Environment

Looking to Achieve Carbon Neutrality by 2050

Information Disclosure in Line with TCFD Recommendations

Basic Approach

In May 2019, the ENVIPRO Group announced its endorsement of the recommendations of the Task Force on Climate-related Financial Disclosures (TCFD), established by the Financial Stability Board (FSB). The TCFD recommends information disclosure based on four categories: governance, risk management, strategy, and metrics and targets. The Group discloses information on climate-related issues according to these four categories.

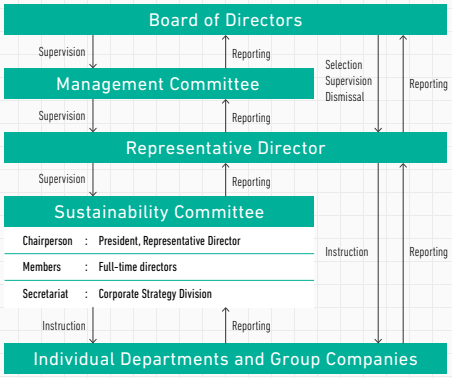
In December 2020, the Group decided to achieve effectively zero greenhouse gas (GHG) emissions from all its businesses by 2050, including the processing and recycling of scrap and waste handled by the Group. As countries work toward decarbonization, resources and climate change are issues that–far from being separate–are closely interrelated and global in scope. Unrestricted resource extraction and GHG emissions undermine sustainability and must be addressed if we are to preserve the Earth's resources and natural environment we share into the future. As its resource circulation business is located at the end of the supply chain, the Group has the characteristics to address both of these important social challenges through its business. This is precisely the social responsibility we believe the Group should fulfill.

Governance

Sustainability Promotion System

To promote policies and measures related to climate change response and other sustainability matters, the Group's sustainability promotion system has a Sustainability Committee that consists of the full-time directors. The committee seeks to promote the medium-term management plan that forms our strategy for achieving sustainable development for both the Group and society. As an organization that assists decision-making by the representative director, it flexibly and actively discusses and examines the status of strategy promotion and future directions, including new business and M&A, from a long-term perspective. Matters discussed are further resolved or discussed by the Management Committee, a decision-making body for business execution, and are then submitted to the Board of Directors. Under the supervision system of the Board of Directors, we work to maintain governance and promote sustainability.

Sustainability Promotion System



Role of Conference Bodies to Address Climate Change within the Sustainability Promotion System

Conference Body	Role
Board of Directors (Meets monthly)	Supervises progress on initiatives related to environmental issues discussed and approved by the Management Committee.
Management Committee (Meets monthly)	Decides on important matters related to individual, specific instances of business execution, and makes decisions on timely disclosure.
Sustainability Committee (Meets monthly)	Discusses the organization and operation of the committee and other important matters concerning sustainability in order to promote the medium-term management plan.

Initiatives to Date

- 2018: Joined RE100
- 2019: Announced endorsement of the TCFD recommendations
- 2020: Declared a commitment to become carbon neutral by 2050
- 2021: Incorporated the Sustainability Committee into the governance structure
- 2022: In the medium-term management plan, disclosed CO_2 reduction targets in line with the Science-Based Targets (SBT)

Risk

Risk Management

At the Group, the internal Control Committee evaluates and reviews business risks, which are integrated into the company-wide risk management process. The Sustainability Committee evaluates and reviews climate change-related risks. Relevant departments identify opportunities, consider specific measures, and make recommendations as necessary. The Sustainability Committee evaluates the recommendations and promotes measures to address them. For both risks and opportunities, particularly important matters are reported to or submitted to the attention of the Board of Directors.

Strategy

Identifying and Addressing Risks and Opportunities

The Group conducts scenario analyses to examine the risks and opportunities posed by climate change and its impact on the Group. We analyzed the Group's business activities using the Representative Concentration Pathways (RCP8.5) published by the Intergovernmental Panel on Climate Change (IPCC) and the Net Zero Emissions by 2050 Scenario (NZE) published by the International Energy Agency (IEA). We examined the impact on the Group's business activities based on the assumption of a temperature increase limited to 1.5°C by the end of this century and the assumption of a 4°C increase.

