shinetsu Branch, Chubu Branch, Kansai Branch, Shikoku Branch, Chugoku Branch, Kyushu Branch, Architect Department	

Major Initiatives

Initiatives at Manufacturing Sites

Thorough preventive measures are carried out at the Group's refineries and plants to eliminate quality-related issues and prevent recurrence.

Standardization of Quality Management and Assurance Procedures

ENEOS has established quality assurance procedures for quality assurance systems and operations covering all of our products and services.

In addition, all ENEOS refineries and plants have obtained ISO 9001 certification.

Furthermore, we have developed a proprietary Quality Management System that is specifically focused on requirements for managing the quality of petroleum and petrochemical products, based on ISO 9001. We have implemented this system at all of our refineries and plants, and are carrying out activities to expand it throughout the supply chain.

One of the features of this system is the performance of quality management risk assessments and risk reduction measures to prevent quality-related issues from occurring. Employees learn quality management risk analysis methods, enabling them to identify risks and take appropriate measures to address them, thus contributing to the achievement of proactive, highly effective quality management.

For product quality design and the establishment of manufacturing standards, in addition to fulfilling legal requirements, standard specifications such as those prescribed by JIS, and the contractual requirements of customers, we have developed an extensive database of our abundant experience and knowledge, thus giving due consideration to the prevention of issues in the use of our products by customers and providing reliable, high-quality products.

Information Sharing About Quality Complaints and Issues

Information about quality complaints and issues that have occurred at ENEOS refineries and plants is shared via databases with other refineries and plants, and company-wide measures to prevent recurrence are discussed and implemented, thus contributing to the future prevention of quality-related issues.

Inspection of Quality Management Systems

ENEOS carries out inspections of the quality management systems of its refineries and plants based on the Quality Management System. These inspection activities include internal audits conducted by each plant or refinery and audits implemented by the head office Quality Assurance Department. Inspections identify the strengths and weaknesses of each location, and the results are shared throughout the company, enabling us to strengthen the quality management systems at each site and make further improvements to the Quality Management System.

In the inspection activities conducted in fiscal 2022, we found no irregularities, including irregularities in terms of information and labeling, in product safety and quality in fiscal 2022. We will continue to strengthen our quality assurance systems by utilizing and improving upon the Quality Management System.

Quality Audits

At ENEOS, in accordance with company procedures, each department conducts self-audits, while independent departments that supervise and manage quality assurance perform quality audits. In this way, we conduct regular audits of the quality control work and activities for the products and services of each department. Through these efforts, we strive to properly maintain and manage the quality of products and services while carrying out continuous improvement.

JX Metals has developed an internal quality audit program based on guidelines for conducting internal quality audits and in accordance with management needs and risks. Through this program, the Quality Control Department conducts quality control inspections and each site conducts voluntary inspections. The results of internal quality audits are analyzed and reported to the Quality Management Meeting, which is made up of top management, and are reflected in the continuous improvement of the quality management system.

Quality Control Education

ENEOS systematically conducts training for each department on matters necessary to ensure the quality of its products and services and their continuous improvement, and also provides training on laws, regulations, contracts and internal rules. It also holds training sessions for quality assurance personnel and in-house seminars with highly specialized content, such as compliance with laws and regulations related to chemical substance management, to help promote quality assurance activities.

The JX Metals Group is thoroughly disseminating its Basic Quality Policy through e-learning and other means. It also provides quality control training for all employees to raise the level of quality control. For this quality control training, JX Metals has prepared various training programs, which range from introductory courses to advanced courses according to the level of the participants, and which employees are encouraged to take systematically according to job function and year of employment. These programs have become an established part of employee training.

Initiatives at Distribution Sites

At ENEOS, as part of our quality management efforts at distribution sites, we work with freight companies to ensure that all procedures, from product loading to unloading, are carried out safely and without error.

We are working to prevent accidents through facilities improvements, by continuing with installation of equipment to prevent the mixing of products on tank trucks that transport gasoline, kerosene and diesel, as well as through operational initiatives, such as having both customers and truck drivers present during unloading.

When transporting packaged lubricant products by truck, we work to prevent transport-related issues by having both customers and truck drivers check the destination, product name, packing condition, quantity and appearance during unloading, and also encourage the practice of pointing and calling.

Initiatives at Service Stations

At ENEOS, we work with operators to improve product quality management and customer satisfaction at our service stations.

Product quality management initiatives, including regular inspections of weighing devices, underground tanks and other facilities, are implemented at our service stations. We have also developed a quality management manual to ensure proper day-to-day management to prevent mixing of water and oil products and to improve knowledge and skills in order to ensure quick and appropriate response to product quality issues should they occur.

Initiatives at the Customer Service Center

ENEOS receives valuable feedback from our customers through the ENEOS Customer Service Center. The Center accepts enquiries and complaints about ENEOS by telephone and email, and responses are coordinated with the relevant departments. The Center responds to enquiries with clear, courteous explanations and addresses complaints promptly and in good faith.

The Center shares enquiries and complaints received from customers with the relevant departments via a dedicated IT system to facilitate responses. This dedicated IT system enables the Center to understand the status of responses at any time. If a response is delayed, the system automatically prompts the relevant department to implement a response immediately.

Customer feedback received through the Center is tabulated and analyzed and a report is issued, which is shared with officers and the relevant departments, helping to prevent the recurrence of complaints. In fiscal 2022, we received a total of 24,161 enquiries from customers.

In addition, we have introduced a chatbot service on our website that uses artificial intelligence (AI) to respond to customer inquiries, thereby providing support 24 hours a day, 365 days a year, including outside the business hours of the ENEOS Customer Service Center. To ensure that we provide information that meets customer expectations, we regularly update the responses based on the inquiries received.

Supply Chain Management

Basic Approach

At the ENEOS Group, we work to fulfill our social responsibilities across the entire supply chain by cooperating with suppliers of raw materials, logistics companies, construction companies, sales companies and others involved in our business activities, while carrying out initiatives for compliance, environmental preservation, human rights and labor, and health and safety.

In accordance with this approach, we have established basic principles on procurement in the Group Code of Conduct and the Group CSR Procurement Policy, based on which we are implementing a number of initiatives. Based on the Group Code of Conduct and the Group CSR Procurement Policy, Group companies have established their own procurement guidelines for business partners in accordance with their business characteristics, and carry out their procurement activities accordingly.

ENEOS Group Code of Conduct (excerpt)

3. Applicable Scope of the Code of Conduct

In principle, this Code of Conduct is applicable to all directors, officers and employees who work at ENEOS Holdings, Inc., and its subsidiaries. We also encourage companies that are part of our value chain to comply with this Code of Conduct. These companies include, but are not limited to, suppliers of raw materials, logistics companies, construction companies, and sales companies.

ENEOS Group Procurement Policy

All executives and employees of the ENEOS Group shall comply with this policy when they engage in procuring the goods and services necessary for business operations.

We also request that our suppliers understand this policy and guidelines and cooperate with us in following them.

1. Social Responsibility

The ENEOS Group will conduct procurement activities based on the ENEOS Group Code of Conduct, Human Rights Policy, and other policies in each sector.

2. Selection of Business Partners

When selecting suppliers, the ENEOS Group will make fair and impartial judgments based on respect for human rights principles in Japan and overseas, and consideration for the environment, quality, and delivery times.

3. Mutual Trust

The ENEOS Group emphasizes doing business with suppliers on an equal footing and aims to build mutually trusting relationships.

4. Information Management

The ENEOS Group shall appropriately manage information obtained through its procurement activities.

Procurement Guidelines for Business Partners of Principal Operating Companies

> [ENEOS](#) □

> [JX Metals](#) □

Structure

For information about our structure, see [ESG Management Structure](#).

Material Issues, Plans and Results

Fiscal 2022 Targets, Results and Progress

Evaluation: 😊 Achieved/Steady progress ☹️ Not achieved

Material ESG Issue	Initiative	Target (KPI)	Results/Progress	
Social responsibility in the supply chain	Implementation of CSR procurement surveys	Conduct CSR procurement surveys at overseas sites in addition to domestic sites, where surveys have already been conducted	😊	Implemented

Major Initiatives

CSR Procurement

The Group works with suppliers to promote procurement in which factors such as compliance, environmental impact reduction, human rights and labor, and health and safety are taken into account.

To ensure responsible procurement, employees in charge of procurement receive training to raise their awareness of the ENEOS Group Philosophy, the ENEOS Group Code of Conduct, procurement policies and applicable laws and regulations.

In contracts, which are the basis for purchasing transactions, and in the procurement guidelines for business partners established by each Group company, suppliers are asked to implement initiatives in 12 areas, including compliance, environment and human rights.

In fiscal 2022, based on the results of human rights due diligence and the Corporate Human Rights Benchmark (CHRB) assessment, we continued to focus efforts on “consideration of human rights factors in supplier selection.” For details, see [Human Rights Due Diligence](#).



Training session for procurement partners

CSR Procurement Workflow



Checks at Commencement of Business Relationships with New Suppliers

When selecting a new supplier, the Group first confirms that the supplier has no relationship with anti-social forces. In addition to confirming the supplier’s financial position and performance, we conduct a comprehensive risk assessment by asking the supplier to complete our business partner survey, which includes items related to quality and environmental certifications, as well as ESG risks.

CSR Procurement Survey of Suppliers

The Group conducts CSR procurement surveys of its main suppliers to identify potential risks in the supply chain.

Through this survey, we assess risks related to environmental and social issues (human rights, labor, health and safety, etc.). For suppliers whose responses indicate the presence of risks, we conduct more detailed checks of those risks.

In fiscal 2022, we revised the previous CSR procurement survey. In addition, before conducting CSR procurement surveys, we held briefing sessions for the suppliers to be surveyed. As a result, the response rate from ENEOS’s and JX Metals’ main suppliers exceeded 80%. We also newly established the CSR Procurement Business Partner Audit Procedures. Starting in fiscal 2023, we plan to provide support for improvements and conduct monitoring for suppliers for which risks have been identified.

CSR Procurement Survey Process

1. Selection of main suppliers

We select survey respondents based on our criteria for main suppliers. Main suppliers are selected based on the importance of the transactions in terms of sector*, transaction value, and substitutability, as well as factors such as past CSR procurement survey results, incident history, and ESG risks. In fiscal 2022, only domestic suppliers were subject to the survey.

* Suppliers from which we have ordered manufacturing materials, equipment, and construction.

2. Implementation of CSR procurement survey

We hold briefings on the importance of CSR procurement and our ESG initiatives with the selected suppliers, and then ask them to respond to the CSR procurement survey. The survey consists of 67 questions covering eight categories*: compliance and fair and equitable transactions, provision of products and services, information management, supply chain, environment, human rights and labor, health and safety, and dialogue and cooperation with local communities (see the table below). Items are classified into two categories: those related to the internal management structure, such as the clear documentation of policies and the identification of responsible parties, and those related to the status of activities, mainly those that can be quantified, such as the volumes of contaminated materials discharged and the number of occupational injuries.

* JX Metals’ CSR procurement survey consists of a total of 80 questions covering nine categories, including risk management.

3. Tabulation of survey responses and risk assessment

Survey responses are tabulated and scores are calculated for each question, enabling us to assess the management structure and status of activities of the supplier.

4. Improvement support and monitoring

We ask suppliers for which risks have been identified to submit improvement plans. After that, we monitor the progress of their improvements.

CSR Procurement Survey Composition (Total of 67 Questions)

Category	Item (summary)	Number of survey items	Breakdown of individual items	
Compliance and fair and equitable transactions	1) Thorough compliance 2) Fair and equitable transactions 3) Early detection and prevention of legal violations 4) Protection of intellectual property rights	12 questions	(1) Management structure	7
			(2) Status of activities	5
Provision of products and services	Appropriate provision of products and services	5 questions	(1) Management structure	3
			(2) Status of activities	2
Information management	Appropriate information management and information disclosure	4 questions	(1) Management structure	1
			(2) Status of activities	3
Supply chain	Supply chain management and supervision	1 question	(1) Management structure	1
			(2) Status of activities	-

Category	Item (summary)	Number of survey items	Breakdown of individual items	
Environment	1) Reduction of environmental impacts 2) Reduction of GHG emissions and energy consumption 3) Prevention of pollution, management of chemical substances, and reduction of waste	17 questions	(1) Management structure	6
			(2) Status of activities	11
Human rights and labor	1) Respect for human rights and protection of worker rights 2) Discrimination/harassment in hiring or at work 3) Forced labor and child labor 4) Wages 5) Working hours and leave	19 questions	(1) Management structure	5
			(2) Status of activities	14
Health and safety	Ensuring safety and health enhancement	8 questions	(1) Management structure	3
			(2) Status of activities	5
Dialogue and cooperation with local communities	Dialogue and cooperation with local communities	1 question	(1) Management structure	-
			(2) Status of activities	1

Risk Analysis and Assessment

Risk assessment involves the analysis and assessment of supplier responses to the CSR procurement survey according to four levels of criteria. The following table contains a summary of assessment criteria and ENEOS's response to the assessment findings. Suppliers receiving the lowest assessment of "non-compliant" are identified as "high-risk suppliers" and are subject to intensive follow-up. From fiscal 2022, suppliers who responded that they accept foreign technical intern trainees are also subject to follow-up interviews.

Risk Assessment Criteria and Response

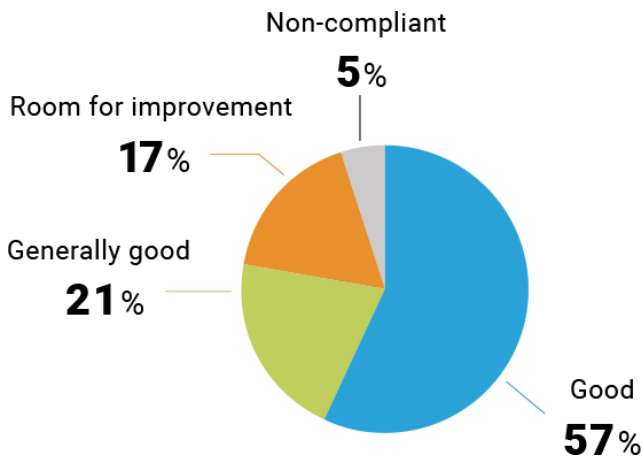
Assessment	Explanation	ENEOS's response
Good	Overall, sufficient measures are being implemented.	Each supplier receives a report on the survey results. Assessment results, including areas for improvement, are communicated to suppliers and information, such as the assumed risks for each category and information on relevant international guidelines, is provided.
Generally good	Measures are being implemented for a relatively large number of items; risk is low.	
Room for improvement	Measures are not being implemented for some items; risk is moderate.	
Non-compliant	Items such as receiving adverse dispositions from government bodies, failing to confirm the facts and implement measures to prevent recurrence of violations, and the occurrence of serious occupational injuries are identified; risk is extremely high.	High-risk supplier. In addition to the response above, issue request for improvement and conduct monitoring, along with individual follow-up.

CSR Procurement Survey Results

Since fiscal 2018, we have selected a total of 1,385 suppliers to complete the CSR procurement survey, with responses received from 1,306. Around 80% of suppliers who completed the survey were assessed as “good” or “generally good.” We also checked for child labor and forced labor, human rights risks of particular focus in the supply chain, but have not found any suppliers of concern in this regard.

Starting in fiscal 2023, we have been strengthening follow-up with suppliers. We are working to support the improvement of suppliers for which risks or concerns have been identified through the survey.

CSR Procurement Survey Results (total of 1,306 suppliers)



Improvement Support and Monitoring

In fiscal 2023, for suppliers who were assessed as “generally good,” “room for improvement,” or “non-compliant” based on the results of the survey, we plan to share the survey results, conduct additional interviews and clarify concerns, and then conduct follow-up, such as on-site surveys and discussions on improvement plans as necessary. For suppliers who have been assessed as having potential risks, we provide support so they can improve their initiatives.

Initiatives for Foreign Technical Intern Trainees

According to survey results, we conduct additional interviews with suppliers who responded that they employ foreign technical intern trainees to confirm that there are no issues with the legal compliance and employment status of the supervising organization and the host company.

Membership in Sedex and EcoVadis

In fiscal 2019, ENEOS became a member of both Sedex and EcoVadis, ratings providers for supply chain sustainability.

Confronting the Issue of Conflict Minerals

Industry organizations relevant to the JX Metals Group (including the LBMA¹, LPPM², and RBA³) have established monitoring programs for eliminating conflict minerals in accordance with international trends regarding information disclosure and calls from stakeholders to strengthen monitoring. Under these programs, companies are requested to carry out surveys and undergo external audits by third-party organizations.

Accordingly, the JX Metals Group has included a clause on the exclusion of conflict minerals in its Basic Procurement Policy, and has established and operates management systems to appropriately address this issue.

- 1 London Bullion Market Association. An industry association composed of financial institutions and others that deal in gold and silver ingot. Inclusion on this association's Good Delivery List is viewed as a guarantee of high quality and reliability.
- 2 London Platinum and Palladium Market. An industry association composed of financial institutions and others that deal in platinum and palladium ingot. Inclusion on this association's Good Delivery List is viewed as a guarantee of high quality and reliability.
- 3 Responsible Business Alliance. An industry coalition for ensuring responsible conduct in supply chains within the electronics industry.

Initiatives for the Copper, Gold, Silver, Platinum and Palladium Supply Chains

JX Metals Smelting, a producer of gold, silver, platinum and palladium ingot, has established and operates management systems for supply chain due diligence, which includes the following requirements.

