# ESG Initiatives Environment

To achieve carbon neutrality by 2050, the ENVIPRO Group has joined the RE100 initiative, whose goals are to reduce GHG emissions to effectively zero and to use 100% sustainable energy for electricity consumed in business operations. Accordingly, the Group has set goals for 2030.

# nvironment

# **Environment** Becoming Carbon Neutral 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 Disclosure (TCFD), established by the Financial Stability Board (FSB). The TCFD recommends 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 GHG emissions from all its business 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 issues 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 strategy matters, the Group's sustainability promotion system has a Sustainability Committee that consists of the president and representative director, full-time directors, executive officers, and heads of some related departments. The committee seeks to promote the mediumterm management plan (Sustainability Strategy) that forms our strategy for

#### Sustainability Promotion System

**Board of Directors** Supervision Report Selection Management Committee Supervision Report Dismissal Report Supervision **Representative Director** Report Instruction Sustainability Committee Chairperson : President and Representative Director Instruction Report Members : Full-time Directors, Executive Officers, Heads of Related Departments Secretariat : Corporate Strategy Division Report Instruction Individual departments and Group companies

#### Initiatives to Date



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 strategies.

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

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

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## **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 to the Sustainability Committee 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 Sustainable Development Scenario (SDS) 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 2°C by the end of this century and the assumption of a 4°C increase.

# **Assessment of Environmental Initiatives**

### Climate Change: **B**

The Group received a "B" rating, the third highest out of nine, in a 2022 study on climate change conducted by CDP, an international non-profit organization.



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

Туре	Category	Hypothetical examples Potential Financial Impact		incial Impact		
туре	Galegui y	nypolitetical examples	Risks	Period	Opportunities	Period
	Policy and regulation	Taxes on various types of energy, introduction of carbon taxes	<ul> <li>Increased costs of using renewable energy</li> <li>Easing of the supply-demand balance and price decline of ferrous scrap due to the development of new technologies such as hydrogen-reduction steelmaking</li> </ul>	Short to long term	<ul> <li>Expansion of existing recycling business</li> <li>Increased demand for ferrous scrap due to shift to electric furnaces, price increase</li> <li>Installation of large shredder to produce electric furnace materials</li> </ul>	Short to long term
		Regulations on the use of recycled plastics	<ul> <li>Reduction in the thermal recycling of waste plastics</li> </ul>	Long term	<ul> <li>Growth in demand for low-carbon raw materials and fuels (RPF)</li> <li>Expansion of material and chemical recycling of waste plastics</li> <li>Development and commercialization of chemical recycling plants</li> </ul>	Medium to long term
Transitional		Traceability of CO <sub>2</sub> emissions (DX) mandated	<ul> <li>Lost market entry opportunities due to delays in business development</li> </ul>	Medium term	<ul> <li>Expansion logistics businesses of scrap, waste</li> <li>Visualization of GHG emissions</li> <li>Support for the procurement of carbon credits</li> </ul>	Medium to long term
Παποιτιστια	Technology	Expansion of the chemical recycling of waste plastics	<ul> <li>Lost business entry opportunities due to delays in technology development</li> </ul>	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	<ul> <li>Increased demand for nonferrous metals and minor metals due to electrification (depletion)</li> </ul>	Short to long term	<ul> <li>Expansion of the Lithium-ion Battery Recycling Business</li> <li>Expansion of the business of collection gold, silver, and copper sediment sludge</li> </ul>	Short to long term
	Reputation	Social responsibility as an environment-related company	<ul> <li>Failure to consider the environment, damage to credibility among stakeholders</li> </ul>	Short to long term	<ul> <li>Scoring by CDP and other international rating agencies</li> <li>Disclosure of information in line with the TCFD recommendations</li> <li>Disclosure of various approaches through the Sustainability Report</li> </ul>	Short to long term
Physical	Acute	Increase in natural disasters due to increasing severity of extreme weather events	<ul> <li>Decrease in earnings due to such factors as shutdowns and production reductions caused by damage to plants, difficulties in vessel dispatch, or transportation delays</li> <li>Decrease in revenue due to lost sales and purchasing opportunities</li> <li>Increase in insurance premiums and repair/restoration costs</li> </ul>	Short to long term	<ul> <li>Enhanced response to issue of waste created in disasters</li> </ul>	Short to long term
	Chronic	Increased heat stress due to higher average temperatures	<ul> <li>Decrease in productivity due to restrictions on working hours</li> <li>Increased cost of investing in environmental improvement</li> </ul>	Short to long term	<ul> <li>Personnel savings, unmanned operation, remote control</li> </ul>	Short to long term

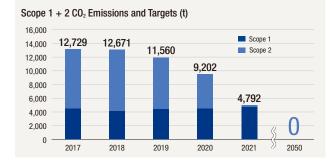
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# **Metrics and Targets**

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

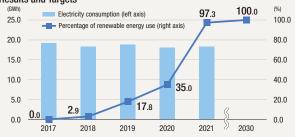
By 2050, the Group aims to achieve effectively zero GHG emissions from all its operations, including the processing and recycling of scrap and waste. In fiscal 2021,  $CO_2$  emissions (Scope1 and 2) amounted to 4,792 tons, down 62% from fiscal 2017 levels.



#### Percentage of Electricity Generated from Renewable Energy Sources

In July 2018, we became the first company in the global recycling industry to join the RE100 initiative, which sets the goal of reaching 100% renewable energy for electricity consumed in business activities by 2050.