Climate-Related Risks/Opportunities and Potential Financial Impacts and Responses

Type	Category	Specific Anticipated Examples	Potential Financial Impact			
			Risk	Period	Opportunities	Period
Transitional	Policy and regulation	Taxation on various types of energy and the introduction of carbon taxes	• Increased costs of using renewable energy • Easing of the supply-demand balance and price decline of ferrous scrap due to the development of new technologies such as hydrogen-reduction steelmaking	Short to long term	• Expansion of existing recycling business • Increased demand for ferrous scrap due to shift to electric furnaces, price increase • Installation of large shredder to produce electric furnace materials	Short to long term
		Regulations on the use of recycled Plastics	• Reduction in the thermal recycling of waste plastics	Long term	• Growth in demand for low-carbon fuels (RPF) • Expansion of material chemical recycling of waste plastics • Development and commercialization of chemical recycling plants	Medium to long term
		Traceability of CO_2 emissions (DX) mandated	• Lost market entry opportunities due to delays in business development	Medium term	• Expansion of logistics businesses of scrap and waste • Visualization of GHG emissions • Support for the procurement of carbon credits	Medium to long term
	Technology	Expansion of the chemical recycling of waste plastics	• Lost business entry opportunities due to delays in technology development	Medium to long term	• Creation and expansion of new markets for the chemical recycling of waste plastics	Medium to long term
	Market	Increased adoption of EVs, ESSs	• Increased demand for non-ferrous metals and minor metals due to electrification (depletion)	Short to long term	• Expansion of the Lithium-ion Battery Recycling Business • Expansion of the collection business of gold, silver and copper sediment sludge	Short to long term
	Reputation	Social responsibility as an environment-related company	• Failure to consider the environment, damage to credibility among stakeholders	Short to long term	• Scoring by CDP and other international rating agencies • Information Disclosure in Line with TCFD Recommendations • Disclosure of various approaches through the Sustainability Report	Short to long term
Physical	Acute	Increased natural disasters due to increasing severity of extreme weather events	• Decrease in earnings due to such factors as shutdowns and production reductions caused by damage to plants, difficulties in vessel dispatch, or transportation delays • Decrease in earnings due to lost sales and purchasing opportunities • Increase in insurance premiums and repair/restoration costs	Short to long term	• Enhanced response to issue of waste created in disasters	Short to long term
	Chronic	Increased heat stress due to higher average temperatures	• Decrease in productivity due to restrictions on working hours • Increased cost of investing in environmental improvement	Short to long term	• Personnel savings, unmanned operation, remote control	Short to long term

Metrics and Targets

The Group has identified GHG emissions and the percentage of electricity generated from renewable energy sources as indicators to be used in assessing and managing climate change-related risks and opportunities, and has publicized target values for each.

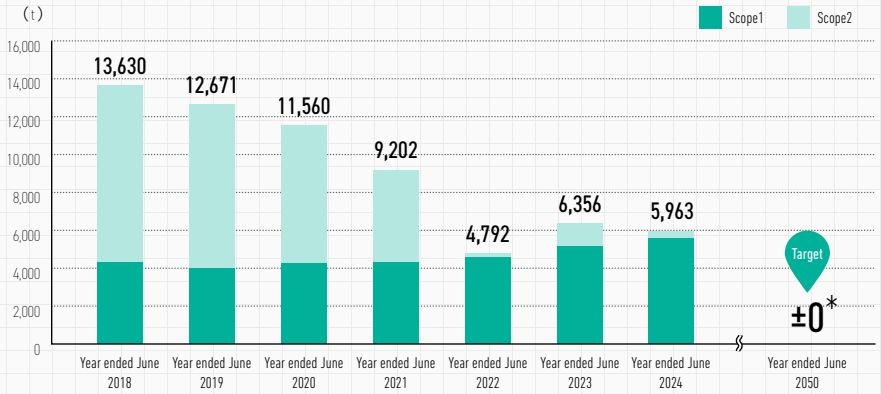
GHG Emissions

The Group aims to achieve effectively zero greenhouse gas emissions from all its businesses by 2050, including the processing and recycling of scrap and waste handled by the Group. CO_2 emissions (Scope 1+2) were 5,963 tons in the fiscal year ended June 2024, a 56% reduction compared to the fiscal year ended June 2018.