1. Performance of supply chain due diligence before the purchase of mineral raw materials (confirmation of material source origin, performance of risk assessment, item confirmation upon delivery, distribution route confirmation, retention of relevant documents, etc.)
2. Notification to suppliers of the policy on the exclusion of conflict minerals
3. Implementation of in-house training on supply chain due diligence and its background
4. Implementation of internal audits and undergoing external audits

Operation of supply chain due diligence is audited by a third-party organization specified by the LBMA and the LPPM, and the results are reported to the LBMA and the LPPM. As a result of following these procedures, JX Metals Smelting's gold, silver, platinum and palladium ingot are included on the Good Delivery Lists of the LBMA and the LPPM. Gold is also included on the RMAP Conformant Smelters list established by the RBA and GeSI¹. This indicates that we are taking appropriate steps for the elimination of conflict minerals.

For copper ingot, we have established a management system for supply chain due diligence that includes checks on the sources of raw materials, risk assessment, and checks of distribution channels. This system began operation in fiscal 2022. The status of its operation is monitored through external audits by a third-party organization through the procedures for obtaining the Copper Mark² certification.

- 1 Global Enabling Sustainability Initiative (European ICT industry organization). In light of the high risk of conflict minerals being used in electronics and telecommunications equipment, the RBA and GeSI, which are related to the ICT industry, have collaborated to establish a certification program for the Responsible Minerals Assurance Process (RMAP).
- 2 The Copper Mark: A framework established in 2019 to demonstrate the responsible production of the copper industry and its contribution to the SDGs advocated by the United Nations. The Copper Mark certification is granted after independent third-party organization assessments covering compliance with environmental, human rights, community, governance, and other standards. Even after certification, performance is assessed every three years.

Initiatives for the Tantalum Supply Chain

TANIOBIS GmbH, a producer of tantalum powder, implements a strict program of purchasing checks based on OECD Due Diligence Guidance for procuring raw materials from conflict-affected and high-risk areas. For example, TANIOBIS purchases materials with the ITSCI* guarantee of non-involvement in human rights violations. As a result of these initiatives, TANIOBIS has been included on the RMAP Conformant Smelters list in recognition that TANIOBIS is taking proper measures to exclude conflict minerals.

Since June 2019, moreover, TANIOBIS has been implementing a supply chain due diligence system similar to the ITSCI by means of the Better Sourcing Program (BSP) made available by the RCS Global Group, a global responsible sourcing auditor for the raw materials supply chain.

* ITRI Tin Supply Chain Initiative. An initiative of the International Tin Research Institute (ITRI), a global industry organization. It aims to promote implementation of due diligence from mine to smelter as well as procurement of minerals from mines in conflict-affected areas that do not benefit armed groups, based on OECD guidelines.

Initiatives with Distribution Companies

ENEOS shares its environmental and safety policies and targets for each fiscal year with the contract transport providers responsible for transporting its products in an effort to increase awareness of the environment and safety.

We also promote driving in an eco-friendly manner by holding the Ecodrive & Safety Workshop in partnership with vehicle manufacturers and encouraging participation in the Ecodrive Activity Concours hosted by an external organization. In addition, we are actively engaged in safety awareness activities, such as holding a safe delivery contest to improve tank truck drivers' driving techniques and unloading work, and sharing good practices of transport companies at meetings of safety managers held every autumn.

JX Metals is working on an appropriate response to the review of contracts with logistics companies, such as separating driving from non-driving ancillary work and considering and introducing fuel surcharges, to reconfirm its compliance with labor-related laws and regulations and laws and regulations related to the motor truck transportation business.

Through our initiatives to achieve sustainable logistics and distribution, we seek to increase the productivity of the entire supply chain, thus contributing to the fulfillment of our responsibility to provide a stable supply of energy and materials.

Support for the White Logistics Movement

ENEOS has supported the White Logistics movement since 2019 and JX Nippon Mining & Metals has supported the movement since 2020. This movement seeks to improve the productivity of truck transport, increase the efficiency of logistics and distribution, and ensure comfortable work environments for women and seniors. Both companies have submitted voluntary action declarations under this movement.

ENEOS' Voluntary Action Declaration and Initiatives

1. Proposals and cooperation for improving logistics and distribution
2. Separation of trunk route transport and collection/delivery transport
3. Encouraging use of expressways
4. Deliveries that avoid peak rush hour
5. Continuation of fuel surcharges
6. Suspending or stopping transport operations during extreme weather

JX Metals' Voluntary Action Declaration and Initiatives

1. Proposals and cooperation for improving logistics and distribution
2. Separation of driving from other tasks
3. Consideration of modal shift for CO₂ reduction
4. Agreements on fuel surcharges
5. Consideration of legal compliance in selection of contract counterparties
6. Safety measures during loading and unloading
7. Suspending or stopping transport operations during extreme weather

Social Contribution

Basic Approach

The ENEOS Group believes that promoting dialogue, cooperation and collaboration in the areas where we conduct our business operations to build robust relationships of trust with local communities is an important element in the continuation of our business activities and the realization of sustainable development. Based on this belief, we have established basic principles on social contribution in the Group Code of Conduct. We are also contributing to the economic and social development of the communities in which we operate, both in Japan and overseas, by utilizing local companies, employing local staff and carrying out a variety of other activities.

ENEOS Group Code of Conduct (excerpt)

13. Contribution to the development of civil society

- (1) We respect the environment, culture and customs in all of our business locations, and communicate, cooperate and collaborate with local communities, local governments, and civic groups, among others.
- (2) We contribute to the development of civil society through social contribution activities.

Structure

For information about our structure, see [ESG Management Structure](#).

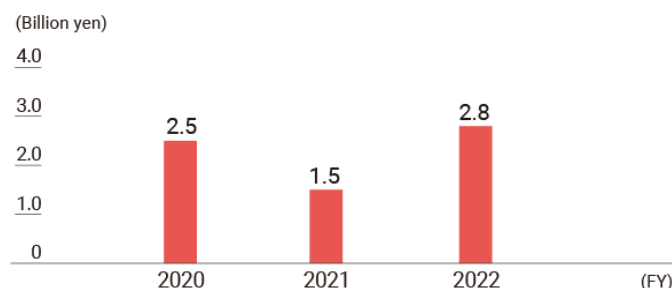
Results of Activities

Expenditures for Social Contribution Activities

In fiscal 2022, the total expenditure by the Group for the implementation of social contribution activities in Japan and overseas, plus donations of money and goods, was approximately 2.8 billion yen.

While actively engaging in dialogue with local communities, we will continue to implement social contribution initiatives, which include activities involving the entire Group and activities unique to each Group company.

Expenditures for Social Contribution Activities



Notes:

Figures indicate the sum of expenditures for social contribution activities and donations of money.

A different calculation method was used starting in fiscal 2021. As a result, results from past fiscal years have also been revised.

Major Initiatives

Initiatives in Vietnam

The Group continues to support the development of youth in Vietnam, one of the countries where we have operations, through a variety of social contribution activities.

Support for Construction of School Buildings

To date, JX Nippon Oil & Gas Exploration has provided donations in Vietnam for the construction of schools and supported vocational training facilities to enable young people with disabilities resulting from the effects of defoliants to participate in society. The company also continues to provide these schools with teaching materials, equipment and supplies.

Support for Construction of School Buildings

2002	Muong Phang Elementary School in Dien Bien Province
2005	Vocational training facility in Quang Tri Province
2007	Thanh Tuyen Junior High School in Ha Nam Province
2008	Binh An Junior High School in Ha Tinh Province
2009	Trieu Dai Elementary School in Quang Tri Province
2011	Vocational training facility in Ha Tinh Province
2012	Nguyen Binh Khiem High School in Hai Phong City
2013	Nguyen Truong To Elementary School in Ba Ria Vung Tau Province
2014	Trieu Dai Elementary School in Quang Tri Province (additional classrooms)
2015	Xuat Tac Kindergarten in Thai Nguyen Province
2016	Hoa Mai Kindergarten in Ba Ria Vung Tau Province
2017	Nguyen Ba Ngoc Elementary School in Dak Nong Province
2018	Trieu Trung Junior High School in Quang Tri Province

Educational Support

Since 2006, JX Nippon Oil & Gas Exploration has provided scholarships to students in need through the Ho Chi Minh Association for Education Promotion, a public institution working to improve education in Vietnam. In 2022, scholarships were awarded to 34 students.

We have also made a donation of 100,000 US dollars to PetroVietnam University, established in 2011 by PetroVietnam, the state oil company of Vietnam, as a petroleum university whose goal is to develop human resources to lead the petroleum industry. Since then, we have continued to provide scholarships and funding for operations, hosted interns from the university, and provided guidance for the preparation of graduation theses.



Graduation and new school term commencement ceremony at PetroVietnam University (fiscal 2022)

Bouquet of Children's Stories Contest by ENEOS and MOGU

ENEOS Group company ENEOS Vietnam Co., Ltd. (ENEV) sponsors the Bouquet of Children's Stories Contest by ENEOS and MOGU, a contest for children's stories that began in 2018 as an event commemorating the 45th anniversary of diplomatic relations between Japan and Vietnam. The contest, which is the first children's story creation contest in Vietnam, was held for the fifth time in fiscal 2022.

In fiscal 2022, 3,067 submissions were received across the three categories of elementary school, junior high school, and general. In the general category, Ms. Dao Trung Uyen (37) won the Grand Prize for *The First Role of Turtle* and *Little Cloud Finds a Place to Cry*.

A Bouquet of Children's Stories, a compilation of all 24 award-winning stories, is sold together with a Vietnamese translation of *A Bouquet of Children's Stories* from the ENEOS Children's Story Award. Proceeds from sales are donated to fund picture book promotion activities.

The year 2023 marks the 50th anniversary of the establishment of diplomatic ties between Japan and Vietnam. ENEV is committed to supporting the growth of picture books in order to foster healthy minds among children in Japan and Vietnam.



Awards ceremony for the children's story contest

Initiatives in Malaysia

As a project operator in Malaysia, JX Nippon Oil & Gas Exploration implements a variety of social contribution activities, and also provides support for local cultural and sporting events.

In fiscal 2022, our activities included making donations to communities affected by floods and visiting children hospitalized in the pediatric ward of Miri Hospital.

Initiatives in Japan

Baseball Classes and Basketball Clinics

The Group runs baseball classes and basketball clinics throughout Japan. The sessions target elementary and junior high school students, and are coached by active players as well as retired players from the ENEOS baseball team and the ENEOS Sunflowers women's basketball team.

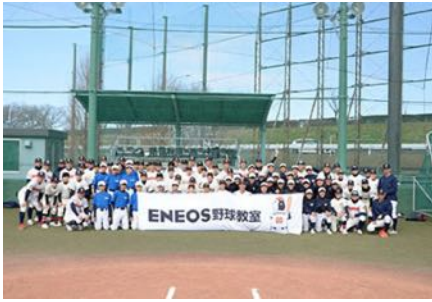
Baseball Classes

In fiscal 2022, we held a total of eight on-site baseball classes for elementary, junior high, and high school students, with 564 participants.

Baseball team managers, coaches, and current players served as instructors, and provided technical guidance to schoolchildren, junior high school students, and female baseball players, while talking about their own experiences as elementary school students. As a new initiative, we held baseball consultation meetings for coaches and guardians, where instructors offered advice based on their own experiences in response to questions on topics such as preparing for coaching and meal planning at home.

Basketball Clinics

In fiscal 2022, we expanded our basketball clinics nationwide and held 77 on-site clinics for elementary, junior high, and high school students, with measures to prevent the spread of COVID-19 in place. Online clinics were held five times for anyone interested in joining from anywhere in Japan. A total of 82 clinics were held, with 2,554 participants.



Baseball class (fiscal 2022)



Basketball clinic (fiscal 2022)

Support for Disabled Sports

Sponsorship for the Japan Wheelchair Basketball Federation

ENEOS has had a women's basketball team for many years. With the aim of promoting sports through basketball and fostering the next generation, we have sponsored the Japan Wheelchair Basketball Federation since 2006.

We will continue to support the activities of the federation through activities such as cheering for the athletes and providing operational support at the tournaments.

Sponsorship for the Japan Deaf Basketball Association

ENEOS has had a women's basketball team for many years. With the aim of promoting sports through basketball and fostering the next generation, we have been sponsoring the Japan Deaf Basketball Association since 2019.

We will continue to support the activities of the association through activities such as cheering for the athletes and providing operational support at the tournaments.

Sponsorship for the Japan Dream Baseball League

ENEOS has had an amateur baseball team for many years. With the aim of contributing to the promotion of sports and the development of the next generation through baseball, we have sponsored the Japan Dream Baseball League since 2007.

One of the league's tournaments, the National Dream Baseball Tournament, held since 1993, is the largest baseball tournament for people with disabilities in Japan. In fiscal 2022, 16 teams selected from among the 38 member teams based on their regional qualifying results competed for the national championship. ENEOS employees and youth baseball team members, numbering around 100 people, attended the games to cheer for the players.



A group of supporters cheering for the players

Sponsorship Agreements with the Japanese Para Sports Association and the Japanese Paralympic Committee

ENEOS signed sponsorship agreements with the Japanese Para Sports Association and the Japanese Paralympic Committee (contract period: June 2022 to December 31, 2024) with the aim of supporting the growth of para-sports and the development of para-athletes in their activities worldwide.

In connection with these sponsorship agreements, we have entered into partnership and sponsorship agreements with para-sports organizations and para-athletes as shown in the table below (contract period: March 2023 to March 2025).

Partnership/Sponsorship Agreements with Para-Sports Organizations and Para-Athletes

Group/Athlete	Contract program
Japan Para Athletics	Official partner
Japan Wheelchair Tennis Association	Official partner
Otani Momoko (wheelchair tennis)	Individual sponsor
Chokai Renshi (wheelchair basketball)	Individual sponsor
KANAGAWA VANGUARDS (wheelchair basketball team of which Chokai Renshi is a member)	Official partner

ENEOS Children’s Story Award

The ENEOS Children’s Story Award is a contest, open to the general public, for recognizing the best works from among submissions of original children’s literature with the theme “heart-to-heart.” The awards have been presented by the Group since 1970. Fiscal 2022 was the 53rd and final year of the awards.

From fiscal 2023 onward, we are considering starting new social contribution activities with environmental themes.



A Bouquet of Children’s Stories (No. 53) (final edition)

Scholarship Support for Children Living in Child Welfare Facilities

The ENEOS Group sells copies of *A Bouquet of Children’s Stories*, a compilation of works awarded the ENEOS Children’s Story Award, to raise money for charity. All proceeds are donated to the ENEOS Scholarship Program, established by the Japan National Council of Social Welfare (JNCSSW), to be used as financial assistance when children living in child welfare facilities enroll in university or other institutions of higher education.

In fiscal 2022, support was provided to 751 children, bringing the total number of recipients since the scholarship program was established in fiscal 2003 to 8,784. Although fiscal 2022 was the final year of the ENEOS Children’s Story Award, the scholarship program will continue in fiscal 2023 and beyond after a partial review.

ENEOS Children’s Culture Award and Music Awards

The ENEOS Children’s Culture Award (founded in 1966) and the ENEOS Music Awards (founded in 1971) are presented by the ENEOS Group to recognize contributions to the development and improvement of music and children’s culture in Japan, and to encourage future achievements. Fiscal 2022 was the final year for these activities.

From fiscal 2023 onward, we are considering starting new social contribution activities with environmental themes.



Awards ceremony for the 57th ENEOS Children’s Culture Award and the 52nd ENEOS Music Awards

Performances by Recipient of the ENEOS Children’s Culture Award

ENEOS presents outreach performances featuring performers from the Kazenoko Theatre Company, recipient of the 11th ENEOS Children’s Culture Award in 1976, to provide children living in the communities where we operate with opportunities to nurture a rich sensitivity and imagination. In fiscal 2022, we held a total of six performances at four locations (Sakai, Wakayama, Mizushima, and Marifu), bringing inspiration and excitement to many children.



Outreach performance by Kazenoko Theatre Company

Copper Study Workshops

JX Metals actively implements next-generation education activities for children, the future leaders of society, to learn about the importance, attractiveness and possibilities of nonferrous metals, including copper. JX Metals supports the Shiba Nature University, a program for elementary school students hosted by the Shiba Regional City Office of Minato City, and as part of this effort, we held a copper study workshop in July 2023. It was the fifth time the workshop had been held. On the day of the workshop, a total of 40 people, comprising 19 groups of students and their guardians, took part in quizzes and watched videos about copper, and also participated in an experiment on cleaning 10-yen coins with seasonings and an experiment on heat conduction using different types of metal rods to learn about the characteristics of copper and how it is useful in our lives. We also took the opportunity to show the students the Square Lab, where we showcase our technology and products.



Copper study workshop

JX Nippon Oil & Gas Exploration International Student Scholarship

Since launching the JX Nippon Oil & Gas Exploration International Student Scholarship for international students studying in Japan in fiscal 2015, JX Nippon Oil & Gas Exploration has continued to assist international students from Papua New Guinea and Indonesia, which are involved in the company’s crude oil and LNG production business.

Support for the ENEOS TonenGeneral Research/Development Encouragement & Scholarship Foundation

Through the ENEOS TonenGeneral Research/Development Encouragement & Scholarship Foundation, ENEOS presents scholarships to undergraduate and graduate students studying science and technology and provides research grants to young researchers in order to contribute to the development of industry and industrial technologies.

Support for the Tonen International Scholarship Foundation

Through the Tonen International Scholarship Foundation, ENEOS provides scholarships for international students studying at Japanese graduate schools as a way to promote friendship between Japan and other countries and contribute to greater society.