#### Electricity Consumption and Percentage of Renewable Energy Use, Results and Targets



The target date for RE100 has since moved forward by 20 years, to 2030, to coincide with the government commitments to go carbon neutral. In fiscal 2021, renewable sources accounted for 97.3% of electric power used throughout the Group.

### **RE100 Plants\*1**

\*1 Plants and facilities that operate entirely on electric power from renewable sources

RE100 Plants		
ECONECOL Inc.	<ol> <li>Head office plant</li> <li>Hamamatsu plant</li> </ol>	Fujinomiya, Shizuoka Hamamatsu, Shizuoka
Kuroda Recycle Co., Ltd.	Head office plant	Hakodate, Hokkaido
Toyo Rubber Chip Co., Ltd.	4 Head office plant	Maebashi, Gunma
SYN ECO Inc.	<ul><li>6 Head office plant</li><li>6 Plaza Azumino</li></ul>	Matsumoto, Nagano Azumino, Nagano
VOLTA Inc.	<ul> <li>Head office plant</li> <li>Fujinomiya plant</li> </ul>	Fuji, Shizuoka Fujinomiya, Shizuoka

RE100 (Except plants)		
ENVIPRO HOLDINGS Inc.	Head office	Fujinomiya, Shizuoka
	Laboratory	Fujinomiya, Shizuoka





ECONECOL Inc. Head office plant

2 ECONECOL Inc. Hamamatsu plant



CDP

3 Kuroda Recycle Co., Ltd. Head office plant



4 Toyo Rubber Chip Co., Ltd. Head office plant



5 SYN ECO Inc. Head office plant







VOLTA Inc. Head office plant



8 VOLTA Inc. Fujinomiya plant

# Environment Material Balance

INPUT				
Scra	ap, Waste	685,00	<b>)0</b> tons	
Scrap/waste	Amount processed	Metal scrap Waste plastic and mixed waste Scrapped cars Electronic waste Wood waste Waste paper Waste batteries Other Subtotal	162,400 tons 37,700 tons 9,200 tons 8,200 tons 7,700 tons 7,600 tons 2,500 tons 300 tons 236,000 tons	
Sci	Distribution volume	Ferrous scrap Non-ferrous metals Waste plastics Waste paper Wood pellets/PKS Other Subtotal	387,200 tons 13,400 tons 13,100 tons 7,900 tons 9,900 tons 2,700 tons 434,600 tons	
	Reuse	Used cars/trucks	2,048	
R	aw materials	Raw materials for rubber chips	14,400 tons	
	Total inputs*1		685,000 tons	

\*1 Sum of scrap, waste, raw materials (excluding reuse)

### OUTPUT

Finiśl	cled Raw Materi ned Goods, and essing Outsourc	/ イイン コ	<b>00</b> tons
		Ferrous metals (scrap)	59,800 tons
		Non-ferrous metals	8,300 tons
		Plastic raw materials	800 tons
		Fuel raw materials	28,200 tons
	Amount processed	Wood chip raw materials	6,000 ton
	processeu	Raw materials for paper	7,300 ton
		Black mass	800 ton
		Other	4,400 ton
ials		Subtotal	116,000 ton
Recycled raw materials		Ferrous metals (scrap)	101,900 ton
E N	Amount processed and distributed* <sup>2</sup>	Non-ferrous metals	3,700 ton
d ra		Other	1,200 ton
ycle		Subtotal	106,900 ton
Rec	Distribution volume*3	Ferrous metals (scrap)	427,200 ton
		Non-ferrous metals	8,400 ton
		Plastic raw materials	2,500 ton
		Fuel raw materials	8,400 ton
		Raw materials for paper	8,400 ton
		Wood pellets/PKS	9,900 ton
		Other	1,600 ton
		Subtotal	466,700 ton
		Total	689,600 ton
	Reuse	Used cars/trucks	1,582
	neuse	Maintenance parts	244 container
Fi	nished goods	Rubber chip-based products	12,600 ton
ing	Recycling	Material recycling	1,000 ton
sourc		Thermal recycling	14,600 ton
al out:	Waste disposal	Simple incineration	3,300 ton
Disposal outsourcing		Landfilling	10,700 ton
Di		Total	<b>29,700</b> ton
		tal outputs*4	

### **Energy and Water**

Fuel	67.0 TJ
Electricity	18.2 GWh
Water	42,400 m <sup>3</sup>

# CO<sub>2</sub> Emissions (Scope 1 + 2) 4,700 tons

Scope 1	4,563.3 tons
Scope 2 (location-based standards)	7,915.7 tons
Scope 2 (market-based standards)	229.1 tons

# CO<sub>2</sub> Emissions (Scope 3) 152,400 tons

Category 1	Purchased products/services	8,951.7 tons
Category 2	Capital goods	2,154.2 tons
Category 3	Fuel and energy activities not included in Scope 1 and Scope 2	1,819.9 tons
Category 4	Transport/delivery (upstream)	135,728.1 tons
Category 5	Waste generated from business	3,534.0 tons
Category 6	Business travel	61.5 tons
Category 7	Employee commuting	217.2 tons

 $^{\ast}\mbox{We will}$  continue to assess emissions in other categories and elaborate on data from the next fiscal year.

# Resource Recovery Rate\* 94.4%



\*2 Amount of processed resources distributed overseas, etc. \*3 Amount of resources distributed through trading company functions \*4 Sum of recycled raw materials, finished goods, and processing outsourcing (excluding reuse)