Emissions and Reduction Targets

Emission Source	Emissions of year ended June 2024 (t)	Base		Target			% reduction of the base value
		Fiscal Year	Emissions (t)	Fiscal Year	Emissions (t)	Reduction rate	
Scope1+2	5,963	Year ended June 2018	13,630	Year ended June 2028	4,907	64.0%	87.9%
				Year ended June 2050	±0*	100.0%	56.3%
Scope3	735,676	Year ended June 2023	443,808	Year ended June 2028	388,332	12.5%	▲65.8%

Scope1+2 Results of Emissions and Targets



* Scope 1 and 2 emissions for the fiscal year ended June 2050 are listed as net zero as ±0.

Initiatives for Reducing CO_2 Emissions

Impact of Using Ferrous Scrap on Reduction

722,800 t-CO_2

The ENVIPRO Group produces recycled materials by shredding and sorting waste. In the fiscal year ended June 2024, the Group as a whole shipped 520,000 tons of ferrous scrap to steel mills. Steelmaking in an electric furnace from ferrous scrap reduces CO_2 emissions by 1.39 t-CO_2 per ton compared to manufacturing in a blast furnace converter from natural resources such as iron ore (according to materials from the Japan Iron and Steel Recycling Institute). The same amount of iron produced from natural resources such as iron ore would generate 1,040,000 t-CO_2, but the steel production process generated only 317,200 t-CO_2, reducing emissions by 722,800 t-CO_2.

Impact of Producing Low-Carbon Fuel on Reduction

18,240 t-CO_2

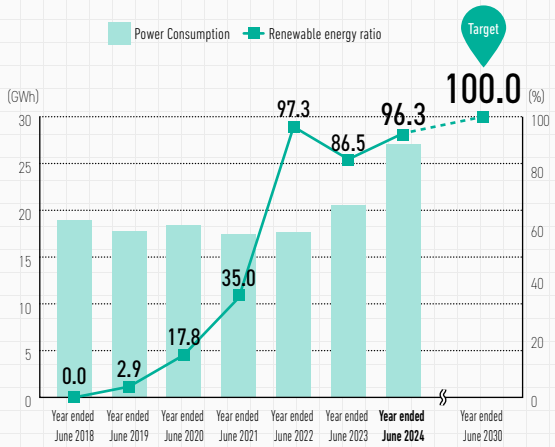
ENVIPRO Group sold 24,000 tons of RPF to paper making companies in the year ended June 2024. CO_2 emissions per ton (calorific value conversion factor) are 2.33 t-CO_2 for imported thermal coal and 1.57 t-CO_2 for PRF. Comparing the CO_2 emissions when the same amount of coal (24,000 tons) and RPF are used, emissions from the use of coal would be 55,920 t-CO_2 and emissions from RPF would be 37,680 t-CO_2, resulting in an annual reduction in CO_2 emissions of 18,240 t-CO_2.

100% renewable energy by 2030

Ratio of Renewable Energy in Electricity

In July 2018, we became the first company in the recycling industry to join RE100, which aims to convert electricity consumed in business activities to 100% renewable energy by 2050. In addition to our commitment to carbon neutrality, we have reset the RE100 target year to 2030, 20 years ahead of schedule. The share of renewable energy electricity in the Group as a whole was 96.3% in the fiscal year ended June 2024.

Actual and target electricity consumption/ renewable energy ratio



Assessment of Environmental Initiatives Climate

Change **A-**

The Group received a "A-" rating, the second highest out of nine, in a 2023 study on climate change conducted by CDP, an international non-profit organization. We will continue to cooperate with the study in 2024, and the rating will be published in 2025.