Forest Stewardship Activities in ENEOS-no-Mori and Other Places

The Group is involved in various forest stewardship activities at each of its Group companies. ENEOS carries out tree thinning, removal of undergrowth, and other forest stewardship activities at six ENEOS Forests (total area: 24.88 hectares) across Japan in partnership with local governments, the National Land Afforestation Promotion Organization and others. While opportunities for these activities have decreased due to the COVID-19 pandemic, a total of 331 employees and their families participated in fiscal 2022.

Since 1998, JX Nippon Oil & Gas Exploration has worked to preserve the pine forest (coastal shelter forest) located on and around the site of its Nakajo Field Office in Niigata Prefecture. As in fiscal 2021, in fiscal 2022, which marked the 12th anniversary of JX Nakajo Forest, activities were scaled back to prevent the spread of COVID-19. Participation by directors, employees and their families, and local residents was suspended, and only Nakajo staff (32 participants) took part, with due attention to safety.

JX Metals promotes reforestation activities in cooperation with local forestry associations and other groups, especially at the sites of its closed mines.

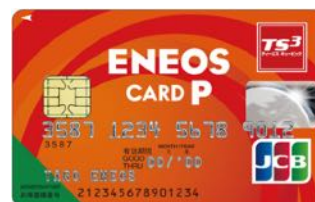


ENEOS-no-Mori forest stewardship activity

Promoting Afforestation through the ENEOS Credit Card

Since ENEOS credit cards were first issued in October 2001, ENEOS has donated part of the spending on these cards at ENEOS service stations to the National Land Afforestation Promotion Organization. These funds are being used to help support a host of environmental programs run by the organization, including human resources development for afforestation, afforestation work, the revitalization of tropical forests and the prevention of desertification.

In fiscal 2022, approximately 50 million yen were donated, bringing total donations through this initiative to about 690 million yen.



ENEOS credit card

Rural Community Support Team

The ENEOS Oita Refinery has been registered with Oita Prefecture's rural community support team program since fiscal 2009. This program supports small communities that find it difficult to mow grass along roadways or run local festivals due to shortages of residents resulting from aging demographics and depopulation.

As part of this program, employees take part in the festival of Yurugi Shrine, located in the Kujuno area of Taketa City. Due to depopulation and the aging of residents, the community has difficulty finding people to carry the mikoshi (portable shrine) for this festival, which has a history of almost 1,000 years. The support team has been welcomed by the local community for making it possible to pass down this important tradition.

This event was cancelled in fiscal 2022 to prevent the spread of COVID-19.



Employees carrying a mikoshi (portable shrine) (fiscal 2019)

Joint Disaster Drills with Local Governments

At ENEOS oil refineries and depots, disaster drills are conducted in collaboration with local governments, fire departments and other relevant groups, using scenarios of a major disaster or an accident at a refinery.

In addition to carrying out practical drills to strengthen systems for cooperation in the event of a disaster, the company works to ensure that local residents can live their lives with peace of mind.

Dialogue with Local Communities

The Group has established venues for regularly interacting with local communities (local governments, schools, local community members, etc.), including tours of refineries and plants, dialogue sessions and networking sessions, in order to continue activities rooted in the community. In dialogue sessions with local communities, we explain the Group’s environmental and safety initiatives, and through regular dialogue, we strive to deepen mutual understanding. In addition, we disseminate necessary information in a timely manner through community newsletters and other means in an effort to ensure mutual understanding and build relationships of trust with local communities.

Introduction of Volunteer Activity Leave System

ENEOS has established a special leave system that allows employees to take up to three days off during the year to participate in company-approved volunteer activities (system introduced in April 2019).

In fiscal 2022, a total of 7 employees took the leave for a total of 10 days off.

Support for Disaster-Affected Areas

The Group supports communities and persons affected by major disasters.

In fiscal 2022, we donated 10 million yen through the Japanese Red Cross Society to support the people and areas affected by the earthquake in Turkey and Syria.

Assistance Provided in Fiscal 2022

February	Donation to support those affected by the earthquake in Turkey and Syria	10 million yen
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Governance

The ENEOS Group works to strengthen corporate governance and promote compliance in order to increase our corporate value through highly transparent management and fair business practices.

Corporate Governance Framework



Compliance



Corporate Governance Framework

Basic Approach

ENEOS Holdings has established the ENEOS Group Philosophy as the foundation for the Group's business activities, and works to realize the Philosophy through the establishment and appropriate execution of corporate governance to achieve sustainable growth and enhance the corporate value of the ENEOS Group over the medium to long term.









Corporate governance of the ENEOS Group is structured and executed as follows.

Basic Policy on Corporate Governance

To achieve sustainable growth and increase the corporate value of the Group over the medium to long term, the Company established the Basic Policy on Corporate Governance of ENEOS Group with the objective of establishing and operating a corporate governance framework for the conduct of transparent, fair, timely, and decisive decision-making in the Group's management.

The policy describes systematically and comprehensively the Group's basic approach to corporate governance as well as its establishment and operation, taking into consideration the Corporate Governance Code established by the Tokyo Stock Exchange.

The policy, published on the Company's website, is our commitment to all stakeholders, including shareholders of ENEOS Holdings, Group customers, business partners, employees, and local communities.

- > [Basic Policy on Corporate Governance of ENEOS Group \(PDF : 305KB\)](#) 
- > [\(Exhibit 1\) ENEOS Group Code of Conduct](#) 
- > [\(Exhibit 2\) Medium-Term Management Plan](#) 
- > [\(Exhibit 3\) Basic Policy on Internal Control System \(PDF : 160KB\)](#) 
- > [\(Exhibit 4\) Standards for Consideration of Independence of Independent Directors \(PDF : 91KB\)](#) 
- > [\(Exhibit 5\) Disclosure Policy \(PDF : 76KB\)](#) 
- > [\(Exhibit 6\) Shareholder Return Policy and Capital Policy \(PDF : 145KB\)](#) 
- > [Corporate Governance Report \(Available in Japanese only\) \(PDF : 277KB\)](#) 

Basic Matters on the Establishment and Operation of Corporate Governance

1. Business management as the holding company

The Company takes charge of formulating the ENEOS Group Philosophy, ENEOS Group Code of Conduct, basic management policies such as medium to long term management plans and budgets (hereinafter referred to as "Basic Management Policies"), allocating management resources and overseeing the management of each subsidiary from the perspective of optimizing the value of ENEOS Group as a whole.

2. Management structure of the Company and the Principal Operating Companies (ENEOS Corporation, JX Nippon Oil & Gas Exploration Corporation, JX Metals Corporation)

In order to establish a group management structure centered on the Energy Business, the Company shall integrate the management of the Company and ENEOS Corporation through such means as concurrently serving as directors/officers, integrated operation of meetings, and merger of administration departments.

JX Nippon Oil & Gas Exploration Corporation and JX Metals Corporation shall respectively establish business execution structure where their autonomy, agility, and independence are further enhanced depending on their business characteristics under the Basic Management Policies specified by the Company.

3. Organization

The Company is a company with audit and supervisory committee.

4. Board of Directors

The Board of Directors of the Company consists of the Chairman, the President, more than one full-time directors, and part-time directors concurrently serving as the top management of each Principal Operating Company and outside directors. With such composition, the Board of Directors of the Company shall manage the Company in accordance with the following policies.

- (1) Focus on deliberation and decision of the Basic Management Policies and oversight of the execution of operations.
- (2) As an effort to improve agility of the execution of operations, delegate part of decision-making on the execution of material operations to the President of the Company.
- (3) With respect to the material matters such as appraisal of return on investment, risks, progress of execution of material operations of the Company and the Principal Operating Companies, the Board of Directors shall receive reports from persons such as the President of the Company and the President of each Principal Operating Company, verify its consistency with the Basic Management Policies and oversee such matters.

5. Audit and Supervisory Committee

- (1) The Audit and Supervisory Committee shall carry out audits with a high degree of effectiveness and objectivity conduct audits in an organized and systematic fashion through appropriate collaboration between the full-time audit and supervisory committee members, who are given the strong power to gather information, and the audit and supervisory committee members who are outside directors, who have a high degree of independence, in addition to a wealth of knowledge and experience.
- (2) The Audit and Supervisory Committee shall oversee the execution of operations through each audit and supervisory committee member exercising the voting right that he or she has as a director at the Board of Directors meetings as well as exercising the right to state his or her opinion on personnel affairs and compensation of directors who are not audit and supervisory committee members.

6. Outside directors

To take advantage of a wealth of knowledge and experience of outside directors and to ensure transparency and objectivity in decision-making, the Company shall take the following measures:

- (1) In determining the Basic Management Policies at the Board of Directors of the Company, request outside directors to be involved, from the stage of consideration and to fully discuss it from multiple points of view; and in decision-making on and overseeing execution of material operations, fully verify its consistency with the Basic Management Policies, taking opinions of outside directors into account; and
- (2) In determining personnel affairs and remuneration of directors at the Board of Directors of the Company, ensure transparency of the decision-making process by consulting with the Nomination Advisory Committee and the Compensation Advisory Committee, a majority of whose members are outside directors, and which are chaired by an outside director.

7. Executive officers and the Executive Council

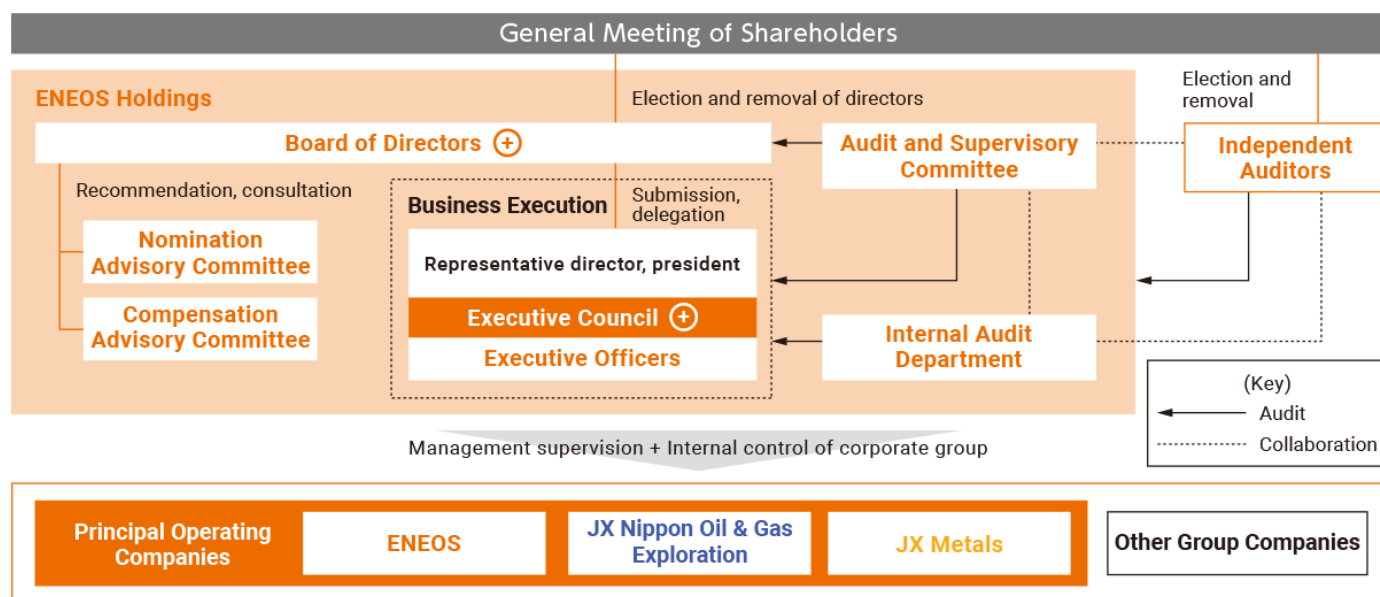
- (1) The Company shall appoint executive officers who execute operations agilely pursuant to a decision of the Board of Directors.
- (2) For the President to make decisions on execution of operations as chief operating officer, the Company shall establish the Executive Council as a consultative body for matters to be decided by the President, which shall consist of the President, the Executive Vice Presidents, the Senior Vice Presidents who have been appointed by the President, and the President of each Principal Operating Company, and have the Executive Council make decisions through careful deliberations.
- (3) A full-time audit and supervisory committee members shall attend the Executive Council, grasp a process of important decision-making, and the status of execution of operations, and share such process and status with other audit and supervisory committee members.

8. Corporate governance framework of Principal Operating Companies

- (1) Each Principal Operating Company is a company with an audit and supervisory committee or a company with board of corporate auditors (as defined in the Companies Act of Japan). Each Principal Operating Company has a Board of Directors to enable directors to oversee each other's performance of duties. Each Principal Operating Company shall fully analyze the risk of the business and verify the conformity of the execution of operations performance to the Basic Management Policies. The full-time audit and supervisory committee member of the Company concurrently serves as the full-time corporate auditor of ENEOS Corporation. The Company shall also dispatch its full-time audit and supervisory committee members to each Principal Operating Company as a part-time director or part-time corporate auditor, as necessary, and cause such director or corporate auditor to audit the execution of the duties by the directors of the Principal Operating Company.
- (2) Any decision-making regarding the matters related to the execution of operations of a Principal Operating Company (including matters on the execution of material operations of a subsidiary of such Principal Operating Company) shall be made by such Principal Operating Company.
- (3) Each Principal Operating Company shall report to the Company the status and other matters established by the Company regarding the execution of material operations.

Structure

Corporate Governance Framework



Corporate Governance Framework at a Glance (As of December 19, 2023)

Item	Details
Organization format	Company with an audit and supervisory committee
Number of directors who are not Audit and Supervisory Committee members*	9 (6 inside, 3 outside)
Number of directors who are Audit and Supervisory Committee members*	5 (2 inside, 3 outside)
Total number of directors	14 (8 inside, 6 outside; 3 female directors)
Percentage of outside (independent) directors	42.9%
Percentage of female directors	21.4%
Chairman of the Board of Directors	Director, Chairman of the Board (Non-executive director with no rights of representation)
Term of directors who are not Audit and Supervisory Committee members	1 year
Term of directors who are Audit and Supervisory Committee members	2 years
Adoption of executive officer system	Yes
Decision-making body for the appointment and dismissal of directors	General Meeting of Shareholders
Decision-making body for the upper limit of director remuneration	General Meeting of Shareholders
Institution assisting the president's decision-making	Executive Council
Voluntary advisory committees for the Board of Directors	Nomination Advisory Committee and Compensation Advisory Committee (2 inside directors, 3 outside directors; chairperson: outside director)
Term of Independent Auditors	1 year

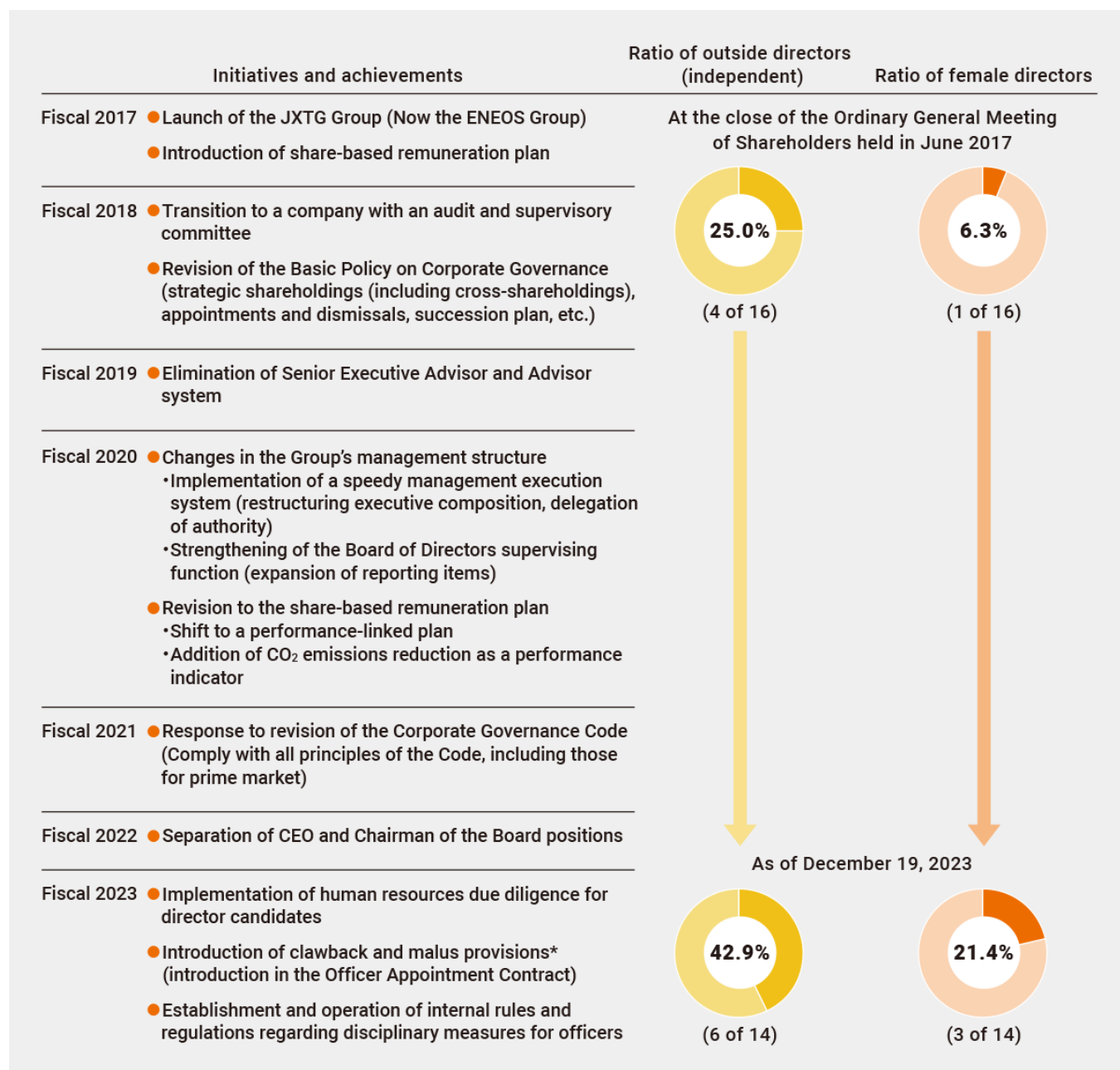
* At the most recent General Meeting of Shareholders (13th Ordinary General Meeting of Shareholders), no directors received 10% or more opposing votes.

Overview of the Nomination Advisory Committee and Compensation Advisory Committee and Fiscal 2022 Results

	Nomination Advisory Committee	Compensation Advisory Committee
Overview	To ensure the transparency of the process for determining the director candidates of the Company, the Nomination Advisory Committee, the majority of whose members are independent outside directors, has been established to provide advice to the Board of Directors about personnel matters involving the Company's directors (including appointment and dismissal). The Nomination Advisory Committee is composed of five directors, three of whom are outside directors ^{1,2} , and one of the outside directors on the committee acts as chairperson. The Company's Board of Directors receives advice from the Nomination Advisory Committee regarding succession planning for the Company's chairperson of the Board and president and for the presidents of the principal operating companies.	To ensure the transparency and objectivity of the process for determining the remuneration and other benefits for directors and executive officers, the Compensation Advisory Committee, the majority of whose members are independent outside directors, has been established to provide advice to the Board of Directors. The Compensation Advisory Committee is composed of five directors, three of whom are outside directors ^{1,2} , and one of the outside directors on the committee acts as chairperson. The Board of Directors requests the Compensation Advisory Committee to advise on policies for determining remuneration and other benefits for directors and executive officers, as well as the executive remuneration plan and remuneration amount.
Chairperson	Outside director (Kudo Yasumi) ³	Outside director (Kudo Yasumi) ³
Purpose	Ensure the transparency of the process for determining director candidates	Ensure the transparency and objectivity of the process for determining the remuneration and other benefits for directors and executive officers
Results for fiscal 2022	The committee met seven times and deliberated on matters including the ideal attributes of representative directors and Group CEO and the appropriateness of the succession plan.	The committee met six times and deliberated on matters including the appropriateness of the executive remuneration plan and the non-payment of executive remuneration.

- 1 Composition of the Nomination Advisory Committee and the Compensation Advisory Committee as of December 19, 2023
- 2 To ensure constructive discussion between outside directors, who supervise management from an independent and objective perspective, and inside directors, who have the greatest familiarity with the status of management, etc. in the Group, the Nomination Advisory Committee and the Compensation Advisory Committee are each comprised of three outside directors, the chairman of the Board, and one representative director.
- 3 For director profiles, see [Executives](#) □ .

Strengthening Corporate Governance



* Clawback provision: A clause requiring the return of all or part of officer remuneration after payment in the event of a material compliance violation
 Malus provision: A clause preventing the vesting of all or part of officer remuneration before payment in the event of a material compliance violation

Material Issues, Plans and Results

Fiscal 2022 Targets, Results and Progress

Evaluation: 😊 Achieved/Steady progress ☹️ Not achieved

Material ESG Issue	Initiative	Target (KPI)	Results/Progress	
Appropriate structuring and operation of corporate governance	Evaluation of the effectiveness of the Board of Directors	Implement improvement measures based on the fiscal 2021 evaluation of the effectiveness of the Board of Directors	😊	Implemented

Major Initiatives

Evaluation of the Effectiveness of the Board of Directors

Since fiscal 2016, the Company’s Board of Directors has conducted annual evaluations of its effectiveness, which serve as a basis for improvement. In December 2022 and January 2023, the Board of Directors surveyed all directors, including outside directors, to evaluate the Board’s effectiveness in fiscal 2022. To ensure objectivity and transparency in the evaluation process, in fiscal 2022 we also engaged external organizations in the process to assist with in-depth evaluations of the following items. The results of the evaluation and analysis were reported at the Board of Directors meeting on April 20, 2023.

Evaluation Items

1. Composition and operation of the Board of Directors
2. Role of the Board of Directors
 - Presentation of major directions, such as corporate strategies
 - Establishment of a supportive environment for appropriate risk-taking by management
 - Highly effective supervision from an independent standpoint
3. Dialogue with shareholders

All of the survey questions received mostly positive responses, and the results indicated that the Board of Directors generally continues to be effective. The results also indicated areas with relatively low evaluations and areas where further improvement is needed. We are accordingly working toward implementation of the following.

1. Introduction of human resources due diligence and rules and regulations regarding disciplinary measures for officers and officer candidates, and ensuring objectivity and transparency in the processes for appointing and dismissing officers
2. Further improvement of the leadership role of the board chair to stimulate more active discussion
3. Discussion of the Group’s overall management strategy under the new Group management structure beginning in fiscal 2024

The following initiatives were implemented to “further strengthen the oversight function” and “raise the quality of discussions and explanations by the Board of Directors,” which were identified as issues to address in the fiscal 2021 Board of Directors effectiveness evaluation.

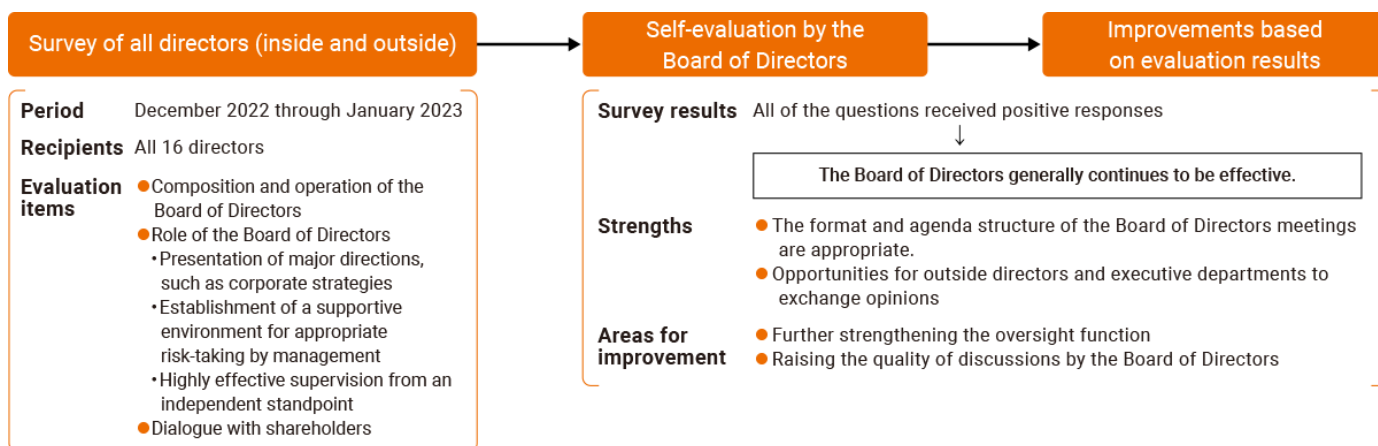
1. Provided multiple opportunities to discuss the third Medium-Term Management Plan and ensured sufficient time for deliberation of various measures, including for decarbonization
2. Reported on the progress of major investment projects during the post-merger integration (PMI)* in business execution status reports and other opportunities
3. Deepened the understanding of the Company by outside directors by providing information on our businesses at meetings of the outside directors and through on-site visits and other means and information relevant to formulation of the Medium-Term Management Plan

In fiscal 2022, we continued our efforts to separate the functions of business management and execution by requiring the appointment of a non-executive director to serve as the chair of the Board of Directors.

In addition, the Company’s Audit and Supervisory Committee conducted an evaluation of the effectiveness of the Company’s audit activities in fiscal 2022. Issues are communicated among the Audit and Supervisory Committee members and will be reflected in the audit plan for fiscal 2023, as we seek to construct an effective auditing system.

* A process used to integrate two companies after a merger or acquisition

Process for Evaluation of Effectiveness



Policy for Appointing Director Candidates

The Board of Directors is composed of an appropriate number of members to enable free and constructive discussion and exchange of opinions, with members appointed in consideration of Board diversity and the knowledge, experience, and abilities of each member. The Company strives to appoint independent outside directors* to at least one-third of director positions. As of December 19, 2023, the percentage of outside independent officers was 42.9%.

To ensure objectivity and fairness in the selection of director candidates, excluding outside director candidates, a third-party entity evaluates the candidates from various perspectives and appropriate considerations (human resources due diligence). Prior to appointment, the Nomination Advisory Committee deliberates the evaluation results and reports to the Board of Directors.

As for directors who are not Audit and Supervisory Committee members, the Company appoints persons with high standards of business ethics, superior strategic thinking and judgment capabilities, and flexible attitudes toward change, as well as the ability to supervise decision-making and management from the viewpoint of what is best for the Group as a whole. Two or more of the directors are independent outside directors.

As for directors who are Audit and Supervisory Committee members, the Company appoints persons with high standards of business ethics, a certain level of specialist knowledge in legal affairs, finance and accounting, etc., as well as the ability to appropriately audit the execution of duties by directors and the ability to appropriately supervise the execution of business. The majority of these directors are independent outside directors.

* Outside directors who have satisfied the Company's "Standards for Consideration of Independence of Independent Officers"

Support System for Outside Directors

Each of the three outside directors who are not Audit and Supervisory Committee members and the three outside directors who are Audit and Supervisory Committee members meet the independence standards based on the rules of the Tokyo and Nagoya stock exchanges, on which the Company is listed. The Company sends materials regarding the agenda of meetings of the Board of Directors to the outside directors, in principle, at least three days prior to meetings, and also provides explanations to the outside directors about important agenda items before the meetings. To enhance the auditing function by all Audit and Supervisory Committee members, including outside directors, the Company has established the Office of the Audit and Supervisory Committee, which is clearly independent from the chain of command for divisions responsible for business execution (including personnel evaluations). Full-time staff members have been assigned to the office to assist with the duties of the Audit and Supervisory Committee members. In addition, an organization with full-time staff members has also been established within the Legal and Corporate Affairs Department to assist outside directors who are not Audit and Supervisory Committee members with business execution.

Training for Directors and Corporate Auditors of Principal Operating Companies

The directors of the Company and principal operating companies and the corporate auditors of principal operating companies have the duty of working toward the realization of the Group Philosophy, the sustainable growth of the Group, and the achievement of increased corporate value over the medium to long term. To that end, to enhance necessary knowledge and skills, the Company and its principal operating companies provide opportunities for directors and corporate auditors to receive training related to the Companies Act, internal control systems, accounting and taxes, business strategies, and organizations. In addition, the Company pays expenses related to self-study initiatives. When outside directors are appointed, the Company provides explanations of basic matters regarding the Group's businesses and, after their appointment, offers business presentations and worksite inspection tours to deepen their understanding.

Results for Fiscal 2022 and Forecast for Fiscal 2023

Topic	Intended for	Fiscal year	Content of training
Respect for human rights, compliance	Inside directors	2023	Group Philosophy and Code of Conduct, prevention of human rights violations and harassment, etc.
Companies Act, compliance, corporate governance	Newly appointed directors	2022 2023 (Planned)	ENEOS Group management structure, compliance, corporate governance
Internal control	Newly appointed directors	2022 2023 (Planned)	ENEOS Group internal control systems
Finance and investor relations	Newly appointed directors	2022 2023 (Planned)	Current status and issues regarding ENEOS Holdings' financial affairs, opinions of institutional investors, etc.
ENEOS Holdings and principal operating companies	Newly appointed directors (outside directors)	2022 2023 (Planned)	Basic knowledge about ENEOS Holdings and its operating companies: ENEOS, JX Nippon Oil & Gas Exploration, and JX Metals
Worksite inspection tours	Outside directors	2022	(ENEOS) Oita Refinery, etc. (JX Metals) Hitachi Works, Isohara Works, Saganoseki Smelter & Refinery, etc.
		2023 (Planned)	(ENEOS) Kashima Refinery, etc. (JX Nippon Oil & Gas Exploration) Nakajo Field Office

Determination of Director Remuneration

Directors Who Are Not Audit and Supervisory Committee Members (Excluding Outside Directors)

The policy on remuneration for individual directors who are not Audit and Supervisory Committee members (excluding outside directors) is determined as follows.

1. Remuneration consists of the monthly remuneration, bonus, and share-based remuneration.
2. Remuneration is determined by whether the person belongs to the Company or a principal operating company, whether the person is full-time or part-time, whether the person is a director or executive officer, etc.
3. Bonuses are linked to performance within a fiscal year, and are paid after the given fiscal year.
4. Share-based remuneration is linked to the achievement of the Medium-Term Management Plan, etc., and is paid after a certain duration from the end of the fiscal year in which the duties have been executed and after the given medium-term management plan has been completed.
5. The consolidated business results, remuneration levels of executives in other companies, composition ratio, etc. are taken into consideration when determining the remuneration level, composition ratio, performance indicators, etc.

Remuneration for directors who are not Audit and Supervisory Committee members (excluding outside directors) is designed to be around 50% of the total for monthly remuneration, around 30% of the total for bonuses, and around 20% of the total for share-based remuneration when the performance targets, etc. are achieved. In addition, starting April 1, 2023, the Company may request that remuneration and other compensation be returned and/or forfeited in accordance with the provisions of the Officer Appointment Contract and rules and regulations regarding disciplinary measures for officers. The maximum amount of the remuneration and compensation subject to return and/or forfeit is the total amount for four fiscal years.

Outside Directors Who Are Not Audit and Supervisory Committee Members

The policy on remuneration for individual outside directors who are not Audit and Supervisory Committee members is to provide a monthly remuneration only in consideration of their roles of providing guidance and advice to Company management and supervising management from an independent and objective perspective.

The policy on remuneration for individual directors who are not Audit and Supervisory Committee members of the Company is determined by resolution of the Board of Directors after deliberation and recommendation by the Compensation Advisory Committee, which consists of a majority of outside directors and is chaired by an outside director. The Board of Directors allows the Audit and Supervisory Committee to select one member to attend meetings of the Compensation Advisory Committee so that the Audit and Supervisory Committee may adequately exercise the right to state opinions related to the remuneration of directors who are not Audit and Supervisory Committee members at General Meetings of Shareholders.

Directors Who Are Audit and Supervisory Committee Members (Including Outside Directors)

Remuneration for directors who are Audit and Supervisory Committee members consists of a monthly remuneration only in consideration of the independence of their roles based on discussions among directors who are Audit and Supervisory Committee members. The parameters of the remuneration are shown in the following table.

Upper Limit of Remunerations for Directors

Category	Type	Upper limit of remuneration	Resolution of the General Meeting of Shareholders (GMS)	Number of receivers (Persons)
Directors who are not Audit and Supervisory Committee members	Monthly remuneration and bonuses	No more than 1,100 million yen per one (1) fiscal year (of which no more than 200 million yen is allocated to outside directors who are not Audit and Supervisory Committee members)	The 8th ordinary GMS (June 27, 2018)	13
	Share-based remuneration	In every three (3) fiscal years, <ul style="list-style-type: none"> the upper limit the Company put in on reserve for trust: 1,500 million yen the upper limit of the number of shares given to eligible persons: 6 million shares (6 million points) * (Including those to be awarded to executive officers who are not directors)	The 10th ordinary GMS (June 25, 2020)	6
Directors who are Audit and Supervisory Committee members	Monthly remuneration	No more than 200 million yen per one (1) fiscal year	The 8th ordinary GMS (June 27, 2018)	5

Note:

Those eligible for share remuneration include executive officers but do not include outside directors and overseas residents.

Remunerations for Directors (Fiscal 2022)

Category	Total amount (Million yen)	Details of remuneration		Number of receivers (Persons)	Details of remuneration		Number of receivers (Persons)
		Monthly remuneration (Million yen)			Bonuses (Million yen)	Share-based remuneration (Million yen)	
Directors who are not Audit and Supervisory Committee members (Outside directors)	626 (51)	468 (51)		16 (4)	101 (-)	58 (-)	7 (-)
Directors who are Audit and Supervisory Committee members (Outside directors)	116 (48)	116 (48)		5 (3)	- (-)	- (-)	- (-)
Total (Outside directors)	742 (99)	584 (99)		21 (7)	101 (-)	58 (-)	7 (-)

Notes:

1. The information in the table includes the amount of remunerations for four (4) directors who are not Audit and Supervisory Committee members (including one [1] outside director who is not an Audit and Supervisory Committee member who retired upon the conclusion of the 12th Ordinary General Meeting of Shareholders held on June 28, 2022) and one (1) director who was not an Audit and Supervisory Committee member who resigned on August 12, 2022.
2. Includes the amount of bonuses received for fiscal 2022 after the conclusion of the 13th Ordinary General Meeting of Shareholders.
3. The Company had requested the refund of the monthly remuneration paid for July and August 2022 (total of 12 million yen) to the director who was not an Audit and Supervisory Committee member and who resigned on August 12, 2022, and has received a full refund from the said director who was not an Audit and Supervisory Committee member. The amount of monthly remuneration that was returned is included in the table above.
4. Regarding the remuneration, etc. of the director who was not an Audit and Supervisory Committee member and who resigned on August 12, 2022, the Board of Directors decided to confiscate the bonuses for fiscal 2022 (equivalent to 12 million yen) and share-based remuneration for fiscal 2020 to fiscal 2022 (equivalent to 36 million yen). Of these, bonuses and share-based remuneration for fiscal 2022 are not included in the table above, but share-based remuneration for fiscal 2020 and fiscal 2021 (equivalent to 53 million yen) is included in the disclosures of previous fiscal years.
5. Bonuses and share-based remuneration are applicable to performance-linked remunerations. In addition, share-based remuneration is applicable to non-monetary remunerations.
6. The share-based remuneration amounts indicated in the table are the average price per share of the Company purchased through the trust that the Company established, multiplied by the number of standard points awarded to the director in the fiscal year and the performance-linked coefficient.