List of RE100 Plants*


ECONECOL Inc. Head Office, Fujinomiya Plant


ECONECOL Inc. Fuji Plant


ECONECOL Inc. Wood Recycling Center


ECONECOL Inc. Shimizu Plant


ECONECOL Inc. Hamamatsu Plant


ECONECOL Inc. Hakodate Plant


ECONECOL Inc. Matsumoto Plant


ECONECOL Inc. Plaza Azumino


Nitto Kako Co., Ltd. Head Office, Shonan Plant


Nitto Kako Co., Ltd. Maebashi Plant, Maebashi Office


VOLTA Inc. Head Office, Fuji Plant


VOLTA Inc. Fujinomiya Plant


VOLTA Inc. Ibaraki Plant

ENVIPRO HOLDINGS Inc. Head Office

°CLIMATE GROUP
RE100

RE100 Plants			
ECONECOL Inc.	Shizuoka Branch	Head Office, Fujinomiya Plant	Fujinomiya City, Shizuoka Prefecture
		Fuji Plant	Fuji City, Shizuoka Prefecture
		Wood Recycling Center	Fuji City, Shizuoka Prefecture
		Shimizu Plant	Shizuoka City, Shizuoka Prefecture
		Hamamatsu Plant	Hamamatsu City, Shizuoka Prefecture
	Hakodate Branch	Hakodate Plant	Hakodate City, Hokkaido
	Matsumoto Branch	Matsumoto Plant	Matsumoto City, Nagano Prefecture
		Plaza Azumino	Azumino City, Nagano Prefecture
Nitto Kako Co., Ltd.		Head Office, Shonan Plant	Samukawa-machi, Koza-gun, Kanagawa Prefecture
		Maebashi Plant, Maebashi Office	Maebashi City, Gunma Prefecture
VOLTA Inc.		Head Office, Fuji Plant	Fuji City, Shizuoka Prefecture
		Fujinomiya Plant	Fujinomiya City, Shizuoka Prefecture
		Ibaraki Plant	Hitachinaka City, Ibaraki Prefecture

RE100 (except plants)		
ENVIPRO HOLDINGS Inc.	Head Office	Fujinomiya City, Shizuoka Prefecture

*Plants and facilities that operate on electric power 100% from renewable energy

Environment

Material Balance

INPUT

Input resources 679,100 tons

Processed resources	Scrap, waste	187,700 tons
Circulating resources*1	Scrap, waste	461,900 tons
Raw materials	Raw materials for polymers, etc.	29,400 tons

Energy 56,238 MWh

Fuel	Oil	14,820 MWh
	Gas	13,414 MWh
Electricity	Renewable energy	26,755 MWh
	Non-renewable energy	1,028 MWh
	Privately generated renewable energy	221 MWh

Ratio of Renewable Energy in Electricity
96.3%

Water 99,678 m³

OUTPUT

Resource Recovery, Product Manufacturing, and Processing Outsourcing 671,100 tons

Resource recovery (including circulating resources)	Ferrous metals		520,300 tons
	Non-ferrous metals		19,100 tons
	Plastic raw materials		43,100 tons
	Raw materials for paper		12,000 tons
	Gold, silver and copper sediment sludge		4,000 tons
	Black mass, etc.		1,200 tons
	Other		12,200 tons
		Subtotal	612,000 tons
Product manufacturing	Polymer products		29,300 tons
Processing outsourcing (including circulating resources)	Resource recovery	Material recycling	5,700 tons
		Thermal recycling	15,500 tons
	Disposal	Simple incineration	3,100 tons
		Landfilling	5,500 tons

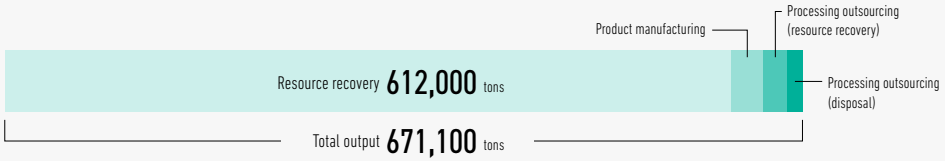
Ratio of Resource Recovery*2
95.8%

CO_2 Emissions (Scope1+2) 5,963 t-CO^2

Scope1		5,569 t-CO^2
Scope2	(market-based standards)	394 t-CO^2
Scope2	(location-based standards)	12,073 t-CO^2

CO_2 Emissions (Scope3) 735,678 t-CO^2

Category1	Purchased products/services	16,358 t-CO^2
Category2	Capital goods	5,932 t-CO^2
Category3	Fuel and energy related activities not included in Scope 1 and Scope 2	2,477 t-CO^2
Category4	Transport/delivery (upstream)	150,399 t-CO^2
Category5	Waste generated from business	52,393 t-CO^2
Category6	Business travel	83 t-CO^2
Category7	Employee commuting	294 t-CO^2
Category9	Transport/delivery (downstream)	402 t-CO^2
Category10	Processing of products sold	392,530 t-CO^2
Category11	Use of products sold	112,345 t-CO^2
Category15	Investment	2,464 t-CO^2



*1 Resources distributed through trading company functions
*2 Resource recovery rate is calculated from outputs in the Resource Circulation Business and the Lithium-ion Battery Recycling Business: (amount of resources recovered - amount of circulating resources) / (amount of resources recovered + waste disposal - amount of circulating resources) × 100