Matters Concerning Bonuses

Bonuses are linked to performance within a single fiscal year and can fluctuate between 0% and 200% (target: 100%) depending on the level of achievement of the performance targets. Bonuses are determined by multiplying the monthly remuneration by the base number of months (8 months) and the percentage of target achieved.

The indicators that affect shareholder returns and the indicators that reflect actual performance should be used when calculating the percentage of target achieved. Therefore, “profit attributable to owners of parent” and “consolidated operating profit after adjustment” of the Company’s consolidated results, and “operating profit” and “operating profit after adjustment” of the Energy business results are used as performance indicators with a weight of 25% each.

The fiscal 2022 performance target for the bonus calculation process was set based on the fiscal 2022 results forecast (disclosed in May 2022), and the resulting percentage of target achieved was 61%. The results of each performance indicator to calculate the percentage of target achieved are as follows.

Results for Each Performance Indicator for Bonuses

Performance indicators	Weight	Results in FY2022
Profit attributable to owners of parent	25%	143,800 million yen
Consolidated operating profit after adjustment	25%	331,300 million yen
Operating profit of the Energy business	25%	51,000 million yen
Operating profit of the Energy business after adjustment	25%	7,600 million yen

Note:

“Consolidated operating profit after adjustment” and “operating profit after adjustment” are calculated by adding or subtracting temporary gain/loss, such as gain/loss on sale of fixed assets and shares and loss by disasters, to or from operating profit excluding inventory valuation, which represents the profit made by the main business.

Matters Concerning Share-based Remuneration

Share-based remuneration is linked to performance over three successive fiscal years and can fluctuate between 0% and 200% (target: 100%) depending on the level of achievement of the performance targets. The share delivery points (one share per point) are determined by multiplying the standard points, awarded according to the eligible person’s role, by the performance-linked coefficient. Eligible persons, in principle, shall receive the Company’s shares through the trust established by the Company, according to the share delivery points, after the elapse of three years from the award of standard points for each year.

When calculating the performance-linked coefficient, the Company uses the following performance indicators and evaluation weightings for the following reasons: to further strengthen the link between medium- and long-term management strategies and the remuneration system for eligible persons, to cultivate the eligible persons’ incentive to contribute to the enhancement of corporate value and their awareness of shareholder-oriented management, and to promote initiatives, such as preserving the environment, for building a sustainable society.

Each performance target is set based on the second Medium-Term Management Plan and the second Medium-Term Environmental Management Plan. The performance-linked coefficient based on the achievement rate was 68%. The results for each performance indicator, which are used to calculate the percentage of target achieved, are as follows.

The Company has set performance indicators for the achievement of the third Medium-Term Management Plan and will continue this system in fiscal 2023 and beyond.

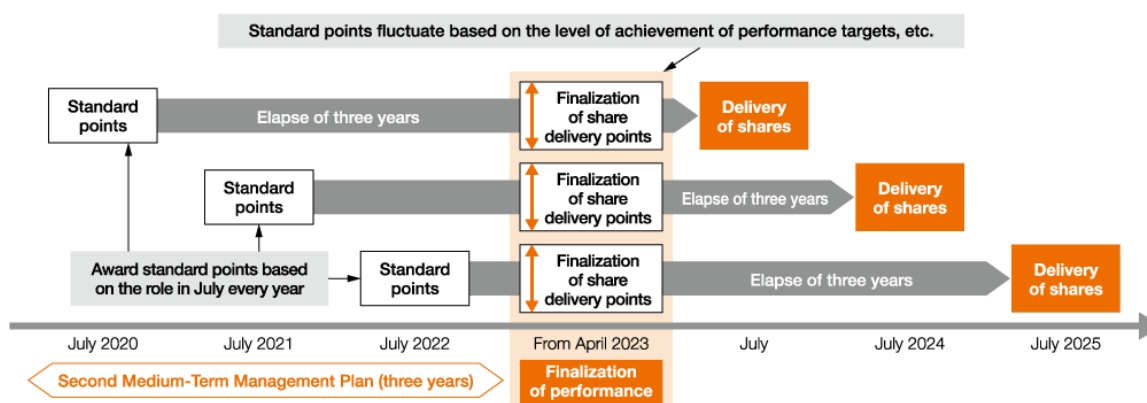
Results for Each Performance Indicator for Share-based Remuneration

Performance indicators	Weight	Results in FY2022
Operating profit excluding inventory valuation	20%	877,600 million yen (consolidated)
		205,800 million yen (Energy business)
Free cash flow	20%	(231,700) million yen (consolidated)
		(636,400) million yen (Energy business)
Net D/E ratio	20%	0.76 times
ROE	20%	5%
Total return ratio	10%	66%
Reduction of CO ₂ emissions	10%	4.30 million tons (consolidated)
		3.99 million tons (Energy business)

Notes:

- Operating profit excluding inventory valuation, free cash flow, and reduction of CO₂ emissions reflect the consolidated results and the results of the Energy business, with a weight of 50% each.
- The percentages achieved for operating income excluding inventory valuation, free cash flow, and total return ratio are calculated using the accumulated results from fiscal 2020 to fiscal 2022.
- The percentages achieved for net D/E ratio and ROE are calculated using the results for fiscal 2022.
- The percentage achieved for reduction of CO₂ emissions is calculated using the results for fiscal 2022 (compared to fiscal 2009).
- The amount of stock compensation for fiscal 2020 and fiscal 2021 was based on the assumption that the performance-linked coefficient was 100% as per the prior fiscal year disclosures. With the confirmation of the achievement rate of performance targets, etc., the amount will decrease by approximately 32%.

Flowchart of Share Remuneration with Regard to the Period of the Second Medium-Term Management Plan



Selection of Independent Auditor

The selection, dismissal, or non-reappointment of the Independent Auditor is resolved every fiscal year in accordance with the policy established by the Audit and Supervisory Committee. Prior to the resolution, the Independent Auditor is evaluated once a year in accordance with the standards established by the Audit and Supervisory Committee.

The Audit and Supervisory Committee has resolved to reappoint the current Independent Auditor as it has been confirmed that there are no issues pertaining to the evaluation items, that the Independent Auditor has sufficient systems and ability to handle the Company's audit work, and that there are no grounds for dismissal or non-reappointment.

The rotation of executive Representative Partners of the current Independent Auditor has been implemented appropriately, and they have not been involved in the Company's audit operations for more than seven consecutive fiscal years. The head Representative Partner has not been involved in the Company's audit operations for more than five consecutive fiscal years.

Governance of Listed Subsidiaries

The Company maintains ENEOS, JX Nippon Oil & Gas Exploration, and JX Metals, its principal operating companies, as wholly owned subsidiaries, and maintains other Group companies as wholly owned subsidiaries, listed subsidiaries, or other types of entities based on the need to maintain or expand its businesses. The policy of the Board of Directors is to regularly examine the appropriateness of maintaining a company as a listed subsidiary from the perspective of improving the Group's overall corporate value and capital efficiency, to consider the reasonableness of maintaining the listed company status, and to deliberate on the effectiveness of the listed subsidiary's governance system.

The following policies concerning the authority to appoint and dismiss independent outside directors of listed subsidiaries have been adopted to ensure an effective governance system that gives due consideration to the interests of general shareholders of listed subsidiaries.

(1) Exercise of Appointment Authority

- A. More than one-third of directors shall be independent outside directors. If difficult to immediately put into effect, a mechanism will be introduced for a committee made up primarily of independent outside directors to discuss and consider important business transactions involving conflict of interest.
- B. Prerequisites for Independent Outside Directors
 - i. Strong professional ethics, excellent strategic thinking and judgment, flexibility to change, and the ability to make decisions and supervise the management of a listed subsidiary
 - ii. Not employed by a company in the ENEOS Group within the past 10 years
 - iii. Ability to contribute to raising the corporate value of the listed subsidiary, taking into account the protection of the common interests of shareholders, including general shareholders, from an independent perspective

(2) Exercise of Dismissal Authority

Voting rights shall be exercised to dismiss an independent outside director if any of the following conditions occur and in accordance with the decision of the Board of Directors of the relevant listed subsidiary.

- i. A serious violation of laws or regulations that materially damages the reputation of the ENEOS Group or a listed subsidiary group
- ii. Malicious intent or gross negligence in the execution of duties that causes significant damage to the ENEOS Group or a listed subsidiary group
- iii. Actions that cause significant damage to the interests of general shareholders

Policy on Strategic Shareholdings

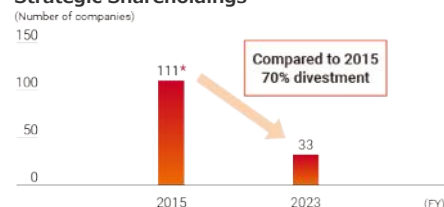
In accordance with the Basic Policy on Corporate Governance of ENEOS Group, in principle, the Company shall not hold shares in listed companies. As an exception, the Company may hold shares in listed companies as strategic shareholdings, as described below.

- 1) Shares in companies which engage in any important businesses of ENEOS Group
- 2) Shares in companies which ENEOS Group judges necessary to maintain or enlarge business of ENEOS Group

The Company has divested 70% of its strategic shareholdings since the above policy was adopted in November 2015. In fiscal 2022, the Company sold shares (valued at 33,277 million yen)* of six companies and did not acquire any new strategic shareholdings.

* Includes partial divestment of shareholdings, excludes shares sold within the Group

Strategic Shareholdings



* Following the privatization of NIPPO, shareholdings in the company have been excluded from the cross-shareholdings total.

Method of Verifying the Rationality of Possession

With respect to exceptionally holding strategic shareholdings, the Company shall periodically assess whether or not to hold each individual strategic shareholding, specifically examining whether the purpose is appropriate and whether the benefits and risks from each holding cover the company's cost of capital at the Board meeting of the Company.

Board of Directors Verification of the Appropriateness of Individual Strategic Shareholdings

The Company assessed whether or not to hold each individual strategic shareholding, specifically examining whether the purpose is appropriate and whether the benefits (transactional profits, dividends, benefits difficult to quantify) and risks from each holding cover the company’s cost of capital at the Board meeting of the Company in November 2022.

Risk Management

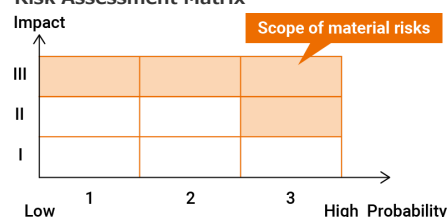
The ENEOS Group has established the Basic Policy on Internal Control System for the development and implementation of a system for ensuring the appropriateness of our business operations.

Enterprise Risk Management (ERM)

The Company has developed and operates a risk management system to identify and analyze Group management risks and ensure appropriate responses.

Risks (tangible and intangible) are identified, taking into account risks identified up to the previous fiscal year, as well as increased risks and potential new risks arising from changes inside and outside the Company, and are assessed for materiality based on the degree of impact, probability and urgency. Risks that are indicated by assessment results as requiring a response from the Group are designated as “material risks” by resolution of the Executive Council, which is chaired by the president of the Company. Relevant departments are assigned for response to material risks, and monitoring is carried out by reporting the status of response to the Executive Council.

Risk Assessment Matrix



Impact

Impact	Qualitative criteria
III	Potential for significant impact on the entire Group, immediate implementation of countermeasures required
II	Potential for some degree of impact on the entire Group, consideration of specific countermeasures required
I	Potential for minimal impact on the Group as a whole, response can be implemented by individual Group companies

Probability and Urgency

	Probability (standard)	Urgency (standard)
3 (High)	Has already occurred or is very likely to occur	Response required within 1 year
2 (Medium)	Not very likely to occur, but could occur in the medium term	Consideration of response required for the medium term (up to 3 years)
1 (Low)	Very unlikely to occur in the short or medium term	Consideration of response required for the long term (over 3 years)

The Group’s principal operating companies—ENEOS, JX Nippon Oil & Gas Exploration and JX Metals—maintain and operate their own risk management systems, which are tailored to their specific business content and characteristics. The departments in charge of risk management at the Company and the principal operating companies cooperate and share risk information with each other. If a company identifies, through its risk management process, a risk that could significantly impact the management of the Group, ENEOS Holdings and the company work together to respond to the risk.

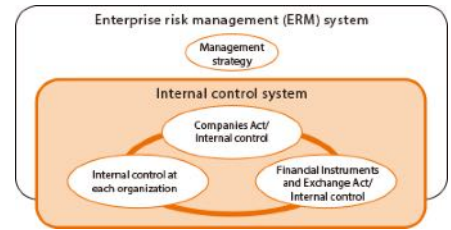
Internal Control

The Internal Control Department has developed and operates the internal control system for the ENEOS Group. The system links the internal controls stipulated in the Companies Act and the Financial Instruments and Exchange Act, and the internal controls of each Group organization. As part of this system, the Group has formulated internal controls based on the COSO Framework* for independent management by each organization. Introduction of the internal controls has been completed for the Company and Group companies.

In fiscal 2023, we are conducting internal control and risk management activities in preparation for the changes to the Group management structure stipulated in the third Medium-Term Management Plan. We are also utilizing information technology to improve the effectiveness and efficiency of the internal control system.

* Committee of Sponsoring Organizations of the Treadway Commission (COSO) is an internal control framework released by the commission and adopted by countries around the world.

> [Basic Policy on Internal Control System \(PDF : 160KB\)](#) 



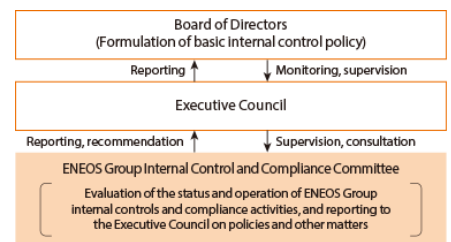
Internal Control System

Comprehensive Internal Control Structure

The Company has established the ENEOS Group Internal Control and Compliance Committee, chaired by the officer responsible for the Internal Control Department and the Legal & Corporate Affairs Department. The committee works to continuously improve the internal control system for the Group.

The committee confirms and evaluates the status and operation of the internal control system twice a year, in principle, and reports its findings to the Executive Council.

Every April, the committee reports to the Board of Directors on the status and operation of the internal control system and on specific points of policies for initiatives for the fiscal year. The Board of Directors appropriately monitors and supervises the internal control system for the Group and fulfills its duty of accountability by providing an overview of the operation status in the Business Report section of the Convocation Notice of the General Meeting of Shareholders.



Comprehensive Internal Control and Compliance Structure

Risk Assessment of Business Activities

The Group has internal rules and regulations for addressing the risks in its business activities. For the screening of new investments, in addition to country risks and foreign exchange rate risks, we analyze and evaluate ESG-related risks, including environmental risks such as those related to the scope of response to biodiversity and environmental regulations; risks in the procurement of raw materials, including water; and human resources risks, including those related to human rights and occupational health and safety, and we take appropriate actions when necessary.

In addition, when reviewing proposed major investments, we perform screenings based on the stage-gate system. The process from initial examination to execution of an investment project is divided into multiple stages of examination, and deliberations are conducted at each stage. During the deliberations, we clarify various risks, including ESG-related risks, using sensitivity analysis, case analysis, and other means, and work to minimize these risks. For important investments, follow-up is carried out after a certain period of time to clarify impacts on the initial outlook caused by environmental changes or other factors and to determine whether to continue with the project.

Crisis Management

In the event of a crisis situation that could significantly affect the management of the Group, the Company responds quickly and appropriately in accordance with the ENEOS Group Rules for Responding to Crises and Emergencies and has systems in place to minimize any damage that may occur. The Group's basic stance on crisis situations is to place the highest priority on protecting human life, issue information promptly and implement centralized information management, quickly determine, execute, and follow up the most effective response measures, implement transparent and smooth communications, and prevent recurrence.

With the Crisis Management Department as the standing organizational unit, in the event of a crisis situation, we maintain a system enabling immediate reporting on conditions and the status of response measures from the site of an incident. Depending on the magnitude of the crisis, we may set up a response headquarters, led by the president, and organize response teams at the head office and at the site of the incident to ensure agile and effective response.

Infectious Disease Prevention Measures

The Group's basic policy is to (1) place the highest priority on respect for human life and make every effort to protect against and prevent the spread of infectious diseases to the Group's officers, employees and their families, and (2) engage all Group companies in maintaining a continuous supply of our products, which support the functioning of society. In the event that management is significantly affected by an infectious disease epidemic, a system is in place to set up a response headquarters, led by the president, to ensure the prompt determination and execution of countermeasures.

ENEOS has business continuity plans at its head office, branch offices, refineries, and other sites to ensure that we can fulfill our responsibility of providing a stable supply of petroleum products, even during an epidemic. To protect employees from infection and prevent the spread of disease, we systematically stockpile surgical masks, goggles, alcohol-based disinfectants, and other items at our business sites in Japan and overseas. We also maintain a system and an IT environment that enable employees to work from home.

COVID-19 countermeasures (Examples)

1. Encouraging employees to work from home (excluding employees at production and distribution sites)
2. Refraining from non-essential domestic business trips
3. Prohibiting overseas business trips
4. Enabling remote participation in training and meetings
5. Refraining from holding or attending social gatherings and events

At ENEOS refineries and plants in particular, we are working to maintain a stable supply of petroleum products, having established infection prevention guidelines for our sites and by thoroughly implementing countermeasures to prevent viruses from entering our sites and prevent mass infections.

COVID-19 countermeasures at refineries and plants (Examples)

1. Ensuring the use of masks, hand washing and alcohol-based disinfectants, ventilation in the workplace, and patrols by industrial physicians
2. Checking the temperature of employees and visitors when they enter the sites
3. Limiting the number of people using cafeterias, changing rooms, and bathing facilities, and increasing the floor space of break areas/rooms
4. Recommending the use of private cars and avoiding public transport when commuting to work
5. Refraining from visiting areas where states of emergency have been declared due to the spread of infection
6. Maintaining appropriate supplies of test kits

Note:

These measures ended on May 8, 2023, when the Japanese government reclassified COVID-19 from a Class 2 to a Class 5 disease, the same category as seasonal influenza, under the Infectious Diseases Control Law.

We will continue monitoring the government's actions and the status of the pandemic and implement any necessary prevention measures.

Information Security

Company information is an important asset of the Group, and we work to prevent the improper use, disclosure, or leakage of this information in accordance with the ENEOS Group Basic Rules for Information Security. The Group also strives to maintain information accuracy and reliability and to prevent falsification or mishandling while ensuring that information is available to authorized users when needed.

In addition, we have developed personal information protection procedures and established rules to ensure compliance with the Personal Information Protection Act and the appropriate handling of personal information to protect people's rights. We are working to promote better understanding of laws and company rules by distributing the Personal Information Protection Procedures Guidebook to employees.

Following the leak of personal customer information at ENEOS in fiscal 2021, we carried out a Group-wide inspection of legal compliance focused primarily on the protection of personal information and conducted e-learning training for all ENEOS employees in fiscal 2022.

At ENEOS, when a leak of personal information is detected, it is immediately shared among the relevant departments and reported to the Personal Information Protection Commission as necessary. In such cases, we conduct prompt root cause analysis and response to prevent the spread of damage.

We are also working to prevent recurrence through efforts such as providing training on personal information protection laws to all employees. We will continue working to strengthen our personal information management systems to ensure appropriate management.

Cybersecurity Measures

In order to protect its important information and systems from cyberattacks, which have become stealthier in recent years, the Group has established the ENEOS Group Cybersecurity Council, chaired by the president of the Company. The council checks the status of cybersecurity measures, and also determines and implements cybersecurity measures using a top-down approach.

In addition, the IT Security Basic Procedures for ENEOS Group have been established and communicated to Group companies to ensure that cybersecurity countermeasures are carried out across the entire Group. The procedures require the appointment of IT cybersecurity managers to implement and oversee IT security measures at each Group company. The procedures also stipulate that disciplinary action is to be taken in the event that an employee violates the procedures and causes damage to the company.

For employees, as ongoing initiatives, the ENEOS Group conducts drills and issues reminders on the handling of suspicious emails, and also provides Group-wide security training using curricula translated into multiple languages.

Protection of Intellectual Property

The ENEOS Group Code of Conduct states that we will properly maintain, manage and protect corporate tangible and intangible assets along with new discoveries made in the course of business activities, as well as respect the intellectual property rights of third parties.

ENEOS Group Code of Conduct (excerpt)

10. Corporate asset protection and management

- (1) We properly maintain, manage, and protect corporate tangible and intangible assets.
- (2) We shall not use corporate tangible and intangible assets for purposes other than business activities.
- (3) We protect new discoveries or inventions made in the course of business activities as corporate intellectual properties.

Through a dedicated department, ENEOS manages and uses intellectual property appropriately in accordance with its regulations on intellectual property rights ("Regulations on Inventions and Devices"). Given the important role of intellectual property in our business strategy, we are working particularly to ensure that the acquisition, protection and use of intellectual property contributes to our business. In addition, as part of our business risk management, we are implementing necessary measures through close collaboration between this dedicated department and other business and research departments in order to prevent the unauthorized use of the intellectual property of third parties. Moreover, we provide training for employees on the creation of intellectual property, investigation of patents, and handling of contracts, which improves awareness of intellectual property.

Number of registered patents (As of March 31, 2023)

	Japan	Overseas	Total
Number of registered patents	4,175	6,584	10,759

Note:

Data from ENEOS and JX Metals

Compliance

Basic Approach

The ENEOS Group is committed to thorough compliance and has designated high ethical standards as a core element of the Group Philosophy and the Group Code of Conduct. No significant legal violations occurred within the Group in fiscal 2022.

ENEOS Group Code of Conduct (excerpt)

1. Compliance

- (1) We ensure compliance with laws, contracts, and corporate regulations and follow social norms and customs in an appropriate manner.
- (2) We shall neither ignore nor participate in any compliance violations.

Structure

The Internal Control and Compliance Committee has been established under the Executive Council to ensure the implementation of effective and efficient internal control and compliance. The committee, comprising relevant officers and department general managers, regularly confirms the performance of and issues related to the Group’s internal control and compliance activities and deliberates policies for future activities (see [Comprehensive Internal Control Structure](#)).

Material Issues, Plans and Results

Fiscal 2022 Targets, Results and Progress

Evaluation: 😊 Achieved/Steady progress 😞 Not achieved

Material ESG Issue	Initiative	Target (KPI)	Results/Progress	
Compliance	Legal compliance inspections	Conduct legal compliance inspections	😊	Implemented (no major issues)
	Implement training on important laws and regulations	Strengthen management of personal information and provide legal training according to business needs	😊	Implemented
	Operation of whistleblower systems	Revise and appropriately apply rules based on the amended Whistleblower Protection Act	😊	Implemented

Major Initiatives

Internal Control and Compliance Inspections

We conduct internal control and legal compliance inspections annually as a voluntary initiative at each work site.

We inspect each business operation to ascertain compliance with Group-wide rules (internal control standards) and whether the corporate culture values integrity and ethics. In addition, given the rapidly changing management environment, we use a risk control matrix to ascertain whether risks have been appropriately identified and assessed, and whether effective controls for these risks have been developed and implemented. We also utilize interviews of all staff by managers to identify compliance issues, including questions and concerns, in order to prevent legal violations and to identify and correct any issues at an early stage.

The Group identified approximately 800 compliance issues, questions, and concerns in fiscal 2022. None of the issues significantly impacted management. The Company resolved 80% of the issues within the fiscal year and is taking steps to promptly address the remaining 20% of unresolved issues.

Compliance Violations (Fiscal 2023)

Deficiencies under the High Pressure Gas Safety Act at ENEOS

On June 9, 2023, the Ministry of Economy, Trade and Industry cited deficiencies under the High Pressure Gas Safety Act and revoked certification of ENEOS Corporation as an Accredited Completion Inspection Executor for the Ukishima North Area and Ukishima South Area of the Kawasaki Refinery (including certification of the Ukishima North Area as a Specified Accredited Completion Inspection Executor under the Regulation on Safety of Industrial Complexes). As a certified business operator under the High Pressure Gas Safety Act, we are required to rigorously carry out voluntary safety management, and we sincerely apologize for this incident.

To prevent recurrence of a similar situation, the company is implementing prevention measures, including steps to ensure a high level of safety awareness and strengthen the safety management system. All Group companies are also broadening and strengthening compliance initiatives and working to quickly restore trust in the company.

Compliance Training

Strong awareness among all officers and employees is an important element in achieving thorough compliance. To this end, we issue ENEOS Group Philosophy cards and ENEOS Group Code of Conduct handbooks to all personnel and regularly provide compliance training for officers and employees. In fiscal 2022, we conducted company-wide training on compliance, competition laws, anti-bribery, the Act on the Protection of Personal Information, and insider trading regulations, as well as anti-monopoly law training for sales departments to raise employee awareness and prevent violations of laws and regulations in each business. We will continue to provide training based on select topics as part of our ongoing efforts to ensure thorough compliance.

Establishment and Operation of Whistleblower Systems

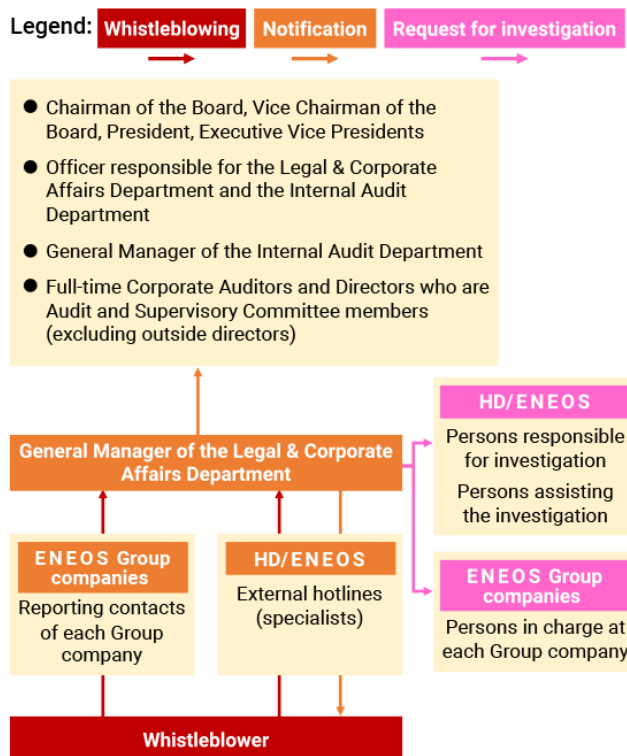
To enable prompt detection and corrective action in the event of legal violations, the Company and some of its subsidiaries maintain compliance hotlines for their employees and those of contractor companies. The hotlines are part of whistleblower systems aligned with the Whistleblower Protection Act. In addition to establishing whistleblower hotlines with external specialists as reporting contacts to respond to both real-name and anonymous reports, we have established a system that enables appropriate responses to whistleblowing, through means such as adopting Group whistleblower systems that enable whistleblowing to the reporting contacts established by ENEOS Group companies. We have also introduced whistleblower systems, including some with multilingual capabilities, for overseas subsidiaries where we have ownership of more than 50%.

Based on internal regulations, when whistleblowing is received, the content is reported to the relevant officers, including the chairman and president, and an investigation is launched under the responsibility of the general manager of the Legal & Corporate Affairs Department. The investigation results and any necessary corrective and recurrence prevention measures are reported to the officers. Individuals who identify themselves when conducting whistleblowing are also informed of the investigation results.

To ensure that employees do not hesitate to use the system, they are informed through the intranet, posters, and training that the identity of those conducting whistleblowing is strictly confidential and that whistleblowing can be conducted even if the employee is not sure if the matter constitutes a legal violation.

In fiscal 2022, the Group recorded 227 reports via its whistleblower systems.

Whistleblowing Workflow



Compliance with Competition Laws

The Group maintains a policy that the entire Group must thoroughly comply with competition laws in Japan and other countries. We have put into place necessary company rules, and all officers and employees work under a clear commitment by management to ensure compliance with competition laws. Specifically, we have established the ENEOS Group Competition Law Compliance Policy, which strictly prohibits officers and employees from engaging in any activity, including cartels, that violates competition laws of any country. The policy clearly states that no activity that would violate competition laws shall be justified by any reason of business custom, the authority or position of the violator, maintaining or expanding business or making profits. Our legal division checks each department every year for planned interactions with business competitors, assessing those interactions for competition law risks, and requesting the submission of meeting records detailing the interactions. Through these and other efforts, we work to prevent competition law violations before they occur.

We also conduct competition law compliance training for officers and employees on a regular and ongoing basis.

Operation of the Competition Law Compliance Policy

The Group has established and published the ENEOS Group Competition Law Compliance Policy pursuant to the basic principle of compliance with competition laws set out in "7. Equitable and fair transactions" in the ENEOS Group Code of Conduct. This policy clearly states the Group's commitment to comply with competition laws.

We will communicate this policy to and require compliance of all those within the scope of application of the ENEOS Group Code of Conduct. In addition to implementing this policy within the Group, we will also request that the companies and others that make up our value chain also cooperate with this policy.

[ENEOS Group Competition Law Compliance Policy](#) □ >

Prevention of Bribery and Corruption

The Group participates in the United Nations Global Compact, and puts the 10 principles, including anti-corruption, into practice. We have established and published the ENEOS Group Anti-Corruption Policy, which clearly states that the ENEOS Group will not engage in corrupt practices. With regard to anti-corruption, the Group does not tolerate bribery in any form. We have internal regulations in place to prevent bribery at our Group companies, and all officers and employees actively work under a clear commitment by management of all Group companies to prevent bribery. Specifically, a mechanism has been put in place to check for bribery involving travel expenses, business entertainment, gift giving, and donations, taking into consideration the laws and regulations of each country. We also implement third-party due diligence procedures to prevent our involvement in bribery through a third party such as an agent, agency, or distributor.

Employees can access relevant internal regulations at any time via the company's in-house intranet or other means. They also undergo various forms of compliance training on the prevention of bribery. In this manner, we are working to raise employee awareness of this important issue.

Internal controls, compliance inspections, and internal audits are used to continuously monitor whether these mechanisms are functioning properly. The results of monitoring are reported to the Company's Board of Directors. Every year, we conduct regular screenings for all divisions and business sites in Japan based on our anti-bribery procedures. We also conduct risk surveys at the commencement of business relationships with new business partners, and if risks are indicated, we take necessary risk mitigation measures and determine whether or not to commence the business relationships. Overseas subsidiaries where we have ownership of more than 50% are also required to establish and comply with anti-bribery guidelines. We also have a system in place to promptly detect and rectify problems through our whistleblower systems.

In fiscal 2022, there were no serious violations and no fines, administrative monetary penalties or settlements imposed regarding corruption or bribery. In addition, no internal disciplinary action was taken in connection with corruption or bribery.

Operation of the Anti-Corruption Policy

Based on the basic rules on the prevention of bribery and corruption established within "7. Equitable and fair transactions" and "8. Appropriate relationships with governments and public administrations" of the ENEOS Group Code of Conduct, the Group formulated and published the ENEOS Group Anti-Corruption Policy, which clearly stipulates that the Group will not engage in corrupt practices.

Going forward, we will continue to raise awareness of and require compliance with this policy within the scope of application of the ENEOS Group Code of Conduct. In addition to applying this policy within the Group, we will request the cooperation of companies in our value chain as well.

[ENEOS Group Anti-Corruption Policy](#)  

Political Contributions

The Group thoroughly complies with Japan's Political Funds Control Act. The Group prohibits contributions to individual politicians as prohibited by law and monetary donations to specified political groups or political parties exceeding the legally permitted threshold.

In fiscal 2022, the Group did not make any political contributions (donations).

Honoring Tax Liabilities

Companies have a corporate social responsibility to appropriately honor their tax liabilities in the countries and areas in which they conduct their business activities. Therefore, we have formulated the ENEOS Group Tax Matters Policy to ensure that tax liabilities are appropriately honored throughout the entire Group.

[Tax Matters Policy](#)  

Timely and Proper Disclosure of Company Information

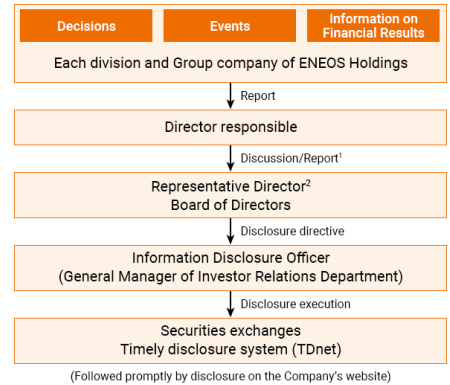
The Company is fully aware that the timely and proper disclosure of corporate information is a key element of healthy capital markets. Accordingly, the Company makes efforts to ensure prompt, appropriate, and fair disclosure of information to shareholders and other investors with the aim of promoting transparency in management.

Systems are in place to obtain, manage, and disclose information on the Company, as well as information on ENEOS Group companies, quickly and accurately. Information that is subject to the Timely Disclosure Rules is made public through the timely disclosure system (TDnet) provided by the Tokyo Stock Exchange and others, and the same information is made available on the Company's website. Information that is not subject to the Timely Disclosure Rules is disclosed proactively based on basic policies and disclosure standards.

The Company has prepared Rules for the Prevention of Insider Trading, and systems have been created to communicate regulations regarding insider trading throughout the ENEOS Group.

[Disclosure Policy](#) □ >

Disclosure Framework and Workflow



- 1 Whether timely disclosure is required is determined through consultation among the director responsible, the general managers of the General Administration, Legal & Corporate Affairs, and Controller departments, the information disclosure officer (general manager of the Investor Relations Department), and the general managers of any other relevant departments or offices.
- 2 Disclosure of information regarding events that require urgent disclosure may be made on the authority of a representative director without being reported to the Board of Directors.

Data

- Governance
▼
- Environmental
▼
- Social
▼
- Independent Practitioner’s Assurance Report
▼

Governance

	Item	FY2020	FY2021	FY2022
Board of Directors	Number of meetings	11	14	14
	Number of members	From April 1: 17 From June 25: 16	16	From April 1: 16 From June 28: 17 From August 12: 16
	Number of independent outside directors	6	6	6
	Average attendance rate (%)	98.3	100.0	98.3
Audit and Supervisory Committee	Number of meetings	14	15	15
	Number of members	5	5	5
	Number of independent outside directors (Audit and Supervisory Committee members)	3	3	3
	Average attendance rate (%)	98.7	100.0	98.7
Compensation Advisory Committee	Number of meetings	3	3	6
	Number of members	5	5	5
	Number of independent outside directors	3	3	3
	Average attendance rate (%)	100.0	100.0	100.0
Nomination Advisory Committee	Number of meetings	4	6	7
	Number of members	5	5	5
	Number of independent outside directors	3	3	3
	Average attendance rate (%)	100.0	100.0	94.1

Environmental

- The environmental information covers a total of 134 business sites at 80 companies in the principal operating companies the ENEOS Group, the JX Nippon Oil & Gas Exploration Group, the JX Metals Group, as well as other operating companies (ENEOS Group: 54 business sites at 29 companies; JX Nippon Oil & Gas Exploration Group: 3 business sites at 1 company (operator business); JX Metals Group: 77 business sites at 49 companies; other operating companies: 1 company), however, the companies covered vary depending on the information. The companies covered are indicated in the “Scope of data” column.
- The JX Metals Group and NIPPO Group expanded their scope of data from fiscal 2020.
- The environmental information indicated with for fiscal 2022 has been assured by an independent practitioner.

Energy Consumption

	Unit	FY2022	FY2021	FY2022	Scope of data
Energy consumption (crude oil equivalent)	Million kL	9.38	10.07	11.80	ENEOS, JX Nippon Oil & Gas Exploration, JX Metals, NIPPO Corporation
Fuel consumption (crude oil equivalent)	Million kL	8.03	8.52	10.79	
Electricity consumption	Million kWh	4,277	4,430	3,527	

Note:

Calculated in accordance with the Act on Promotion of Global Warming Countermeasures. From fiscal 2022, calculations take into account electricity sold and heat sold.

Energy Consumption Intensity

	Unit	FY2020	FY2021	FY2022	Scope of data
Energy consumption intensity for oil refining	Oil equivalent consumption volume (kL)/ Crude distillation unit equivalent throughput (thousand kL)	9.38	9.08	8.92	Petroleum refining business of the ENEOS Group

GHG Emissions (Scope 1 and Scope 2)

	Unit	FY2020	FY2021	FY2022	Scope of data
CO ₂ emissions	Million tons	22.49	23.34	27.81	ENEOS, JX Nippon Oil & Gas Exploration, JX Metals, NIPPO Corporation
(1) Scope 1	Million tons	18.75	19.92	25.55	
(2) Scope 2	Million tons	2.70	2.37	1.19	
(3) Non-energy-derived CO ₂	Million tons	1.04	1.05	1.07	

	Unit	FY2020	FY2021	FY2022	Scope of data
GHG emissions other than CO ₂	Tons	121,880	129,611	116,656	ENEOS, JX Nippon Oil & Gas Exploration, JX Metals, NIPPO Corporation
(1) CH ₄	Tons	42,814	47,431	30,320	
(2) N ₂ O	Tons	77,748	81,652	85,929	
(3) HFCs	Tons	1,123	352	223	
(4) PFCs	Tons	0	0	0	
(5) SF ₆	Tons	195	176	184	
(6) NF ₃	Tons	0	0	0	
Total GHG emissions	Million tons	22.61	23.47	27.93	

Notes:

GHG emissions indicate emissions of greenhouse gases from consumption of electricity, fuel, etc., as well as oil refining and oil and gas production, converted to CO₂ equivalent.

Calculated in accordance with the Act on Promotion of Global Warming Countermeasures. From fiscal 2022, calculations take into account electricity sold and heat sold. GHG emissions from electricity use were calculated using the emissions factors by electricity user.

GHG Emissions (Scope 3)

Category		Unit	FY2022	Scope of data
1	Purchased goods and services	Million tons	22.69	ENEOS
2	Capital goods	Million tons	0.67	
3	Fuel- and energy-related activities not included in Scope 1 or Scope 2	Million tons	0.04	
4	Transportation and distribution (upstream)	Million tons	2.62	
5	Waste generated in operations	Million tons	0.08	
6	Business travel	Million tons	0.004	
7	Employee commuting	Million tons	0.002	
9	Transportation and distribution (downstream) <input checked="" type="checkbox"/>	Million tons	0.37	
11	Use of sold products <input checked="" type="checkbox"/>	Million tons	183.42	
14	Franchises	Million tons	0.29	
GHG emissions		Million tons	210.19	

Air Pollution Load

	Unit	FY2020	FY2021	FY2022	Scope of data
(1) SOx	Tons	10,626	11,201	11,171	ENEOS, JX Metals, NIPPO Corporation
(2) NOx	Tons	11,969	13,237	13,315	
(3) Soot	Tons	871	885	941	
(4) VOC	Tons	11,886	11,873	12,117	ENEOS, JX Nippon Oil & Gas Exploration

Notes:

VOC data for the JX Nippon Oil & Gas Exploration Group covers the Nakajo Field Office.

Data for the JX Metals Group covers 45 business sites at 31 companies (fiscal 2022).

Water Use and Discharge

	Unit	FY2020	FY2021	FY2022	Scope of data
Water used (1) + (2) + (3) + (4) + (5)	Million tons	1,521.78	1,499.22	1,567.98	ENEOS, JX Nippon Oil & Gas Exploration, JX Metals, NIPPO Corporation
(1) Service water (municipal potable water)	Million tons	3.67	3.85	4.02	
(2) Service water (surface water)	Million tons	155.24	167.28	183.34	
(3) Harvested rainwater	Million tons	0	0	0	
(4) Groundwater	Million tons	18.87	19.51	20.20	
(5) Seawater	Million tons	1,344.00	1,308.58	1,360.42	
Water discharged (1) + (2)	Million tons	1,469.39	1,445.08	1,455.86	
(1) River discharge	Million tons	14.90	15.50	24.29	
(2) Sea discharge	Million tons	1,454.49	1,429.58	1,431.56	

Note:

Data for the JX Metals Group covers 45 business sites at 31 companies (fiscal 2022).

Water Pollution Load

	Unit	FY2020	FY2021	FY2022	Scope of data
COD	Tons	1,177	1,260	2,486	ENEOS, JX Nippon Oil & Gas Exploration, JX Metals

Note:

Data for the JX Metals Group covers 45 business sites at 31 companies (fiscal 2022).

Release and Transfer of Chemical Substances (PRTR)

	Unit	FY2020	FY2021	FY2022	Scope of data
(1) Released	Tons	2,257	1,749	2,575	ENEOS, JX Nippon Oil & Gas Exploration, JX Metals, NIPPO Corporation
(2) Transferred	Tons	446	369	344	

Notes:

Data for the JX Nippon Oil & Gas Exploration Group covers the Nakajo Field Office.

Data for the JX Metals Group covers 30 business sites at 18 companies (fiscal 2022).

Waste

	Unit	FY2020	FY2021	FY2022	Scope of data
Total waste	Tons	4,144,932	3,209,760	3,691,031	ENEOS, JX Nippon Oil & Gas Exploration, JX Metals, NIPPO Corporation
Landfill disposal volume	Tons	28,756	26,243	30,085	
Waste-to-landfill ratio	%	0.7	0.8	0.8	

Note:

Data for the JX Metals Group for total waste covers 45 business sites at 31 companies (fiscal 2022) and for landfill disposal volume and waste-to-landfill ratio covers 41 business sites at 27 companies (fiscal 2022). From fiscal 2020, volumes for the JX Metals Group include by-products (approx. 2,480 thousand tons).

Environmental Accidents

	FY2020	FY2021	FY2022
Number of environmental accidents	0	0	0
Monetary penalties	Nil	Nil	Nil

Social

- Social information covers ENEOS Holdings, the ENEOS Group, the JX Nippon Oil & Gas Exploration Group, the JX Metals Group and other operating companies, however, the companies covered vary depending on the information. The breakdown of the totals by company is shown in the table below.
- The social information indicated with for fiscal 2022 has been assured by an independent practitioner.

Employees

Item		Total	ENEOS Holdings	ENEOS	JX Nippon Oil & Gas Exploration	JX Metals
Number of employees (by employment status)						
Male	Full time	9,911	582	7,162	291	1,876
	Fixed term	210	8	54	31	117
	Non-fixed term (regular employees)	9,701	574	7,108	260	1,759
	Other than full time	87	4	58	3	22
	Fixed term	71	0	47	3	21
	Non-fixed term	16	4	11	0	1
	Subtotal	9,998	586	7,220	294	1,898
Female	Full time	1,594	291	946	56	301
	Fixed term	47	20	5	2	20
	Non-fixed term (regular employees)	1,547	271	941	54	281
	Other than full time	26	0	3	2	21
	Fixed term	7	0	2	2	3
	Non-fixed term	19	0	1	0	18
	Subtotal	1,620	291	949	58	322
	Percentage of female employees	13.9%	33.2%	11.6%	16.5%	14.5%
Temporary staff		692	2	563	6	121
	Male	389	0	326	2	61
	Female	303	2	237	4	60
	Percentage of temporary staff	5.6%	0.2%	6.4%	1.7%	5.2%
Total		12,310	879	8,732	358	2,341
Foreign nationals		78	12	43	7	16
	Male	40	6	23	3	8
	Female	38	6	20	4	8
Mid-career hires		856	—	259	37	560
Number of locally employed staff at overseas sites		4,634	0	1,160	337	3,137
	Managerial staff	644	0	188	79	377

Item	Total	ENEOS Holdings	ENEOS	JX Nippon Oil & Gas Exploration	JX Metals	
Number of employees (by category), average age and average years of service						
Managerial staff (regular employees)	2,878	345	1,932	144	457	
Male	2,726	298	1,856	135	437	
Female	152	47	76	9	20	
Percentage of female managerial staff	5.3%	13.6%	3.9%	6.3%	4.4%	
Age	Up to 29 years old	0	0	0	0	
	30–49 years old	1,150	139	691	55	265
	50 years old and over	1,726	206	1,241	87	192
Average age	50.2	50.0	50.6	50.2	48.4	
Average years of service	24.7	25.3	26.0	22.9	19.3	
Foreign nationals	12	0	4	4	4	
Mid-career hires	118	0	37	5	76	
Non-managerial staff (regular employees)	8,372	500	6,117	172	1,583	
Male	6,975	276	5,252	125	1,322	
Female	1,397	224	865	47	261	
Age	Up to 29 years old	2,554	104	1,951	32	467
	30–49 years old	3,987	244	2,787	122	834
	50 years old and over	1,831	152	1,379	18	282
Average age	38.0	41.2	37.9	36.9	37.3	
Average years of service	15.4	15.8	16.5	11.1	11.4	
Total	11,250	845	8,049	316	2,040	
Average age (regular employees)	41.1	44.8	41.0	42.9	39.8	
Average age – male	41.3	45.7	41.1	43.3	40.2	
Average age – female	40.0	42.9	39.8	41.3	37.5	
Average years of service (regular employees)	17.8	19.7	18.8	16.4	13.2	
Average years of service – male	18.1	20.4	19.0	17.0	13.9	
Average years of service – female	15.6	18.2	17.1	13.7	8.7	

Item		Total	ENEOS Holdings	ENEOS	JX Nippon Oil & Gas Exploration	JX Metals
Number of new hires (regular employees, incl. mid-career hires)						
Male	Up to 29 years old	334	—	228	5	101
	Percentage of regular employees as of March 2023	3.0%	—	2.8%	1.6%	5.0%
	30–49 years old	171	—	79	8	84
	Percentage of regular employees as of March 2023	1.5%	—	1.0%	2.5%	4.1%
	50 years old and over	4	—	1	0	3
	Percentage of regular employees as of March 2023	0.0%	—	0.0%	0.0%	0.1%
	Subtotal	509	—	308	13	188
	Percentage of regular employees as of March 2023	4.5%	—	3.8%	4.1%	9.2%
Female	Up to 29 years old	112	—	84	4	24
	Percentage of regular employees as of March 2023	1.0%	—	1.0%	1.3%	1.2%
	30–49 years old	32	—	5	1	26
	Percentage of regular employees as of March 2023	0.3%	—	0.1%	0.3%	1.3%
	50 years old and over	1	—	0	0	1
	Percentage of regular employees as of March 2023	0.0%	—	0.0%	0.0%	0.0%
	Subtotal	145	—	89	5	51
	Percentage of regular employees as of March 2023	1.3%	—	1.1%	1.6%	2.5%
Total	654	—	397	18	239	
Percentage of regular employees as of March 2023	5.8%	—	4.9%	5.7%	11.7%	

Item		Total	ENEOS Holdings	ENEOS	JX Nippon Oil & Gas Exploration	JX Metals
Employee turnover (regular employees)						
Male	Up to 29 years old	99	1	81	2	15
	Percentage of regular employees as of March 2023	0.9%	0.1%	1.0%	0.6%	0.7%
	30-49 years old	104	5	66	3	30
	Percentage of regular employees as of March 2023	0.9%	0.6%	0.8%	1.0%	1.5%
	50 years old and over	132	9	105	1	17
	Percentage of regular employees as of March 2023	1.2%	1.1%	1.3%	0.3%	0.8%
	Subtotal	335	15	252	6	62
	Percentage of regular employees as of March 2023	3.0%	1.8%	3.1%	1.9%	3.0%
Female	Up to 29 years old	14	1	8	1	4
	Percentage of regular employees as of March 2023	0.1%	0.1%	0.1%	0.3%	0.2%
	30-49 years old	25	3	14	1	7
	Percentage of regular employees as of March 2023	0.2%	0.4%	0.2%	0.3%	0.3%
	50 years old and over	12	1	11	0	0
	Percentage of regular employees as of March 2023	0.1%	0.1%	0.1%	0.0%	0.0%
	Subtotal	51	5	33	2	11
	Percentage of regular employees as of March 2023	0.5%	0.6%	0.4%	0.6%	0.5%
Total	386	20	285	8	73	
Percentage of regular employees as of March 2023	3.4%	2.4%	3.5%	2.5%	3.6%	

Item		Total	ENEOS Holdings	ENEOS	JX Nippon Oil & Gas Exploration	JX Metals
Employment rate of persons with disabilities		2.44%	—	2.50%	3.98%	2.10%
Number of employees re-employed after mandatory retirement		473	51	382	3	37
Paid annual leave	Average number of days of paid annual leave granted	22.0	—	22.1	22.3	21.4
	Average number of days of paid annual leave taken	19.5	—	19.8	16.8	18.3
	Usage rate of paid annual leave	88.8%	—	89.8%	75.4%	85.5%
Number of employees taking family care leave		9	—	6	0	3
Childbirth / childcare	Number of employees taking childcare leave	357	—	321	10	26
	Male employees	316	—	292	7	17
	Percentage of male employees taking childcare leave	77.9%	—	103.9%	70.0%	18.2%
	Percentage of employees returning to work after giving birth or taking childcare leave	100.0%	—	100.0%	100.0%	100.0%
	Percentage still employed 12 months after returning to work	97.4%	—	97.4%	100.0%	96.6%
Labor unions	Number of members	9,682	No labor unions	7,284	No labor unions	2,398
	Membership rate	99.8%	No labor unions	99.8%	No labor unions	100.0%
Participation rate for regular health checkups		100.0%	100.0%	100.0%	100.0%	100.0%

Notes:

Employees of ENEOS Holdings are seconded from operating companies and belong to joint departments of ENEOS Holdings and ENEOS. Employees of ENEOS do not include employees belonging to joint departments.

The number of new hires, the number of mid-career hires, the employment rate of persons with disabilities, the number of days of paid annual leave granted/taken, the number of employees taking family care leave, and the taking of leave for childbirth and childcare for ENEOS Holdings are accounted for at employees' companies of origin.

Training Hours in Fiscal 2022

	Total training hours	Training hours per employee
ENEOS Holdings, ENEOS	31,243	3.5
JX Nippon Oil & Gas Exploration	4,245	12.1
JX Metals	31,515	14.2
Total	67,003	5.8

Note:

Number of hours of internal group training and external training organized by the human resources departments of ENEOS Holdings and the Group's principal operating companies, aggregated for each employer.

Occupational Injuries

		FY2020	FY2021	FY2022	Scope of data	
Number of occupational injuries (persons) <input checked="" type="checkbox"/>						
Directly hired employees	Subtotal	12	17	12	ENEOS, JX Nippon Oil & Gas Exploration, JX Metals	
	Fatalities	0	0	0		
	Lost work time	12	17	12		
Contractors (contractor companies, etc.)	Subtotal	28	26	17		
	Fatalities	2	0	0		
	Lost work time	26	26	17		
Total		40	43	29		
Occupational injury frequency rate <input checked="" type="checkbox"/>		0.37	0.37	0.22		11 ENEOS refineries and plants, 3 JX Nippon Oil & Gas Exploration business sites, JX Metals head office and 5 business sites
Occupational injury severity rate <input checked="" type="checkbox"/>		0.03	0.01	0.02		
Number of lost working days due to occupational injuries (days) <input checked="" type="checkbox"/>		645	125	459*		

Notes:

Number of contractors in "Number of occupational injuries" is for reference.

Scope of data for occupational injury frequency rate, occupational injury severity rate, and lost working days due to occupational injuries: Employees directly employed by 11 ENEOS refineries and plants, 3 JX Nippon Oil & Gas Exploration business sites (Vietnam, Kuala Lumpur, and Nakajo) and the JX Metals head office and 5 business sites (head office, Hitachi, Isohara, Kurami, Tsuruga, and Saganoseki).

* Number of lost working days as of August 31, 2023.

	FY2020	FY2021	FY2022	Scope of data
Total recordable incident rate (TRIR)				ENEOS Holdings, ENEOS head office and 11 refineries and plants, JX Nippon Oil & Gas Exploration head office and 3 business sites, JX Metals head office and 5 business sites
Directly hired employees	1.23	1.13	1.00	
Contractors (contractor companies, etc.)	1.86	2.13	2.59	
Lost time injury rate (LTIR)				
Directly hired employees	0.35	0.26	0.19	
Contractors (contractor companies, etc.)	0.63	0.72	0.51	

Notes:

TRIR: Number of occupational injuries per million working hours (non-lost-time occupational injuries + lost-time occupational injuries and fatalities)

LTIR: Number of lost-time occupational injuries and fatalities per million working hours

Scope of data for TRIR and LTIR: ENEOS Holdings, ENEOS head office and 11 refineries and plants, JX Nippon Oil & Gas Exploration head office and 3 business sites (Vietnam, Kuala Lumpur, and Nakajo), JX Metals head office and 5 business sites (Hitachi, Isohara, Kurami, Tsuruga, and Saganoseki)

TRIR excludes heat stroke (first aid). (Number of cases of heat stroke [first aid] involving directly hired employees and contractors: 21 in fiscal 2020, 10 in fiscal 2021, and 23 in fiscal 2022)

ENEOS Group Safety Education Center Training Participation

	FY2020	FY2021	FY2022	Scope of data
Number of participants	432	570	1,013	ENEOS, JX Nippon Oil & Gas Exploration, JX Metals, affiliated Group companies, contractor companies, etc.

Independent Practitioner's Assurance Report

December 11, 2023

Mr. Takeshi Saito,
Representative Director, President,
ENEOS Holdings, Inc.

Tomoharu Hase
Representative Director
Deloitte Tohmatsu Sustainability Co., Ltd.
3-2-3, Marunouchi, Chiyoda-ku, Tokyo

We have undertaken a limited assurance engagement of the environmental information and the social information indicated with for the year ended March 31, 2023 (the "Sustainability Information") included in the "ENEOS REPORT ESG DATA BOOK 2023 (PDF)" (the "Report") of ENEOS Holdings, Inc. (the "Company").

The Company's Responsibility

The Company is responsible for the preparation of the Sustainability Information in accordance with the calculation and reporting standard adopted by the Company (as described on pages 2, 146, 150 and indicated with the Sustainability Information of the Report). Greenhouse gas quantification is subject to inherent uncertainty for reasons such as incomplete scientific knowledge used to determine emissions factors and numerical data needed to combine emissions of different gases.

Our Independence and Quality Management

We have complied with the independence and other ethical requirements of the Code of Ethics for Professional Accountants issued by the International Ethics Standards Board for Accountants, which is founded on fundamental principles of integrity, objectivity, professional competence and due care, confidentiality and professional behavior. We apply International Standard on Quality Management 1, *Quality Management for Firms that Perform Audits or Reviews of Financial Statements, or Other Assurance or Related Services Engagements*, and accordingly maintain a comprehensive system of quality management including documented policies and procedures regarding compliance with ethical requirements, professional standards and applicable legal and regulatory requirements.

Our Responsibility

Our responsibility is to express a limited assurance conclusion on the Sustainability Information based on the procedures we have performed and the evidence we have obtained. We conducted our limited assurance engagement in accordance with the International Standard on Assurance Engagements ("ISAE") 3000, *Assurance Engagements Other than Audits or Reviews of Historical Financial Information*, issued by the International Auditing and Assurance Standards Board ("IAASB"), ISAE 3410, *Assurance Engagements on Greenhouse Gas Statements*, issued by the IAASB and the *Practical Guideline for the Assurance of Sustainability Information*, issued by the Japanese Association of Assurance Organizations for Sustainability Information.

The procedures we performed were based on our professional judgment and included inquiries, observation of processes performed, inspection of documents, analytical procedures, evaluating the appropriateness of quantification methods and reporting policies, and agreeing or reconciling with underlying records. These procedures also included the following:

- Evaluating whether the Company's methods for estimates are appropriate and had been consistently applied. However, our procedures did not include testing the data on which the estimates are based or reperforming the estimates.
- Performing interviews of responsible persons and inspecting documentary evidence to assess the completeness of the data, data collection methods, source data and relevant assumptions applicable to the sites.

The procedures performed in a limited assurance engagement vary in nature and timing from, and are less in extent than for, a reasonable assurance engagement. Consequently, the level of assurance obtained in a limited assurance engagement is substantially lower than the assurance that would have been obtained had we performed a reasonable assurance engagement.

Limited Assurance Conclusion

Based on the procedures we have performed and the evidence we have obtained, nothing has come to our attention that causes us to believe that the Sustainability Information is not prepared, in all material respects, in accordance with the calculation and reporting standard adopted by the Company.








The above represents a translation, for convenience only, of the original Independent Practitioner's Assurance report issued in the Japanese language.

Comparative Table with GRI Standards










Statement of Use	The ENEOS Group has reported the information cited in this GRI content index for the period from April 1, 2022 to March 31, 2023 with reference to the GRI Standards.
GRI 1 used	GRI 1: Foundation 2021

Universal Standard

GRI 2: General Disclosures 2021

1. The organization and its reporting practices		Where to find	
2-1	Organizational details	> Corporate Data 	-
		> ENEOS Group Business Sites Worldwide 	-
2-2	Entities included in the organization's sustainability reporting	> Editorial Policy	P2
		> Annual Securities Report (Available in Japanese only) 	-
2-3	Reporting period, frequency and contact point	> Editorial Policy	P2
		> Annual Securities Report (Available in Japanese only) 	-
2-4	Restatements of information	> Data	P145
2-5	External assurance	> Independent Practitioner's Assurance Report	P157
2. Activities and workers		Where to find	
2-6	Activities, value chain and other business relationships	> Business Segments 	-
		> ENEOS Group Business Sites Worldwide 	-
		> ENEOS REPORT Integrated Report 	-
		> Supply Chain Management	P108
2-7	Employees	> Data	P150
2-8	Workers who are not employees	> Data	P150

3. Governance		Where to find	
2-9	Governance structure and composition	> Corporate Governance Framework	P124
		> ESG Management Structure	P6
2-10	Nomination and selection of the highest governance body	> Corporate Governance Framework	P124
		> ENEOS REPORT Integrated Report 	-
		> Corporate Governance Report (Available in Japanese only) (PDF : 277KB) 	-
		> Basic Policy on Corporate Governance of ENEOS Group (PDF : 305KB) 	-
2-11	Chair of the highest governance body	> Corporate Governance Framework	P124
2-12	Role of the highest governance body in overseeing the management of impacts	> ESG Management Structure	P6
		> Corporate Governance Framework	P124
		> Risk Management	P136
		> Our Response to Climate Change Risks and Opportunities (TCFD)	P59
2-13	Delegation of responsibility for managing impacts	> ESG Management Structure	P6
2-14	Role of the highest governance body in sustainability reporting	> ESG Management Structure	P6
2-15	Conflicts of interest	> Corporate Governance Framework	P124
		> Corporate Governance Report (Available in Japanese only) (PDF : 277KB) 	-
		> Basic Policy on Corporate Governance of ENEOS Group (PDF : 305KB) 	-
2-16	Communication of critical concerns	> Risk Management	P136
		> Compliance	P140
2-17	Collective knowledge of the highest governance body	> Corporate Governance Framework	P124
2-18	Evaluation of the performance of the highest governance body	> Evaluation of the Effectiveness of the Board of Directors	P129
2-19	Remuneration policies	> Determination of Director Remuneration	P131
		> ENEOS REPORT Integrated Report 	-
		> Corporate Governance Report (Available in Japanese only) (PDF : 277KB) 	-
		> Basic Policy on Corporate Governance of ENEOS Group (PDF : 305KB) 	-

2-20	Process to determine remuneration	> Determination of Director Remuneration	P131
		> ENEOS REPORT Integrated Report 	-
		> Corporate Governance Report (Available in Japanese only) (PDF : 277KB) 	-
		> Basic Policy on Corporate Governance of ENEOS Group (PDF : 305KB) 	-
2-21	Annual total compensation ratio	-	
4. Strategy, policies and practices		Where to find	
2-22	Statement on sustainable development strategy	> ENEOS REPORT Integrated Report 	-
2-23	Policy commitments	> ENEOS REPORT Integrated Report 	-
		> ENEOS Group Philosophy 	-
		> ENEOS Group Code of Conduct 	-
		> ENEOS Group Policies 	-
		> ESG Management	P6
		> Human Rights	P75
2-24	Embedding policy commitments	> ENEOS REPORT ESG DATA BOOK (ESG Management, Environmental, Social, Governance)	P6, P21, P67, P123
		> ENEOS REPORT Integrated Report 	-
2-25	Processes to remediate negative impacts	> Human Rights (Consultation Contact Points (Remedy Measures))	P82
		> Quality (Initiatives at the Customer Service Center)	P107
2-26	Mechanisms for seeking advice and raising concerns	> Compliance	P140
		> Human Rights (Consultation Contact Points (Remedy Measures))	P82
2-27	Compliance with laws and regulations	> Compliance	P140
		> Preventing Environmental Accidents	P28
		> Data	P149
2-28	Membership associations	> Participation in Initiatives and Organizations	P18
		> Communication with Industry Organizations	P20

5. Stakeholder engagement		Where to find	
2-29	Approach to stakeholder engagement	> Stakeholder Engagement	P17
2-30	Collective bargaining agreements	> Labor-Management Negotiations on Appropriate Labor Conditions	P82
		> Data	P145

GRI 3: Material Topics 2021

		Where to find	Sector Standard reference number	
3-1	Process to determine material topics	> ESG Management		P6
3-2	List of material topics	> Verifying and Identifying Material ESG Issues		P7
		> ESG Management		P6
3-3	Management of material topics	> Verifying and Identifying Material ESG Issues		P7
		> ESG Management Structure	11.1.1 11.2.1 11.3.1 11.4.1	P6
		> Environmental Management	11.5.1 11.6.1 11.8.1 11.9.1	P22

Topic Standards/Sector Standards

Topics with reference numbers in the Sector Standard column (GRI 11: Oil and Gas Sector 2021) have been selected as material ESG issues.

ECONOMIC

GRI 201: Economic Performance 2016		Where to find	Sector Standard reference number	
201-1	Direct economic value generated and distributed	> Annual Securities Report (Available in Japanese only) ☐		-
201-2	Financial implications and other risks and opportunities due to climate change	> Annual Securities Report (Available in Japanese only) ☐		-
		> Our Response to Climate Change Risks and Opportunities (TCFD)		P59
		> Risk Management		P136
201-3	Defined benefit plan obligations and other retirement plans	-		
201-4	Financial assistance received from government	-		

GRI 202: Market Presence 2016		Where to find	Sector Standard reference number	
202-1	Ratios of standard entry level wage by gender compared to local minimum wage	-		
202-2	Proportion of senior management hired from the local community	-		
GRI 203: Indirect Economic Impacts 2016		Where to find	Sector Standard reference number	
203-1	Infrastructure investments and services supported	> Social Contribution		P115
203-2	Significant indirect economic impacts	-		
GRI 204: Procurement Practices 2016		Where to find	Sector Standard reference number	
204-1	Proportion of spending on local suppliers	-		
GRI 205: Anti-Corruption 2016		Where to find	Sector Standard reference number	
205-1	Operations assessed for risks related to corruption	> Compliance (Prevention of Bribery and Corruption)		P143
205-2	Communication and training on anti-corruption policies and procedures	> Compliance		P140
205-3	Confirmed incidents of corruption and actions taken	> Compliance (Prevention of Bribery and Corruption)		P143
GRI 206: Anti-Competitive Behavior 2016		Where to find	Sector Standard reference number	
206-1	Legal actions for anti-competitive behavior, anti-trust, and monopoly practices	> Compliance		P140
GRI 207: Tax 2019		Where to find	Sector Standard reference number	
207-1	Approach to tax	> Honoring Tax Liabilities		P143
207-2	Tax governance, control, and risk management	-		
207-3	Stakeholder engagement and management of concerns related to tax	-		
207-4	Country-by-country reporting	-		

ENVIRONMENTAL

GRI 301: Materials 2016		Where to find	Sector Standard reference number	
301-1	Materials used by weight or volume	> Overview of the ENEOS Group's Environmental Impact		P26
301-2	Recycled input materials used	> Increasing the Use of Recyclable Raw Materials		P42
301-3	Reclaimed products and their packaging materials	-		
GRI 302: Energy 2016		Where to find	Sector Standard reference number	
302-1	Energy consumption within the organization	> Overview of the ENEOS Group's Environmental Impact	11.1.2	P26
		> Data		P146
302-2	Energy consumption outside of the organization	-		
302-3	Energy intensity	> Energy Conservation at Production Sites	11.1.4	P31
		> Data		P146
302-4	Reduction of energy consumption	> Energy Conservation at Production Sites		P31
		> Data		P146
302-5	Reductions in energy requirements of products and services	-		
GRI 303: Water and Effluents 2018		Where to find	Sector Standard reference number	
303-1	Interactions with water as a shared resource	> Effective Utilization of Water Resources and Preventing Water Pollution	11.6.2	P51
		> Overview of the ENEOS Group's Environmental Impact		P26
303-2	Management of water discharge-related impacts	> Effective Utilization of Water Resources and Preventing Water Pollution	11.6.3	P51
303-3	Water withdrawal	> Data	11.6.4	P148
303-4	Water discharge	> Data	11.6.5	P148
303-5	Water consumption	> Effective Utilization of Water Resources	11.6.6	P51


GRI 304: Biodiversity 2016		Where to find	Sector Standard reference number	
304-1	Operational sites owned, leased, managed in, or adjacent to, protected areas and areas of high biodiversity value outside protected areas	> Biodiversity	11.4.2	P54
304-2	Significant impacts of activities, products, and services on biodiversity	> Biodiversity	11.4.3	P54
304-3	Habitats protected or restored	> Biodiversity	11.4.4	P54
304-4	IUCN Red List species and national conservation list species with habitats in areas affected by operations	> Biodiversity	11.4.5	P54
GRI 305: Emissions 2016		Where to find	Sector Standard reference number	
305-1	Direct (Scope 1) GHG emissions	> Overview of the ENEOS Group's Environmental Impact	11.1.5	P26
		> Prevention of Global Warming		P29
		> Data		P146
305-2	Energy indirect (Scope 2) GHG emissions	> Overview of the ENEOS Group's Environmental Impact	11.1.6	P26
		> Prevention of Global Warming		P29
		> Data		P146
305-3	Other indirect (Scope 3) GHG emissions	> Overview of the ENEOS Group's Environmental Impact	11.1.7	P26
		> Prevention of Global Warming		P29
		> Data		P147
305-4	GHG emissions intensity	-		
305-5	Reduction of GHG emissions	> Prevention of Global Warming	11.2.3	P29
		> Data		P146
305-6	Emissions of ozone-depleting substances (ODS)	-		
305-7	Nitrogen oxides (NOx), sulfur oxides (SOx), and other significant air emissions	> Prevention of Air Pollution	11.3.2	P50
		> Data		P148

GRI 306: Waste 2020		Where to find	Sector Standard reference number	
306-1	Waste generation and significant waste-related impacts	> The 3Rs (Reduce, Reuse, Recycle)	11.5.2	P41
		> Management of Chemical Substances		P46
306-2	Management of significant waste-related impacts	> The 3Rs (Reduce, Reuse, Recycle)	11.5.3	P41
		> Management of Chemical Substances		P46
306-3	Waste generated	> The 3Rs (Reduce, Reuse, Recycle)	11.5.4	P41
306-4	Waste diverted from disposal	> The 3Rs (Reduce, Reuse, Recycle)	11.5.5	P41
306-5	Waste directed to disposal	> The 3Rs (Reduce, Reuse, Recycle)	11.5.6	P41
		> Overview of the ENEOS Group's Environmental Impact		P26
GRI 308: Supplier Environmental Assessment 2016		Where to find	Sector Standard reference number	
308-1	New suppliers that were screened using environmental criteria	> Supply Chain Management (CSR Procurement)		P109
308-2	Negative environmental impacts in the supply chain and actions taken	> Supply Chain Management (CSR Procurement)		P109


SOCIAL

GRI 401: Employment 2016		Where to find	Sector Standard reference number	
401-1	New employee hires and employee turnover	> Data		P152
401-2	Benefits provided to full-time employees that are not provided to temporary or part-time employees	-		
401-3	Parental leave	> Healthy Work Environment (Work-Life Management)		P100
		> Data		P154
GRI 402: Labor/Management Relations 2016		Where to find	Sector Standard reference number	
402-1	Minimum notice periods regarding operational changes	> Human Rights (Labor-Management Negotiations on Appropriate Labor Conditions)		P82

GRI 403: Occupational Health and Safety 2018		Where to find	Sector Standard reference number	
403-1	Occupational health and safety management system	> Operation of Safety Management System and Status of Certification	11.9.2	P69
403-2	Hazard identification, risk assessment, and incident investigation	> Safety (Major Initiatives)	11.9.3	P71
403-3	Occupational health services	> Industrial Hygiene at Refineries and Other Production Sites	11.9.4	P92
403-4	Worker participation, consultation, and communication on occupational health and safety	> Health (Structure)	11.9.5	P90
403-5	Worker training on occupational health and safety	> Safety (Major Initiatives)	11.9.6	P71
403-6	Promotion of worker health	> Health	11.9.7	P89
403-7	Prevention and mitigation of occupational health and safety impacts directly linked by business relationships	> Safety	11.9.8	P68
		> Industrial Hygiene at Refineries and Other Production Sites		P92
403-8	Workers covered by an occupational health and safety management system	> Safety	11.9.9	P68
403-9	Work-related injuries	> Results of Major Initiatives for Ensuring Safety	11.9.10	P69
		> Data		P155
403-10	Work-related ill health	-		
GRI 404: Training and Education 2016		Where to find	Sector Standard reference number	
404-1	Average hours of training per year per employee	> Human Resource Development	11.10.6 11.11.4	P84
		> Data		P155
404-2	Programs for upgrading employee skills and transition assistance programs	> Human Resource Development	11.7.3 11.10.7	P84
		> Healthy Work Environment		P94
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